

# *The 13th Asia-Pacific Symposium for Music Education Research*

—Exploring Possibilities and Alternatives in a Changing future—

## Proceedings

Virtual Conference on 18-19 September 2021



**The 13th Asia-Pacific Symposium for Music Education Research**  
—Exploring Possibilities and Alternatives in a Changing Future —

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## ***Keynote Addresses***



## Keynote Address 1

### **A Music Educator's Perspective on "Change" and "Possibilities"**

#### **Victor Fung**



Victor Fung is Professor of Music Education, and Director of the Center for Music Education Research at the University of South Florida, United States. Also, he is coordinator and academic advisor of Ph.D. program in the School of Music. He has a long, good relationship with Japanese educators, and he has contributed a lot to Japan Music Education Society.

He was a Board Member for the International Society for Music Education. Today, he's going to talk about a music educator's perspective on change and possibilities. This is a subject in which we should all be deeply interested. Because throughout the last two years, music educators have experienced some of the most dramatic changes. Strategies such as online teaching and the uses of hybrid instructional technology and flexible tools have been added to many music educators' repertoire of skills with the potential to become a mainstay.

Thank you so much for the generous introduction. First of all, I would like to thank Professor Imagawa, Professor Akuno, Professor Leung, and Professor Mito for their leadership, their teams, and their hard work to put this symposium together. It is not easy to organize and manage a conference of this magnitude during this unusual time. It is a lot of work, which I greatly appreciate.

It is a tremendous honor for me to speak at the 13th APSMER, especially seeing the caliber of speakers from the previous twelve conferences. Making this more special is that this is the first ever fully online APSMER, which could suggest some new possibilities for the future. In this presentation, I would like to share with you some thoughts on "change" and "possibilities."

The title of my presentation is drawn from the theme of the conference "Exploring Possibilities and Alternatives in a Changing Future." I selected two concepts from the conference theme, "change" and "possibilities," to share with you my perspective, which is certainly not the only perspective. I am sure that you have your own perspective too, and I would love to hear from you.

#### **Historical Perspectives**

On "change" and "possibilities," let me begin with some historical perspectives, as these two concepts are not new. In fact, they are quite old. The literature suggested that these two ideas have been documented for thousands of years in the East and the West.

Starting with the East, the earliest documentation of these two concepts is found in the Book of Changes, which is referred to as *Yijing* or *I Ching* (易經) or *Zhouyi* (周易) in Chinese. This is a source that has been developed through a long period of time, from about 2900 BCE to about 300 BCE. It's not a simple source authored by one person but by quite a few people through its development. In this book, there is a set of principles of change and a lot of unchanging principles. As we change, the principles are unchanged. For example, the seasons change from one to the next, from spring to summer to fall, then to winter, but every year it comes back in the same cycle. So, the principle of this change is unchanged. It is the same with day and night, it comes back every day in the same cycle. Another important concept presented in the Book of Changes is that it contains a lot of simple and easy symbols and concepts. These ideas are represented in some symbols that are easy to understand. However, in this presentation, I focus on the principles rather than the symbols.

Turning to the West, the earliest documented concept of change and possibilities that I can find is in the work of Heraclitus, a Greek philosopher active around 500 BCE. One famous saying from his work is that no one can step into the same river twice, because the river is constantly changing. Here it is again: the constant interaction between sameness and change. This is also an easy way to understand how change and unchanging principles interact with each other to produce new possibilities.

### **A Contemporary View on Change and Human Actions**

Now fast-forward about 2600 years to the year 2018. My book titled *A Way of Music Education* was published. In this book, I proposed a framework for Change and Human Actions (p. 100). Figure 1 is based on this framework that starts with change, accepting change as a given, meaning that no matter what, things are going to change and we cannot stop it. It leads to the next stage in the framework when humans come to a decision point to be ignorant or to take actions. Actions can be taken proactively, passively, or in avoidance as changes are occurring. In other words, the top part of the figure represents change, which leads to a human decision, followed by human actions. For example, change in the weather is not directly controlled by humans. If it is raining outside, humans can decide to go outside to get wet or to stay inside to remain dry. Depending on the decision and action, the possibilities are getting wet or staying dry. Humans have a choice and make such decisions all the time. Humans make a lot of decisions and take a lot of actions to create an outcome.

In this presentation, I would like to expand from this framework to include the outcome possibilities as results of human actions in proactivity, passivity, and avoidance. What happens is that after these possibilities, it leads to more change. Human actions generate more change.

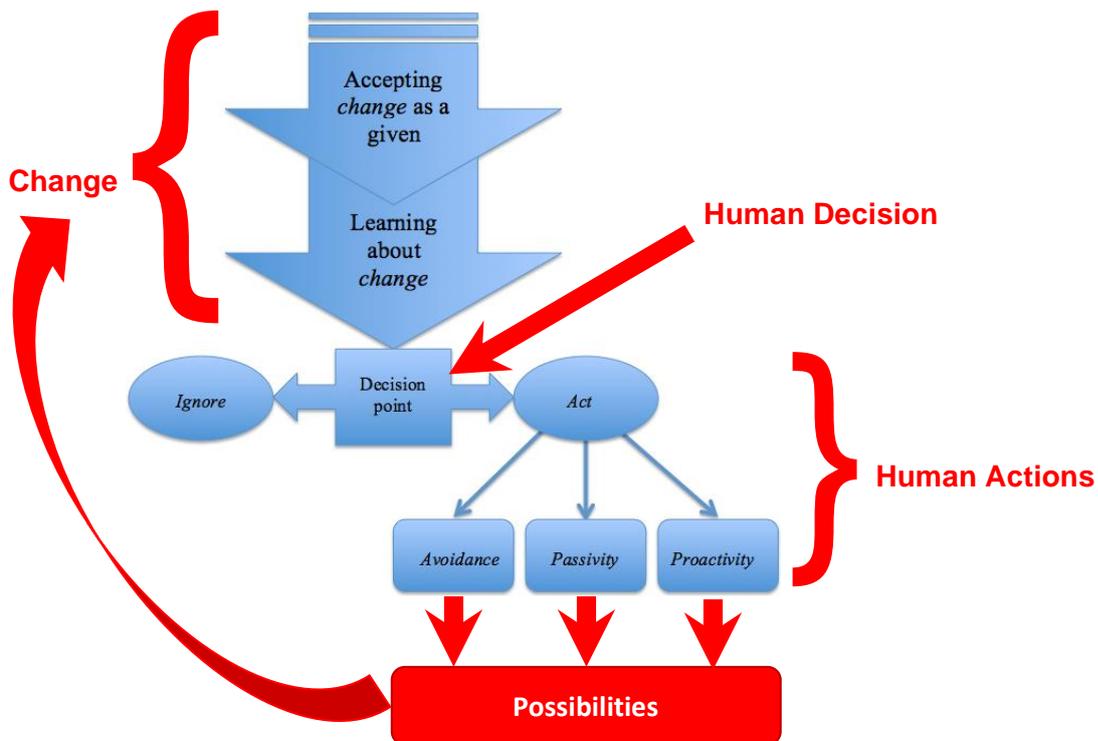


Figure 1. *Change and human actions leading to possibilities and further change* (based on Fung, 2018, p. 100).

For this presentation, I would like to simplify the framework to three cyclical components (see Figure 2). It starts with change, which is a given. Then we, as humans, make decisions and take actions. Finally, they lead to more possibilities, proceed to more change and onto another round of the same cycle: change→human decisions and actions→possibilities, and back to change. What can we do with impending change? We can decide and take actions.

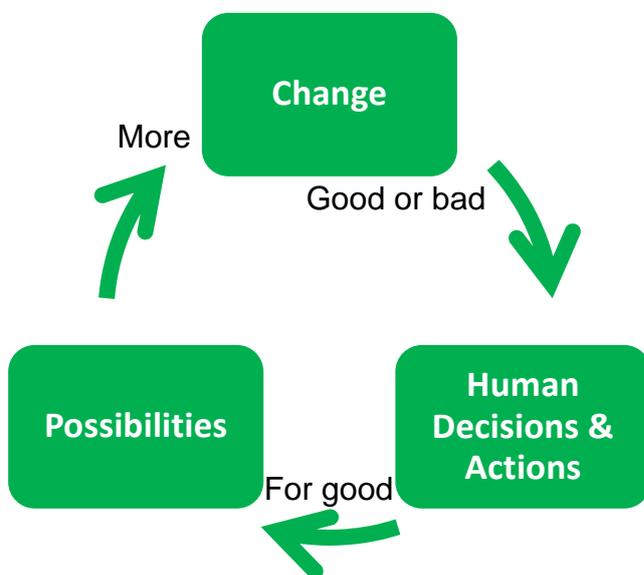


Figure 2. *Cycle of change, human decisions and actions, and possibilities.*

While change is an expected constant, it is not always good to humans, because humans cannot control many of the changes. Nevertheless, some changes are good for humans, and other changes are good for other beings. Through human decisions and actions, hopefully more things would end up better for humans among the possibilities. Then it leads to more change. That's the idea of the cycle, from change to human decisions and actions, to possibilities, and back to more change.

### **Relevance to the Pandemic from December 2019 to September 2021**

Speaking of change, the world has gone through a lot of unprecedented changes since December 2019. In music education prior to that time, large and small ensembles of all age levels came together to make music and to learn music. Going into the early part of 2020, much of the in-person social interactions became distressed and were even forbidden, and most of the in-person group musical activities came to a halt. Although constant change is expected, a change of such an enormous magnitude in a short period of time has caught many people off-guard, including musicians and music educators. This extraordinary time reminds me of the importance of exercising strategies regularly in preparation for all types of change, big or small. These strategies include being flexible and creative. In times of uncertainty, decisions and actions for new strategies are needed, so possibilities to further change for the better can be uncovered. As for the concepts of “change” and “possibilities,” historic and everlasting principles are helpful guides in making decisions and taking actions.

Music has been practiced for 5000 years and probably longer. It is one of the “most stable and everlasting human desires” (Fung & Lehmborg, 2016, p. 1). Everyone has a desire to make, enjoy, or engage in some type of music. Humans take actions for musical endeavors regardless of era, location, and circumstances. It is done privately or publicly, individually or in groups, and in schools or in community settings throughout the entire lifespan.

Despite the dramatic changes and limitations since the beginning of year 2020, musicians and music educators around the world have been exercising their flexibility and creativity and utilizing the resources around them to explore many possible actions. Such evidence is easy to uncover through an internet search:

- Taking a music class for kids and parents outdoor (<https://www.marshasmusic.com/>)
- Teaching a music class for kids and parents via video conference (<https://www.musictogetherbr.com/rhythm-kids.html> and <https://www.amabilemusic.org/music-group-class.html>)
- Participating in a music teacher workshop via video conference (<https://twitter.com/aluthardt124/status/1251559363304738816/photo/1>)
- Social distancing indoor while singing in a school choir (<https://www.arkansasonline.com/news/2020/nov/29/educators-get-creative-to-address-hands-on/?news>)
- Rehearsing a college orchestra in a courtyard outside the building (<https://www.wqxr.org/story/conservatories-covid19-music-schools-reopen-fall/>)

- Having a private clarinet lesson outside on a college campus (<https://kfoxtv.com/news/local/gallery/nmsu-music-students-resume-in-person-classes-after-some-students-test-covid-19-positive?photo=1>)
- Holding a virtual guitar class (<https://www.sfguitarlessons.com/online-classes-all-classes-now-onli>) or a virtual piano class (<https://musicrhapsody.com/product/simply-music-shared-piano-lessons-for-children-and-adults/>)
- Having a private cello lesson via video conference (<https://www.minnpost.com/arts-culture/2020/03/musics-going-to-help-get-us-through-it-teachers-take-online-music-lessons-to-their-at-home-students/>)
- Wearing a mask while having a private electric bass lesson in person (<https://www.darlingtonarts.org/program-areas/music/>)
- Presenting an online performance of a string ensemble as individual players are in different locations (<https://www.cbc.ca/music/events/canadian-music-class-challenge/how-to-make-your-own-virtual-music-class-video-1.5719127>)
- Presenting a wide range of concert experiences online (<https://gilmore.ucboe.us/apps/news/article/1241774>)
- Performing the piano on a residential balcony (<https://www.youtube.com/watch?v=-nI9sUfKsyE>) and joined by a neighbor playing the saxophone (<https://www.classicfm.com/music-news/coronavirus/pianist-saxophonist-my-heart-will-go-on-duet/> and <https://www.youtube.com/watch?v=UqC2y6bp9iY>)
- Producing video of a church choir in the community (<https://www.youtube.com/watch?v=QqBVbCFukCE>)

This list can continue indefinitely, not only for music teaching and learning but for performances as well. While the possibilities of these actions existed prior to 2020, they were not being explored or practiced very much. Music teachers typically did not consider taking such actions before 2020. With a sudden need to exercise flexibility and creativity, these possibilities and actions appear to be “new.”

Many would agree that live in-person musical experience is preferred over virtual or social-distanced musical experience. However, the advantages in the latter are worthy to consider, such as the reduced travel time and cost, the broken barrier between longer distances, the potential of reaching out to a wider audience, the broader experience beyond the audience’s perspective through video recording and online presentation (e.g., from a performer’s perspective), and the increased individual personal connection online compared to such individual connection in live large-group settings.

### **International Perspectives**

In this presentation, I draw on sources from Australia, Canada, China, Italy, South Korea, Spain, Sweden, Turkey, and the United States. I certainly understand that different locations have different situations. When we look at contexts across the different countries, we have to keep in mind that phenomena and findings of these studies may not be universal, but they are informative of the possibilities, which is one of the themes of this conference. No two places are exactly the same. I set off on a journey to explore the possibilities as I look into this international body of evidence. I

am quite impressed by the number of studies that are already published in just the last two years.

### **Changes in Music Education**

Focusing on music education, one of the most prominent changes through the last two years has been changing from mostly face-to-face interactions to mostly online or hybrid formats. A lot of studies have described this change (e.g., Burns, 2021; Şenol & Sakin, 2021). This change is exacerbated by the fact that social distancing in person poses a challenge for singers and wind instrument players in live group settings. While string, percussion, and keyboard players can wear a mask and not affecting the acoustical aspect of the music, the frequent and extensive inhalation-exhalation exchange of singers and wind players in an in-person ensemble setting can have added health concerns with or without any type of facial covering.

Although the online mode of practicing music education has been a most pronounced change, it is not the only possibility. The Ministry of Education in China (2020) proposed the principle of “Pausing school without pausing learning” (停课不停学) through a document released in February 2020. In this document, a few meanings besides the use of online education are included. First, online learning is clearly one of the methods, but it is not the only method. During that time, a lot of teachers immediately changed their pedagogy and materials to online in response to the drastically changing circumstances. The predominance of this action does not necessarily mean that this is the only way.

Another meaning of the principle is that the curriculum lays beyond textbooks. The pandemic itself is seen as a huge textbook. The people, not only the students, can learn about the pandemic, the society, and themselves. The principle suggests a connection between the learning and current events in the society.

A third meaning of the principle is that learning at home is to integrate family and school in the education process. Although not many people think of this possibility, some teachers see it naturally. If the children are not going to schools, they must be at home. When they are home and they are still learning, their family needs to be a part of it.

Finally, this principle is a proposal for a broad view of education. The society, not the physical classroom, is seen as the venue for teaching and learning. Real life is an education. The people are in the same boat and are going hand in hand. As far as I can see, while the Ministry of Education in China is recognizing the challenges and trying to alleviate them by plotting out broader concepts of education, it is an attempt to link education back to the society, to unify the people's way of thinking, and hopefully to recoup from the difficult situation as soon as possible.

### **Unchanging Principles**

Amid many changes, some underlying principles are unchanged. For example, school music teacher may still go to school, but no student is in the classroom, because the teacher's desk would become a workstation to prepare digital teaching materials and the students are learning online in their homes. The most profound for music teachers

is that their “love for teaching” remains as a constant (Burns, 2021). Furthermore, social emotional learning persists not only for the students but also for the teachers. Arts education continues to provide social, emotional, cognitive, physical, and mental health in creative ways, online or in person (Joseph, 2020). These are not new, but because of the challenging experience, the researchers found them to be unchanging principles despite the changing conditions.

There is an abundance of evident to show that maybe the format and the approach are changing, but the mission of teaching has not changed. Another example is that university students continue to learn online in different subjects, including music and dance (<https://news.jmsu.edu.cn/info/1015/19722.htm>).

## **The Negatives**

As indicate in Figure 2, not all changes are good to humans. While exploring the positives of some of the possibilities, the reality of some negatives should be addressed. Even with flexibility and creativity in the decisions and actions amid the changes, there is a need to recognize aspects of the change that are negative, so we can learn about our needs and come up with better decisions and actions.

The first of these negatives is the sense of loss and grief (Burns, 2021). There is no escape that the pandemic has affected people's lives, including the loss of lives, who may be a student, a teacher, someone in the family, or people they know. When students are continuing to learn through this unprecedented time, they still have to deal with their personal emotions and psychological and physical wellbeing with a lot of uncertainty, stress, fear, and anxiety (Cheng & Lam, 2021).

Second, since switching to online music teaching has become prevalent through the pandemic, teachers are concerned about the effectiveness of online music teaching (Cheng & Lam, 2021; Gül, 2021). Most teachers and students are not used to it, and for the majority this is their first encounter with purposeful online music education. Teachers are forced to move into a fast-pace learning mode to address teaching effectiveness, parental expectations, student adaptability, and technological integration in the context of the pandemic.

The third negative maybe seen as a criticism to online music education. Music education could turn to become more technological, mechanical, and visual, further away from being cultural, feelingful, musical, and aesthetical (Yang, 2020).

Fourth, researchers found concerns about the ineffectiveness of online music teaching due to interruptions (Okay, 2021; Şenol & Sakin, 2021), absenteeism, difficulty to work at home (Şenol & Sakin, 2021), and the unavailability of musical instruments at home (Joseph & Lennox, 2021; Şenol & Sakin, 2021). Furthermore, when teachers and students work at home, boundaries across working, teaching, learning, and personal life become less clear. Some teachers express that they find themselves working all the time (Joseph & Lennox, 2021).

The fifth negative is found across numerous studies that I come across, that is the declining motivation and social life (Akarsu, 2021; Gül, 2021; Joseph & Lennox, 2021; Okay, 2021; Şenol & Sakin, 2021). Due to the adjustments needed for a different mode

of music teaching and learning and the limited frequency and quality of social interaction, students and teachers alike can become less motivated and may reveal a strong desire for in-person social life.

Sixth is the fatigue factor for the educator (Akarsu, 2021; Okay, 2021). More specifically, it is the digital fatigue, referring to the need to look at the screen for a long period of time and making the eyes physically tired. An increased screen time could imply limited time and quality for personal interaction.

Finally, the need to practice social distancing makes physical assistance difficult (Joseph & Lennox, 2021; Şenol & Sakin, 2021). Teachers are unable to assist physically. For example, playing together or playing with accompaniment in person are difficult. Opportunities to play together or collaborate as a group in person are greatly reduced.

Based on the studies that I refer to alone, this list of negatives is substantial. Nevertheless, we are humans with the ability to come up with creative strategies, so we can take actions to address them. I suggest that we should identify the needs before making decisions and taking further actions.

## **Needs**

The needs identified here are based on studies across national borders, similar to those cited in the previous sections. The first, and I believe as the most important, is the need for networks and support groups of music teachers (Albert, Paparo, & Lehmborg, 2021; Burns, 2021). As the change is quite sudden over the last two years, many teachers don't know what to do at the moment of the change until they have an opportunity to network with other people and talk to other teachers who know of the proper strategies or tools. This way, they can learn and apply immediately. Even with the networking and support groups, the effort has to be continuous. The strategies learned are not complete in one shot, as in any professional development for teachers. This need is continuous throughout the teaching career but only magnified in this time of intense change.

Another need is for teachers to resolve technological infrastructure issues such as sound quality and slow internet connection (Akarsu, 2021; Gül, 2021; Şenol & Sakin, 2021). Although good quality microphones have been in existence for a long time, not every school has them and not every teacher is knowledgeable about their features and functions. Even if these microphones are available, teachers still have to learn how they can use different types of microphones for different purposes. The need for better internet connection is related to the built-in infrastructure which the teacher can do little to improve in the short term. It is likely related to the local internet availability and its speed.

Third, some music teachers see the need to move along in time and to teach with different perspectives (Deng, 2021). Given the big changes over the pandemic period, this is a good opportunity to reimagine the way music education should be practiced as more varied possibilities are being explored.

Fourth, as many music teachers choose to use an online approach through this unusual time, there is a practical need for teachers to have an analysis and suggestion for specific software for online music teaching (Zhao, Feng, & Luo, 2020). There is a strong need for music teachers to learn how to use various applications, such as social media, recording applications, online performance platforms, video and audio editing and production tools, and tools for online music lessons individually and in class settings (Kao, 2021). Again, most of these technologies are not new but using them widely for the purpose of teaching music is relatively new.

These needs could be departure points for decision making and actions. They help to identify areas to improve. Through these needs, I see opportunities for music teachers to move forward with better strategies amid the changes through the pandemic.

## **Opportunities**

Most of the opportunities evolved from the literature are elevated due to the special circumstances of the time. The first and foremost is the opportunity to refocus, redesign, reinvent, and reimagine instruction remotely, virtually, and in hybrid modes (Joseph, 2020). Teachers and others come up with many quick and immediate solutions in response to the sudden unexpected changes. As the pandemic subsides, there is an opportunity to take advantage of what is learned and to apply it for the long term. For example, one can take advantage of online and offline teaching not only for the immediate resolution but for the long term (Deng, 2021; Wang, 2020). Furthermore, it is time to think about creative strategies to move the field forward for the better (Burns, 2021).

Technologically, teachers and students have the opportunity to incorporate digital audio workstations (DAWs) and other software and hardware in the music education experience (Burns, 2021; Şenol & Sakin, 2021). These technologies have been in existence for a while, but they have not been used widely in music teaching. Using these devices could imply a broadened curriculum to include music composition, editing, recording, and production.

There is also an opportunity to reimagine music ensemble groupings (Burns, 2021). Forming ensembles of varying sizes and types, including smaller groups and sectionals that could be a subset of a larger group, could be advantageous. This is especially applicable to music programs that focus on large ensembles where resources are available to break down into chamber groups or sectionals. Due to the social distancing requirement during the pandemic, large school ensembles have to be divided into smaller groups (Burns, 2021). This change can become an opportunity to broaden the music curriculum for the long term.

Using technology and being flexible in ensemble configurations tend to implicate a broader music curriculum. Music educators suggest that integrating the media could contribute to constructing an awakening aesthetic experience (Yang, 2020). Connecting musical experience with real life could stimulate aesthetic interest (Wang, 2020; Yang, 2020). The opportunity to broaden music education practice reflects the aesthetic needs of the 21st Century.

Due to the involuntary move to teaching and learning music at home, there is a new opportunity to explore and develop autonomous learning (Wang, 2020; Yang, 2020). During pre-pandemic times in school, teachers typically make decisions and offer guidelines and instructions. When students are learning from home through the pandemic period, there is more time for them to think about how they can make their own decisions. Students can be more reflective and self-directed, which has the potential to strengthen their music learning.

The exponential uses of various online tools through the pandemic have led to a heightened opportunity to share musical products online (Okay, 2021). These musical products are most likely performances and productions from individuals and in collaboration. Due to the online nature of the process, anyone can collaborate with individuals within or outside of their regular class (Schiavio et al., 2021).

Last but not least, it is important for teachers to explore opportunities to open doors for more reserved students (Joseph & Lennox, 2021). During in-person classes, some students may tend to be quiet or not so active in participation. On the contrary, when the same students go online, they become more active, and they voice their comments and reactions more frequently. Although this may not be true for all students, it is an opportunity for teachers to recognize students who fit this description so these students can fully utilize their potentials in different avenues of learning and communication, not only in face-to-face classes.

Teachers should consider all of these opportunities and select those that are beneficial in their unique setting. Evidence shows that some entities have been exploring these opportunities. Let me mention two examples. The first is a creative strategy to use masks designed for playing specific wind instruments. Images are found for:

- the French horn (<https://www.rmsides.com/p-33925-mccormicks-3070019-french-horn-bell-cover-w-sleeve.aspx>),
- the trumpet (<https://www.mvnews.org/band-classes-adjust-to-new-covid-19-restrictions/>), and
- the flute (<https://www.finaltouchcompany.com/p-covid-readiness/solid-flute-mask>).

There are similar products for other instruments too. Another example is the production of a middle school orchestra in Gimhae, South Korea (<https://www.youtube.com/watch?v=jD1Q2JKsc6E>). The video shows the engagement of both the students and the teachers. It demonstrates the use of musical skills of both the students and the teachers as well as their audio and video recording and editing skills and video production skills. An outcome is clear in that this product has reached a broader audience worldwide as opposed to the typical local audience in a live performance. As such opportunities are being explored, we are in a better position to practice and develop the good possibilities for the advancement of music education.

## **Gains and the Good Possibilities**

Based on the literature, numerous gains through the actions taken during the pandemic are revealed. The increased use of digital technology goes beyond online teaching. It includes assessment (Burns, 2021; Joseph & Lennox, 2021), video recording, conferencing, and mass live lessons (Okay, 2021). They lead to a better

and more effective use of such technologies. There are also reports of better connection with parents (Joseph & Lennox, 2021). When students stay home, not only the students, also the teachers, are more connected with the parents.

Another gain while exploring possibilities is that more music teaching is reaching home (Joseph & Lennox, 2021). Because of the increased transmission of musical experience through the internet between the teacher and the student's home, parents who take an interest are involved more.

Related to the increased technology use also include the gain of developing more progressive thinking in music education practices. A wider range of resources online can be incorporated in music teaching, and curricular content can be enriched (Wang, 2020). Moreover, there is an increased occurrence of online concerts (Okay, 2021) that can engage a wider audience. More importantly, students' musical learning potentials may be expanded through ways other than the traditional in-person mode.

Overall, teachers can discover new approaches, criteria, and expectations by being open to different possibilities (Okay, 2021). In two studies of at the college level, researchers even suggest that some of these possibilities save time because there is no need to commute (Schiavio et al., 2021; Şenol & Sakin, 2021). This gives teachers extra time to prepare for lessons and to explore more strategies.

The last example that I would like to share comes from the University of South Florida where a small group of master's degree students in music education work collaborative at a distance. These students are fulltime music teachers in the schools taking our online master's program, and they come to campus for only one week in the summer. Five students and a teacher in this master's program work collaboratively using a range of skills including arranging for the unique ensemble of instruments and voices (electric guitar, bass guitar, keyboard, saxophone, and voices). Note that they are not using their primary instruments. In this project, they need to learn and exercise their audio and video recording and editing skills as well as video production techniques. Once they have these skills, they can apply them in their own teaching in the schools. It is amazing that teachers are adding a wide range of skills to their traditional musical and pedagogical skills by being open to these new possibilities.

### **Proactive Actions to Activate Good Possibilities**

Proactive actions are key to selecting and activating the good possibilities amid the inevitable changes. Without any action, random chaos could be the outcome (Fung, 2018). Based on the evidence shown here, the following actions should be taken proactively to perpetuate the discovery of more good possibilities:

1. Continue teacher professional development to include the use of media production, hardware and software, social media, and other online platforms (Joseph & Lennox, 2021; Okay, 2021; Şenol & Sakin, 2021).
2. Teachers self-produce customized materials to ensure quality delivery (Wang, 2021). A lot of materials are available, but not everything fits for use in a given class. Teachers should produce their own materials so they can fit exactly what is needed in that class.

3. Continue to share music between home and school using technology (Joseph & Lennox, 2021). This would increase the chances to engage parents in music education.
4. Strengthen technical infrastructure and equipment (Şenol & Sakin, 2021). While the lack of infrastructure and equipment is considered as a negative, there is a need to take action to fix it. Music teachers should let technology administrators know what infrastructure and equipment are needed, so funding can be sought to make improvements.
5. Organize internet resources in a systematic way (Wang, 2021). So much information and resources are available that someone needs to organize them in a systematic way for easy access. Individual music teachers and professional music education organization could contribute to this effort.
6. Establish support groups among teachers, including mentorship and collaboration (Albert et al., 2021; Şenol & Sakin, 2021). These support groups should allow teachers to ask questions, share materials, ask for materials, vent, and share links and inspirations (Thorgensen & Mars, 2021). These support groups would address the teachers' need to connect to their peers. Few teachers can tackle all issues alone. Having a network to help each other is essential.
7. Extend the connection network to groups of students as well as between students and teachers (Albert et al., 2021; Thorgensen & Mars, 2021). Human is a social being, and students and teachers alike need social interactions and support to be effective in achieving certain goals. Guided student group projects could be an effective approach.
8. Offer fast feedback to students (Şenol & Sakin, 2021). This is quite important for online teaching. The lack of feedback often leads to a decline in student interest and motivation. Teachers should be more sensitive to the need for prompt feedback to the students.
9. Address equity and access issues, especially in light of the widening gap in technology access (Joseph & Lennox, 2021; Nichols, 2020). Some countries may be more severe than others. Throughout this presentation, studies are mainly drawn from countries with high or very high Human Development Index (HDI) (United Nations Development Programme, 2020). Similar studies from countries at medium or lower HDI levels are unavailable. With this in mind, the available studies have reflected that technology access plays a key role in discovering many of the possibilities and that the wide technology access gap makes the discoveries inequitable. This is especially true for students in low-income families and rural locations (Hash, 2021). We are obligated to make an effort to act upon this inequity, making the same type and quality of technology accessible to everyone. This way, music education with 21st century technology would not become an exclusive activity but for everyone. We have to make sure that children in low-income families and in rural areas have equal access. Globally, there is a need to assist disadvantaged countries.
10. Recruit new teachers who can commit to this demanding profession and can be trained in using the current technologies (Albert et al., 2021). While the demand for music teacher is high, so as their attrition rates (e.g., Hu, 2021; Öztürk & Öztürk, 2020;

Robison & Russell, 2021). It is an imperative to recruit, train, develop, and maintain new music teachers so positive changes, actions, and possibilities can emerge.

These proactive actions could lead to a path of improvements in music education going forward. They may activate more “good” possibilities, heading toward a better change.

## Conclusion

I would like to conclude this presentation by revisiting the framework presented in Figure 2. History reminds us that change is constant and inevitable. Changes come from nature and as results of human actions. Some changes are good for humans, others are not. It is a privilege that humans can make decisions and take actions to control part of these changes so more “good” possibilities can be uncovered. This privilege comes with responsibility. Music educators and others are responsible in using flexibility, creative strategies, positive attitudes, kindness, and continuous learning, and at the same time be non-egoistic, understanding, and conscientious when making decisions and taking actions. It is the proactive actions that can lead to a better tomorrow and for the long term.

Thank you very much. I appreciate your patience. Feel free to contact me with any response or question. I would love to hear from you. <fung@usf.edu>

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## Keynote Address 2

# The Structure of Japanese Music

**Akikazu Nakamura**



The author is a composer, a shakuhachi player, and a writer, and his book *Missoku Changes Your Body* explores the secrets of the traditional Japanese breathing technique and how to use the body to produce it. *The Overtone* focuses on phenomena that we do not recognize enough in our daily activities—the overtone components in music and the human voice—and their significance. He uses a scientific method to show that the essence of Japanese music's charm lies in the richness of its overtones.

<https://akikazu.jp/>

<https://www.youtube.com/watch?v=IqkGv1F3ZxE>

## 1. Introduction

What approach should we adopt today when creating and listening to music? Music has emerged over a long historical period, from the depths of human community, society, and civilization and out of our daily lives, bodies, brains, and collective unconscious. It is generated and reborn in a cycle, transferred from one person to another, entering our brains and unconscious realms, influencing our bodies, lives, and culture, and carving out a place in history.

This chapter will analyze the specific attributes of music, with Japanese music as a starting point, in order to see how music comes into being and how it influences the world in which we live. It is meant to contribute to a deeper understanding of Japanese music and permit application to other musical cultures to deepen how we listen to and envision music.

## 2. Japanese music in a global context

Japanese music has some of the most distinctive characteristics from among the world's music cultures. It has the following seven distinctive features, schematized in global context in Fig. 1:

- a) Micro-volume, the use of extremely quiet sounds;
- b) Subtle changes of each element;
- c) Changes in integer overtones;
- d) Changes in non-integer overtones;
- e) Free degree of rhythm;
- f) The linguistic and acoustic nature of the music; and
- g) The complexity of each element.

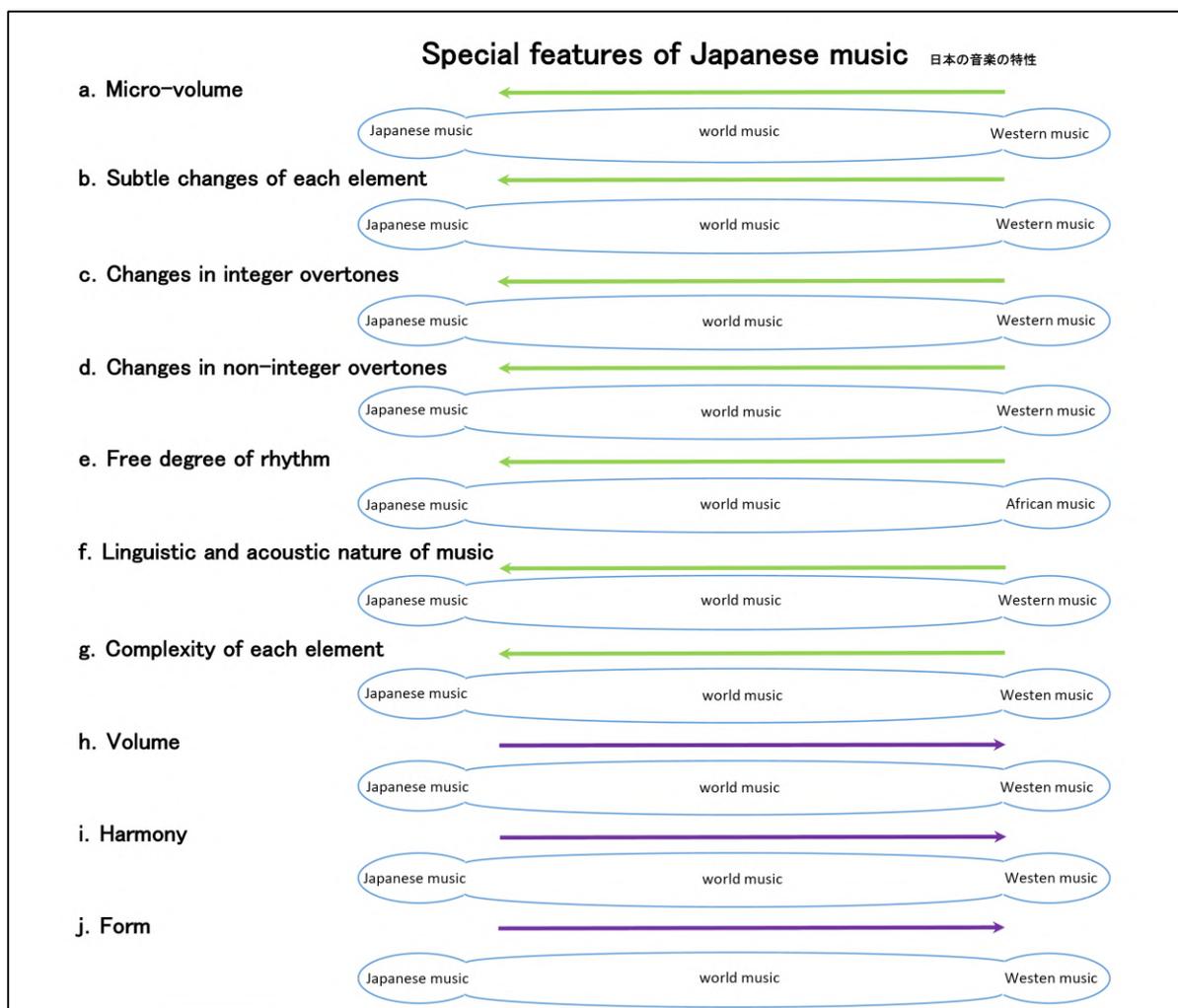


Fig. 1

Conversely, there are three elements that have undergone relatively little development in Japanese music: h. *volume*, i. *harmony*, and j. *form*. I will discuss and explain later why these features respectively developed and did not develop.

### 3. Overview

Let us now take a look at how Japanese music came into being, with reference to Fig. 2.

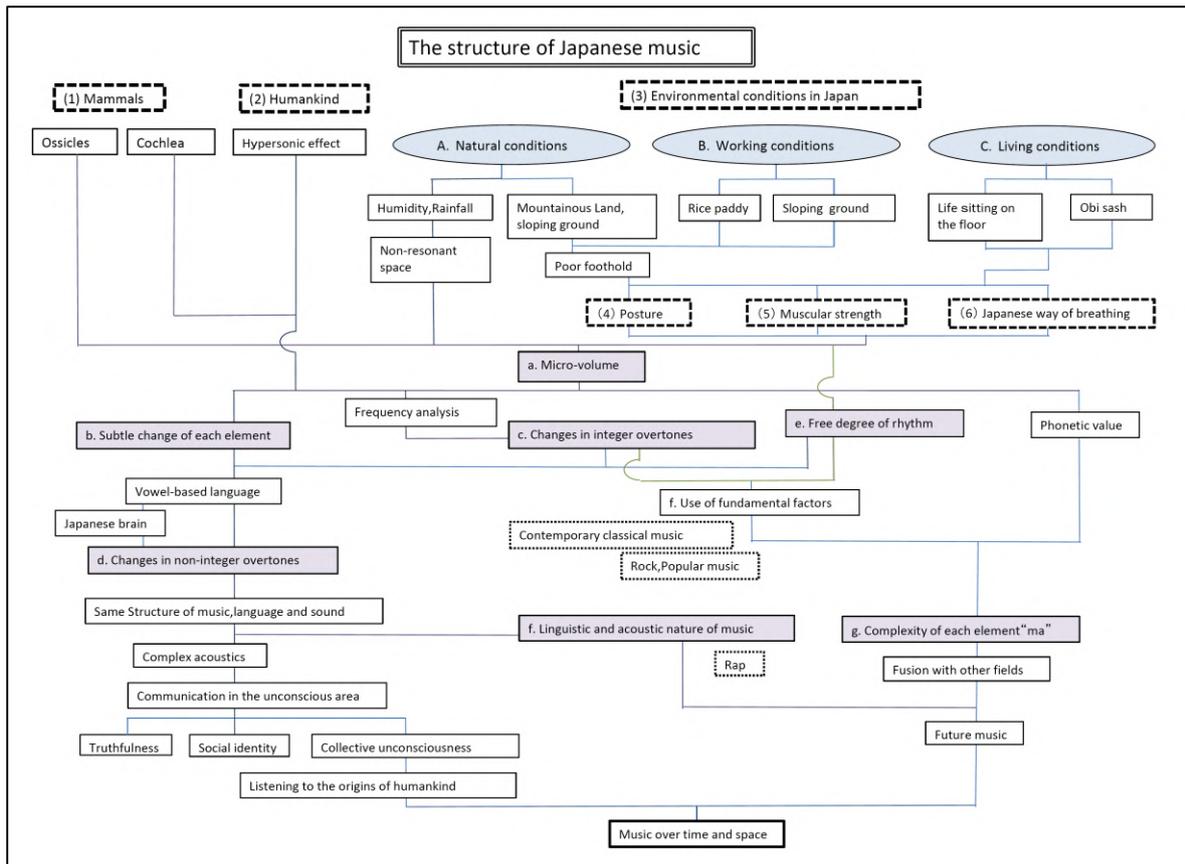


Fig. 2

We can divide this figure for four sections. One represents mammals' functions of ear and Japanese environmental conditions, and the next deals with the overtones, and the key point is a vowel-based language that makes many things different. The fourth section discusses the structure of music, language, and natural sounds, which leads to unconscious communication.

#### 4. Mammals' sense of hearing

Please take a look at Fig. 3, showing the eardrums, ossicles, malleus, incus, and stirrup bone.

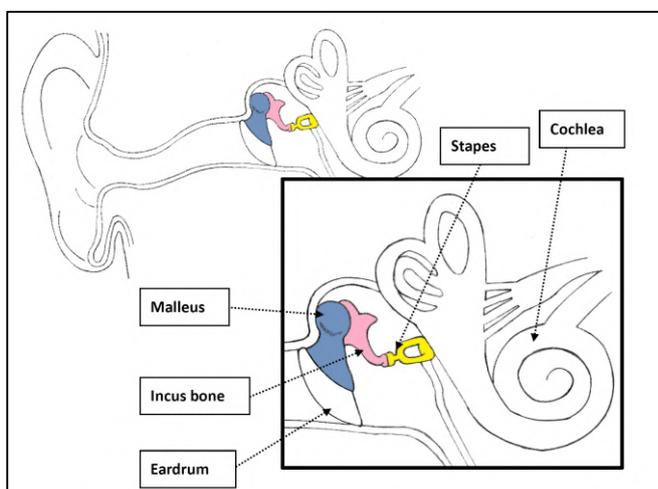


Fig. 3

When ancestors of mammals emerged, during the Cretaceous period, their survival would have depended on their ability to protect themselves by perceiving micro-volume. Whereas other animals possess only a single ossicle, mammals developed to possess three ossicles—that is, three amplifiers, each of which serves as a lever for amplifying sound. Therefore, mammals can hear a **Micro-volume** very well comparing to other animals.

Next, one part is called the cochlea, and another part is called the cochlear basement membrane. There are many hair cells, which work as a type of frequency analyzer sensitive enough to respond to micro-volume. Mammals are unique in possessing cochleae with multiple turns, which enable them to carry out intricate **frequency analysis**.

## 5. Environmental conditions of Japan

Three types of conditions of human life in the Japanese Archipelago affect the concerns of this study: natural conditions, working conditions, and living conditions. Please look at Table 1.

Table 1

(1)	Mammals (哺乳類)	
	1) Ossicles (耳小骨)	a Micro-volume (微小音量)、c,d Overtones (倍音)
	2) Cochlea (蝸牛)	Frequency analysis (周波数解析)、c,d Overtones (倍音)、 a Micro-volume (微小音量)
(2)	Human species (人類)・Hypersonic effect (ハイパーソニックエフェクト)	Frequency analysis (微小音量)
(3)	Environmental conditions in Japan (日本の環境)	
	A Natural conditions (自然条件)	
	1) Humidity (湿度)、Rainfall (雨量)—Plants (草木)— Non-resonant space (響かない空間)	a Micro-volume (微小音量)、Frequency analysis (周波数解析)
	Humidity (湿度)、Rainfall (雨量)—Plants (草木)—unstable footing (悪い足場)	(4) Posture (姿勢)、(5) Muscular strength (筋力)、(6) Breathing (呼吸)
	2) Mountainous Land (山岳地帯)、sloping ground—unstable footing (悪い足場)	(4) Posture (姿勢)、(5) Muscular strength (筋力)、(6) Breathing (呼吸)
	B Working conditions (労働条件)	
	1) Rice paddy (水田)—unstable footing (悪い足場)	(4) Posture (姿勢)、(5) Muscular strength (筋力)、(6) Breathing (呼吸)
	2) sloping ground (傾斜地)—unstable footing (悪い足場)	(4) Posture (姿勢)、(5) Muscular strength (筋力)、(6) Breathing (呼吸)
	C Living conditions (生活条件)	
	1) Life sitting on the floor (座る生活)	(4) Posture (姿勢)、(5) Muscular strength (筋力)、(6) Breathing (呼吸)
	2) Obi sash (帯)	(4) Posture (姿勢)、(5) Muscular strength (筋力)、(6) Breathing (呼吸)

(4) Posture (姿勢)、(5) Muscular strength (筋力)、(6) Breathing (呼吸)

a Micro volume (微小音量)

e Free degree of rhythm (リズムの自由性)

### 1) Natural conditions

In Japan, we have high humidity and a lot of rainfall, and thus plants grow very well. This creates a non-resonant space, in which we can hear a **Micro-volume** very well because of the lack of resonance creating reverb and obscuring other sounds. Thus, frequencies can be analyzed very well. The same conditions—humidity, rainfall, and plants—along with mountainous land and sloping ground, lead to unstable footing. To stand straight, this requires us to bend our knees, which means we must decline the

pelvis and train our muscles accordingly. Under these conditions, the Japanese developed a special **posture, muscular strength, and breathing**.

This special breathing, is called ***missoku***. As we bend the knees and decline the pelvis, we have to keep expanding the abdomen. Keeping expanding and then inhale and exhale. That is *missoku*.

## 2) Working conditions

Photo 1 is a rice paddy.



Photo 1

In rice paddy field, or mountainousland, as we have to bend the knees and decline the pelvis, we have to expand the abdomen; that is, we do *missoku*. See Photo 2.



Photo 2

## 3) Living conditions

Japanese people often sit on the floor (Photo 3).



Photo 3

This was standard even a generation ago and remains common even today. Spending life on the floor, people may have to stand and sit 60 times or more a day, and the **muscles** of Japanese people are trained very well.

Next, Japanese people have traditionally expanded their abdomen and held their clothing in place with a sash or obi wrapped around the waist. The Japanese obi sash differs from the western belt (Photo 4), which lies on the abdomen above the hip bone. The obi sash (Photo 5) rests over the pelvis, holds the underlying kimono in place, and leads to an expanded abdomen, with the waist area opened. Thus, since the Edo period, this has produced a culture rooted in this **posture** and **breathing method**.



Photo 4



Photo 5

Thus, **natural conditions**, **working conditions**, and **living conditions** lead Japanese people to have a **special posture**, **muscular strength**, and **breathing features**. These three characteristics lead people to have very good sensitivity to a. Micro-volume and develop a e. Free degree of rhythm. (Table1)

Next, let us talk about the effects of this posture, muscular strength, and breathing.

#### (4) **Posture**

Photo 6 shows someone in Florida, standing with her spine and pelvis at almost a right angle.

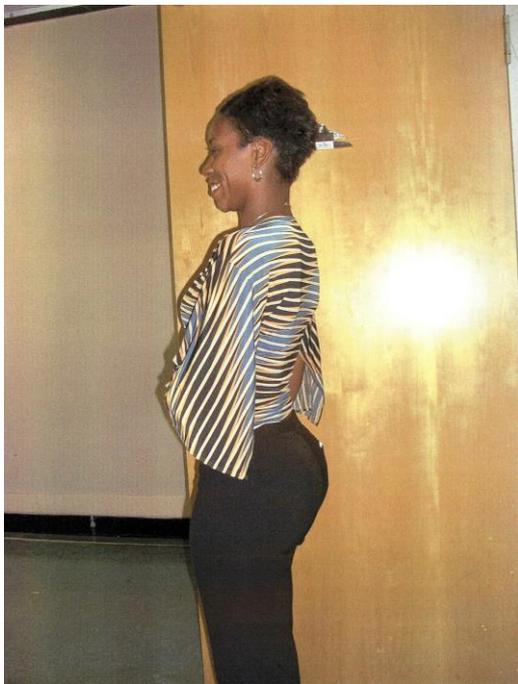


Photo 6

Conversely, Japanese when sitting or standing decline the pelvis very much, maybe as much as possible. In Photos 7 and 8, we can see that the hip-bone looks very short, even childish.



Photo 7



Photo 8

Due to this posture, the following features appear.

- i ) Posture with the knees bent, the pelvis lowered, and the abdomen expanded, lowering the center of gravity and stabilizing the body.
- ii ) Unifying the pelvis and upper body. This Japanese style of breathing creates a body shape similar to that of a beetle. Henceforth, we refer to this as the “beetle” state. See Fig. 4.

The back muscles are pulled out and tightened. As turning is difficult, it becomes difficult to execute a preparatory motion like those in tennis, as we have to rotate our body. However, we can make very fast movements, like in table tennis. This posture thus trades power for speed. Correspondingly, there is no anacrusis in Japanese music. See Fig. 4.

- iii ) As we can see, the body is motionless. As it is easy to maintain static motion, detailed work is facilitated, fostering the development of the free degree of rhythm. In addition, it is easy to relax. Meanwhile, the intricate expression facilitates great aural receptivity, and the lack of prior motion enhances the unpredictability of sound and subsequent movement.

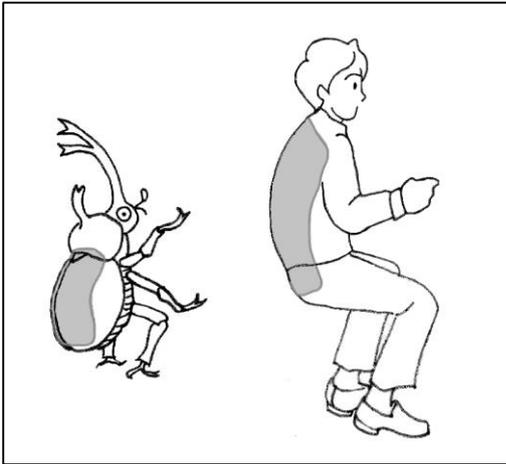


Fig. 4

### (5) Muscular strength

Muscular strength supports **posture** and **breathing**. Its main influence in music is felt in connection with e. **The free degree of rhythm**. Muscular strength makes it possible to respond to any rhythm. Dancing is possible in the elastic rhythm, irregular rhythm, or free rhythm; if the muscles are very strong, we can adopt any kind of rhythm, even expanding or shrinking.

### (6) Japanese way of breathing, *missoku*

If we bend the knees, we must keep expanding the abdomen. *Missoku* is the name of a type of breathing that involves lowering (tucking in) the pelvis, pushing out the abdomen, and raising and lowering the diaphragm with the abdomen distended.

In abdominal breathing, when we inhale, we expand the abdomen, and then when we exhale, we contract the abdomen. However, in the Japanese way of breathing, we keep the abdomen expanded, and then inhale and exhale. Therefore, only the diaphragm moves in our body.

This was the method of breathing in general use among Japanese people until the end of the Edo period, when Japanese lifestyles became more Western. It has the effect of stabilizing and immobilizing the body while at the same time inducing a greater degree of sensitivity to various factors. This is the key physical characteristic underlying much of the distinctiveness of Japanese culture and Japanese music.

As a result of *missoku*, the followings happens:

i ) Increased amount of breath. It influences the note values, length of phrases, dynamics, and **overtones**. We can get a loud voice and then we can keep a loud voice for a long time. Then, we can put the energy to overtones.

Let us listen to a Japanese folksong called the *Esashi oiwake* ([https://www.youtube.com/watch?v=0mLhE765\\_ig](https://www.youtube.com/watch?v=0mLhE765_ig)). The singer sings for a very long time with one breath. From 00:30, the singer sings for a very long time with one breath, for almost 30 seconds. Using abdominal breathing, we have to take time to expand the abdomen, whereas in the Japanese way of breathing, we do not need this time to expand.

With abdominal breathing, singers are likely to get a crescendo. in contrast, but with *missoku*, it is easy to maintain a constant sound.

iii) Lack of bodily movement leads to increased sensitivity of the receiver, for example to **overtones** and g. **Complexity of each element**. In addition, the direction and strength are becoming clear.

## 6.Overtones: integer vs. non-integer

Let's take a look at Fig. 5 (registers of musical instruments).

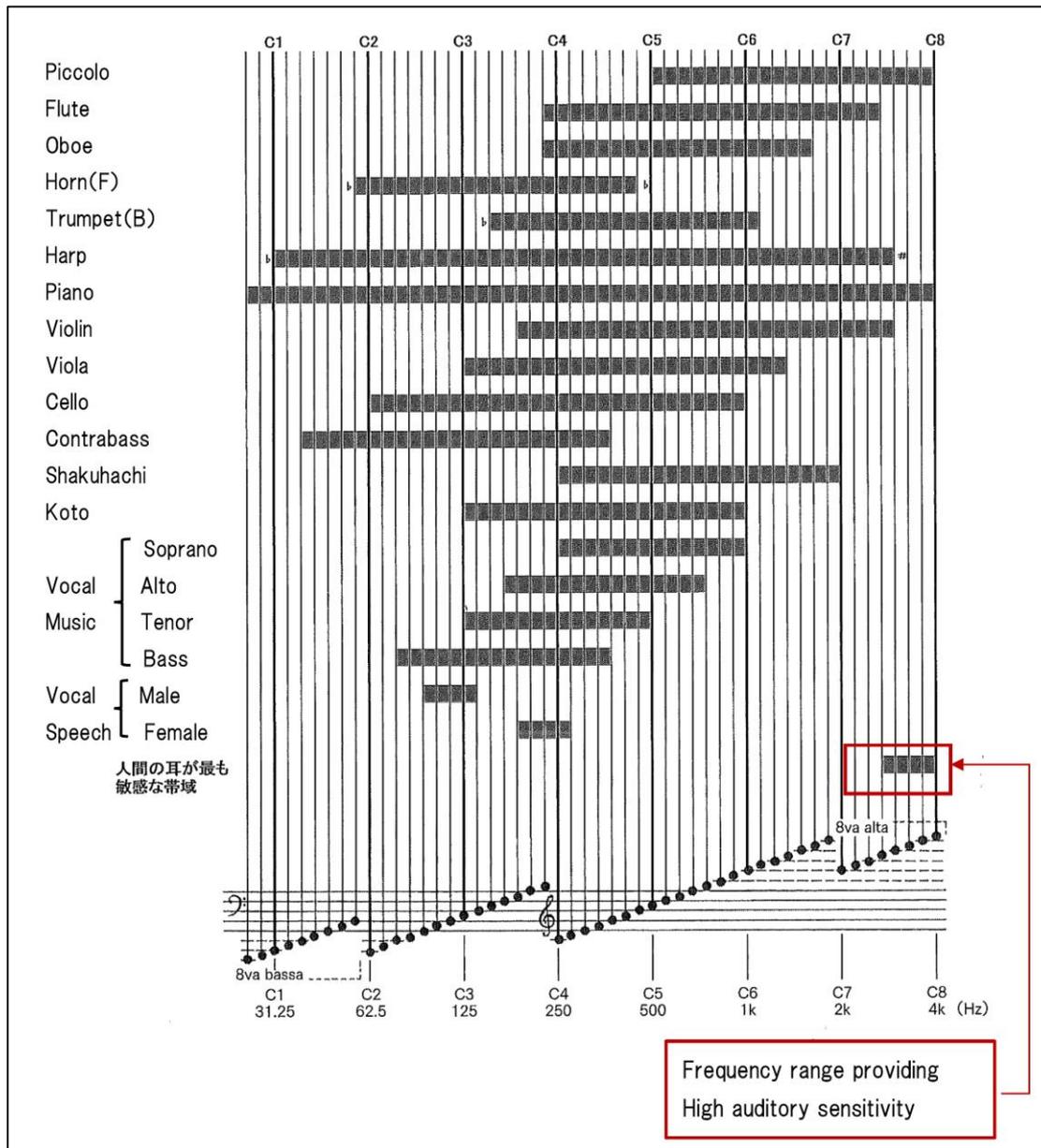


Fig. 5

The range of pitches that the human ear is most sensitive to is the half octave at the top of the range of the piccolo and the piano. Thus, most musical instruments are rather far from the most sensitive register, as are the registers of male and female talking voices, despite their importance for humankind. However, it is also far from the most sensitive register.

If so, what are we listening to in this range? The answer is **overtones**. See Fig. 6.

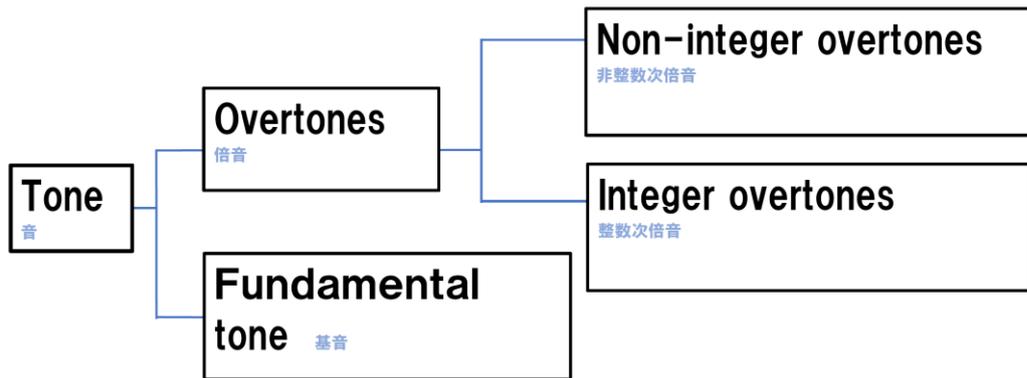


Fig. 6

Sound is a complex phenomenon, consisting of a fundamental and its overtones, divided as shown in Fig. 7.

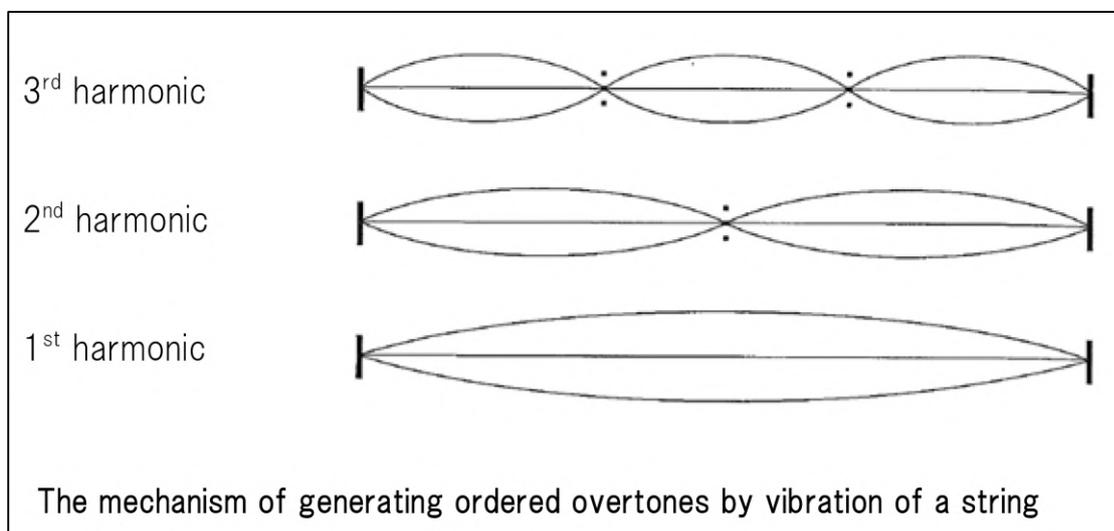


Fig. 7

Overtones are divided into two categories: integer and non-integer overtones. Integer overtones are integral multiples of the fundamental vibration frequency. Integer overtones are generated in sympathetic resonance with the fundamental and occur simultaneously with it. On the Western musical staff, they look like in Fig. 8.

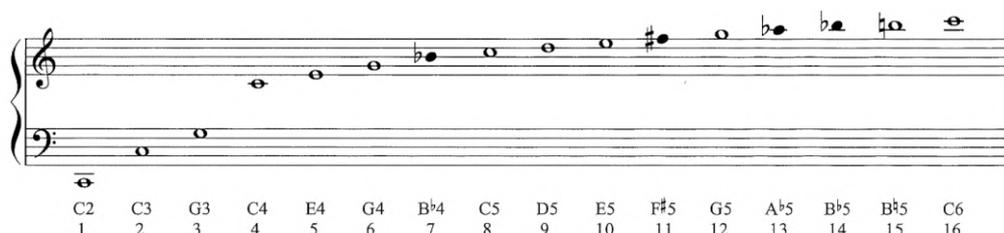
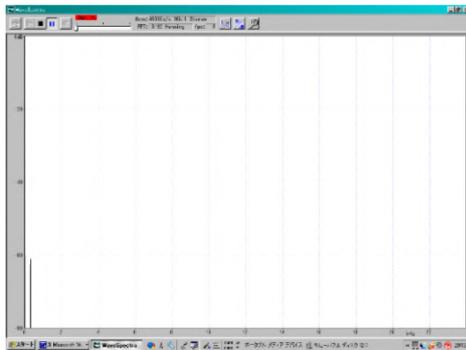


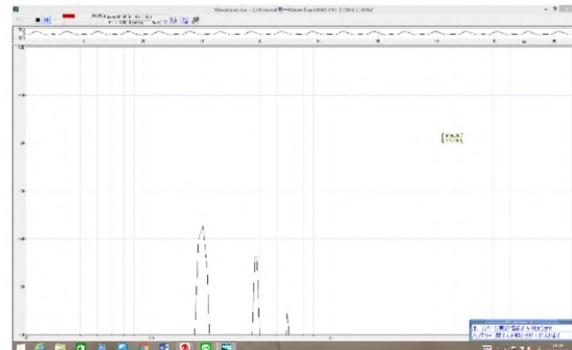
Fig. 8

Non-integer overtones appear for irregular reasons, such as scratching or hitting a string.

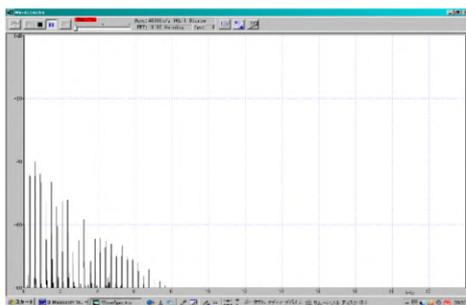
Let us consider a frequency analysis. In Fig. 9, pitch is shown on the horizontal axis and volume on the vertical axis. The difference between note-integer and non-integer overtones can be seen. Additionally, we can see the difference between **vowels** (integer overtones) and **consonants** (non-integer overtones).



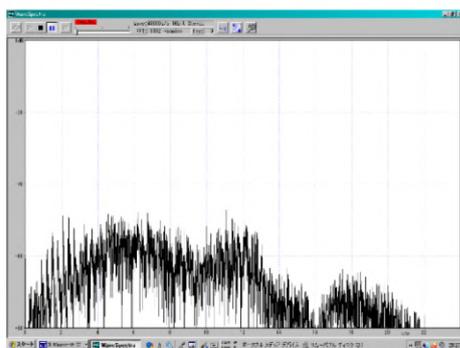
fundamental note



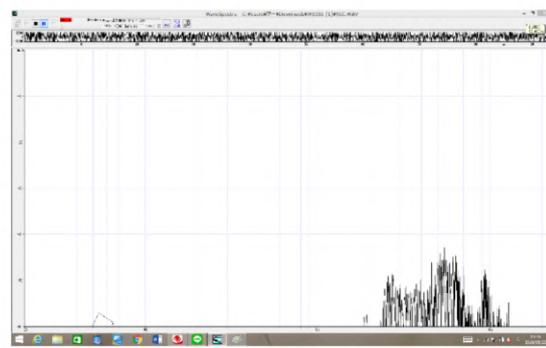
sound of "u" (vowel)



integer overtones



non-integer overtones



sound of "sh" (consonant)

Fig. 9 Wavespectrum

Next, let us look at Table 2, comparing **integer and non-integer overtones**.

Table 2

	Integer overtones	Non-integer overtones
<b>Frequency</b>	Integer multiple of fundamental note	Non-integer
<b>Waveform</b>	ordered	unordered
<b>Language</b>	Vowel	Consonant (emphasis of vowel)
<b>Salient feature of sound</b>	Harsh	Husky
<b>Impression</b>	Charisma, Solemnity	Importance, Familiarity
<b>Singer</b>	John Lennon Edith Piaf	Rod Stewart Bruce Springsteen
<b>Song</b>	Bulgarian choir	Gidayu
<b>Instrument</b>	Khene	Quena (Andean Flute)

The **integer overtone** frequency is an integral multiple of the fundamental note, and the resulting waveform is ordered. Language is a vowel. Salient features of sound are metallic, and sometimes they are harsh. Then, the impression is charismatic or solemn, and the singer may be John Lennon or Édith Piaf-like. Bulgarian choirs also match this profile. The *khene* is a Vietnamese or Thailand free reed instrument, like the Japanese *shō*.

In **non-integer overtones** and frequencies, the waveform is unordered. Language is then a consonant. Later, I will explain the **emphasis on the vowel**. The impression is that a lower non-integer overtone is very muddy, whereas a higher non-integer overtone is very husky. An example singer could be Rod Stewart or Bruce Springsteen.

*Gidayū* is forms of Japanese narrative music. They express very strongly, and often use non-integer overtones. The *quena* is an Andean flute.

## 7. Comparison of Western and Japanese music structures

Next, I would like to compare the structures of Western and Japanese **language, music, and natural sounds**. See Table 3 (Language, music, natural sound). I make several propositions below.

Table 3

	Japan 日本	the West 西洋
Language	Vowel 母音 <Integer overtones> 整数次倍音	Consonant 子音 [Non-integer overtones] 非整数次倍音
Expression	[Non-integer overtones]	Volume
Music	Vowel <Integer overtones>	Vowel <Integer overtones>
Expression	[Non-integer overtones]	Volume
Natural sound	<Integer overtones>	<Integer overtones>
Strong	[Non-integer overtones]	[Non-integer overtones]

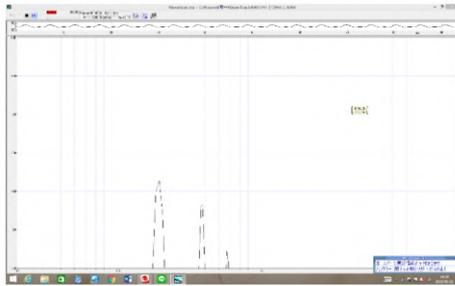
(1) *The Japanese language centers on vowels and integer overtones.* For examples, consider the words *iei* 遺影 'portrait of deceased person', *iou* 硫黄 'sulfur', *eii* 銳意 'eagerly', or *ou* 王 'king'. In contrast, Western languages tend to center on consonants, non-integer overtones, in words such as *crypt*, *dry*, *rhythm*, and *strength*. It means that the Western language is a consonant-based language. It is the author's belief that this difference may have derived from environments in which materials such as non-resonant space or stone are used. Western landmarks like Cologne Cathedral offer very good acoustics, but it is difficult to hear high overtones.

In short, as Japanese is a vowel-based language and Western languages are consonant based, it seems that **Japanese languages** will have mainly **integer overtones**, and **Western languages non-integer overtones**.

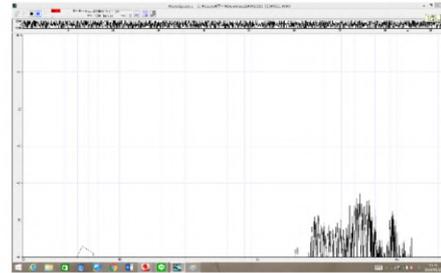
The Japanese language consists of vowels or limited combinations of consonants and vowels. This means that there are a large number of homonyms, such as *shi*, which can mean 'teacher,' 'poem' or 'death'.

Therefore, Japanese people's sense for "Frequency analysis" of overtones has increased.

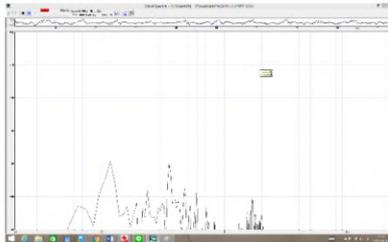
(2) *Japanese uses non-integer overtones for emphasis or strong expression.* If we look at Fig. 10, we can understand why non-integer overtones are used in Japanese.



sound of "u"



sound of "sh"



sound of "u" + non-integer overtones

Fig. 10 sound of "u" and sound of "sh" and + non-integer overtones

For strong expression, we can see that we can emphasize the vowel (the integer overtone) using non-integer overtones very easily. This reflects that, in Japanese, people use non-integer overtones for emphasis or strong expression. In contrast, in the West, if we place non-integer overtones over consonants for emphasis, it is very difficult to recognize what is added to the original tone. As a result, in the **West volume** came to be used for emphasis instead.

When musical instruments were introduced into Japan from overseas, they were modified so as to be able to produce non-integer overtones.

### (3) *Music is integer overtones*

Irrespective of a language's being sung, **music** must mainly use vowels, **integer overtones**. Otherwise, we could not recognize pitch. **Japanese** uses non-integer overtones to do so, and when they need emphasis uses **non-integer overtones**, whereas **Western music** uses **volume**. This leads the traditions to differ somewhat. To speak, the Japanese language is music, in the midst of which Japanese people live.

### (4) *Natural sound overtone*

The voice of bird singing and the sound of the brook are **integer overtones**, whereas the voices of birds at time of crisis and the sound of the waterfall or sea are **non-integer overtones**. This is the same across the world.

In the **West**, **language** is seen to be made up of **non-integer overtones** and **volume**; **music**: **integer overtones** and **volume**; **natural sound**: **integer overtones**, and **non-integer overtones**.

*In Western culture, language, music and natural sound, all have different structures.*

(5) *The Japanese language, music, and natural sounds have the same structure.* In Japan, there are no barriers between language, music, and natural sound structures. The Japanese people adapt language into music, and can use natural sounds in music because the structure is the same. Japanese people can use other sounds very easily in music, and the sounds of music in Japan have become very complex due to the influence of language and natural sounds.

In contrast, Western music and sound have different structures, so that the beauty of each stands out. I sometimes feel that Western music is very special and very different from narrative theater or something, as a talking sound and natural sound.

Please look at Fig. 2 again.

(6) *Japanese use complex sounds in music.* Thus, the Japanese incorporate language, sound, and natural sounds into music. They use complex acoustics very much, leading to activity in or communication with the unconscious. These complex acoustics sometimes cannot be understood. However, this leads to uncommunication.

## 8. Unconscious communication

Please look at Table 4. There are four important things that can happen due to unconscious communication.

Table 4

Conscious communication	Unconscious communication
Easily recognizable—Non-primitive Ex: Repeating of a simple scale	Not easily recognizable—Primitive Ex: Changes in overtone structure
Explicit	Implicit
Small amount of information	Large amount of information
Limited	Multi-faceted, multi-layered, multiple meanings Ambivalent
Not necessarily true	Truthfulness Social identity Collective unconscious

Conscious communication can be easily recognizable. If it is a kind of repetition of a simple scale like *do-re-mi, do-re-mi*, everybody can understand easily. However, if it is a very complex sound, it is very difficult to grasp what it is. This type of complex sound tends to go to the unconscious area. Thus, this unconscious communication is not easily recognizable.

Conscious communication is explicit, and unconscious communication is implicit. Moreover, conscious communication involves a small amount of information on the whole, and unconscious communication has a large amount of information. Thus, conscious communication is somewhat limited. However, unconscious communication also means multifaceted, multilayered, multi-meanings, and sometimes ambivalent –

meaning that different meanings exist together. We can express an ambivalent state of mind through unconscious communication.

There are three important things that happen due to unconscious communication.

(1) **Truth.** It is easy to say and express truth logically in language. On the other hand, it is difficult to create perfect acoustics, intonation, and expressions with unconscious communication. In fact, we cannot control unconscious communication, meaning unconscious communication is very likely to be true. Some lie detectors judge the truth using an overtone structure. In unconscious communication, we must communicate by truth or truthfulness. However, conscious communication, as we can control conscious communication, we can tell a lie anytime by language. However, in unconscious communication, we cannot tell a lie.

(2) **Social identity.** This is a kind of feeling of getting together. It's more effective to simply shout "Oh" in agreement than to hear hundred enunciations of the importance of unity. As acoustic complexity increases, unconscious communication also increases, through the addition of large amounts of "non-integer overtones."

This results in lowering the logical side of language, while unity and social identity have both been raised. If we provide many **non-integer overtones**, the ratio of unconscious communication increases.

(3) The "**collective unconscious**" was advocated by Carl Gustav Jung. In this perspective, when we listen to sounds incorporating **non-integer overtones**, such as the sound of a volcano exploding or of an earthquake, the painful experiences undergone by our ancestors are revived within our bodies through humanity's collective unconscious. It might be said that we listen to the primordial sounds of the human race that lie dormant within our bodies. These unclear and in a sense incomprehensible sounds and music provide us with tickets to enter new, unexplored worlds and to the world of yet unexperienced ideas.

## 9. Conclusion (Fig. 2)

(1) From their mammalian functions and Japan's special environment, Japanese got the special traits, a. **Micro-volume, posture, muscular strength, Japanese way of breathing "Missoku."**

(2) These lead Japanese people to high sensitivity to a. **Micro-volume**, b. **Subtle change in each element**, c. **Changes in integer overtones**, and e. **Free degree of rhythm.**

(3) The Japanese started to use **vowel-based language**, led by these elements; it made Japanese music different from other countries' music.

(4) As a result, d. **Non-integer overtones** are used when emphasizing.

(5) **The structures of music, language, and sound became the same in Japan.** As a result, complex music that transcends boundaries and incorporates language and sound has been established. **Complex sounds** in music are used very frequently.

(6) By handling complex acoustics, the rate of **unconscious communication** increases.

(7) Unconscious communication makes music deeply related to the essential parts of human beings, such as truthfulness, social identity, and **collective unconscious.**

(8) Japanese music has become music attuned to the origin and essence of humankind—to their "ancient brains."

Japanese music's unique structure is that music, language, and the sounds of nature have the same structure. Japanese music relates to unconscious communication for this reason. In short, Japanese music points to an old and new way for the music of humankind—not a method of “element decomposition and reconstruction,” but a method of “managing a complex system as a complex system.”



# ***Abstracts***



SPA-005

## **The Values of Integrating Project-Based and Collaborative Learning in Professional Training**

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### **Abstract**

The concept of Collaborative learning and School as Learning Community can be integrated to make professional training culturally meaningful especially in 21<sup>st</sup> century. These concepts cultivate professional training to provide rich and meaningful experience to music education students. Collaborative Music Community Project was developed to provide experience for music education students to apply theories into practice effectively. This study was aimed to find how Collaborative Music Community Project could 1) infuse collaborative learning virtues among 32 undergraduate and ten graduate music education students and 2) enrich sense and meaning of sharing to the music learning community in the area. Using Design Thinking Process including Empathize, Define, Ideate, Prototype, and Test, college students conducted panel discussions, specified needs, designed six 45-minute rotating sessions, created lesson plans and teaching tools, rehearsed in microteaching sessions before launching the sessions with school graders. College students with diverse instrumental and music teaching background collaborated in peer sharing along with advisor's co-mentoring guidance in order to ensure that they were ready to give clinic sessions to school graders, who will perform in a concert at the end of rotating sessions.

The qualitative data by means of personal response and reflection were gathered by individual and group interviews whereas collaborative behaviours were observed and documented. Quantitative data collected by questionnaires showed school graders' appreciation toward the project. Interview records showed that both undergraduate and graduate students actively participated in a collaborative learning environment throughout the process. Sense of responsibility to music community was introduced in a real-life situation making the emotional attachment and positive memory. Findings implied that the project was an effective approach to merge undergraduate and graduate music education students to collaborative learning. Undergraduate students learn practical and management skills from graduate students while graduate students needed hand on support from undergrad students. College students grasped the meaning of how to teach and how they can contribute to the class and community. Primary and secondary students were inspired and motivated by the project. School directors and music teachers appreciated the process of cooperative workshop sessions as well as the final open-house concert product. Implications to professional music teacher training includes applicable collaborative action plan and responses and suggestions from participants.

SPA-008

## **Aweng, Timek, Garaw (Sound, Voice, Movement): Culturally Responsive and Mother-Tongue Based Music Education in the Ilocos Region of the Philippines**

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### **Abstract**

It has been almost a decade since the Philippines implemented the mother-tongue based multilingual education (MTB-MLE) approach in teaching, together with the reform of the basic education curriculum, within the K-12 program. These reforms established the teaching of music as a subject area for early grades, together with the use of the learners' mother-tongue.

Studies show the benefits of the use of culturally responsive materials and utilizing learners' mother-tongue inside the classroom, especially for colonized countries. Students learn using the language that they understand and this fosters participation, longer attention span, and multifaceted development. Furthermore, education that is culturally responsive doesn't only provide enculturation, but it also enhances the learning process.

This paper considers a pre-service teacher training project that proposed the development of a worktext for teachers and students that incorporates documented and undocumented local songs, dances, rhymes and games from the Ilocos region through archival and field research. It included specific objectives, teacher-facilitated and student-independent activities, and culturally related tasks using a developed spiral curriculum. In addition the community's *cultural calendar* was taken into account which was reflected with the sequences of materials and in the planning of lesson activities. These were then implemented to grade one learners from the said region whose mother-tongue is *Ilocano*. The implementation lasted for one academic quarter with once a week lesson for forty (40) minutes, that ended on a public performance wherein the learners were able to sing and play to their families and other members of the community songs, rhymes and games that hasn't been heard for a long time.

Findings from the implementation show that it presents fluid learning experiences for cognitive and psychomotor domains, as well as positive engagement with local music. This article argues that these are positive implications of mother-tongue and culturally responsive music education.

SPA-009

## **Exploring Perceived Motivating Factors of Busy Urban Adults to Participate in Auditioned Community Choirs: A Grounded Theory Study in Shanghai Context**

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*Huang Qian*

*The University of Hong Kong, China*

### **Abstract**

Choir, which originates from Western religions, has developed along with the process of national independence since its first introduction into China. Choir in China has been presenting with double identity of “mass singing” and “elegant art”. With the rapid development of economy and culture, a new type of Choir with busy urban adults as the main body has emerged, showing new cultural phenomena. The purpose of this grounded study was to explore the motivating factors those busy urban adults perceive in their participation in auditioned community choirs in Shanghai. Purposive maximum variation sampling was used to identify three auditioned community choirs where 20 interviews were conducted with 15 different adult singers. Three waves of data collection and analysis revealed a dynamic motivational factors model of “Music literacy-psychological Needs-urban Context (MNC)” covering eight main categories: family support, past in-and out-of-school music activities and experiences, music literacy, psychological needs, teacher influences, conductor influences and urban situation. This study reveals ‘psychological needs’ as inner factors motivating busy urban adults participating in the choir without external incentives, including aesthetic needs, spiritual needs, music knowledge needs, decompression needs, social needs, and self-realization needs. Music literacy as intervening conditions was identified between past in-and out-of-school music activities and experiences, family-school-urban supports and aesthetic needs, spiritual needs, music knowledge needs and self-realization needs. This study also provides evidences and aspirations in the spectrums of city planning, family education and music education in and out of school: Firstly, the service and resources provided by the city offers situational motivation for busy urban adults to participate in the choir; Secondly, parents’ appropriate pressure serves as an important factor in establishing a stable children’s interest in music; Thirdly, the general music education in Mainland China only focuses on results rather than the process and the concept of “music education for everyone” is inefficiently implemented while students generally form musical aesthetic through private music teachers and choir conductors by their dedication and the love for music. Last but not least, participants shared a strong expectation for contemporary Chinese original choral works reflecting people’s mind and life. They believe that it is necessary to consolidate K12 music education and improve the music aesthetic ability of urban cultural administrators.

SPA-011

## **A Comparative Study of Piano Programs at University-Level Institutions in China and the United States**

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### **Abstract**

As we work and study in our increasingly globalized society, there is a growing trend of Chinese piano students choosing to pursue their higher education in the United States. Elite music institutions in America are also seeking and recruiting a large number of Chinese pianists. The purpose of this study was to promote a greater understanding of Chinese and American piano programs in higher education through examining 20 selected university-level institutions. To accomplish this goal, (1) the researcher collected data from the representative university-level institutions in both countries regarding their piano-related degree offerings, audition requirements, curriculum requirements, and core course offerings for the piano programs; (2) the researcher also conducted an online survey to gather information regarding current faculty members' and students' perceptions of their piano programs. A total number of 34 student participants and 7 faculty participants in the U.S. along with 119 student participants and 11 faculty participants in China completed the questionnaires. Results indicated that both the Chinese and the U.S. institutions had a similar structure in their curricula, the balance of required credits in each area was noticeably different. Although results indicated that overall, there is no significant differences between the students' level of satisfaction of the core courses in their piano programs, students in the U.S. were significantly more satisfied with the applied lessons and the degree recital in their programs. It is encouraging that a large percentage of the students believed they received excellent advice regarding practice strategies and artistry in their applied lessons in both countries. According to the comparative results, the factors that attract Chinese students to study in the U.S. can be attributed to the following aspects: 1) students plan to seek the most advanced degree—doctoral degree in piano performance; 2) students may have less stress related to studying for standardized tests during the application process; 3) students may be able to complete the program and obtain the master's degree in a shorter period of time; 4) the design of the programs/curriculums may allow students to receive more personal attention and more professional development; 5) students may become more independent and can receive better quality of applied lessons and degree recital preparation; and 6) they may gain more performance opportunities and receive a comprehensive view of the subject matter.

SPA-012

## **The Influence of Family Background on Chinese College Music Performance Major Students: A Case Study**

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### **Abstract**

The issue of “the factors influencing students’ academic achievement” has become important to researchers and educators, and family background is considered to be an important factor to influence on students’ development. Many researchers have provided evidence from different aspects to support this statement. Even though numerous studies contributed to analyzing the relationship between family background and students’ development, little literature examined from the aspect of college music major students. Reconsidering the basis of college education, however, suggests that educators and students are two fundamental component elements. Without knowing students’ individual background, educators may only provide what they think is effective in teaching, which can cause limit education. Therefore, to provide a better music teaching environment, I deemed it important to acquire knowledge about students’ family background. The main purpose of this research is to explore Chinese college music performance major students’ family background, and to raise proposals regarding future development direction of the music education.

Based on this concept, a quantitative method was adopted in this research. Students’ family background, represented by their responses to several survey questions, will be fully analyzed to obtain direct and concrete analytical data. Demographic data were collected, including students’ growth environment, parents’ educational level and occupation, family economic status, as well as students’ thoughts towards music itself and their future plans. All participants (N = 75) in this research were music performance majors in one selected Chinese university.

The result indicated that students’ learning process may influenced by family background, but their future plans were connected to individual thoughts more closely instead of family factors: students’ connection with music was affected by their living environment; the length of time that students studying in the certain instrument was influenced by family economic status. However, the intrinsic motivation was the main factor promoting students on whether selecting music as their major and as their jobs or not in and after studying in the university. According to the findings, some suggestions regarding educational administrative organization, school administrations and educators were proposed.

SPA-017

## **Inclusion for Students with Visual Impairment in the Music Classroom of Mainstream School in China**

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### **Abstract**

Driven by China's "Learning in Regular Class"(LRC) inclusive education policy, more and more visually impaired students choose to study in mainstream schools. Under this premise, music education at mainstream schools will also become in demand as the proportion of visually impaired students attending regular classes increases. Of course, quality improvements will also be a trend. Therefore, the purpose of this research is to use this article to further explore the possibility of improving the quality of music education for visually impaired students in mainstream schools. Finally, this research drew the following research conclusions from a comprehensive analysis of literature: The Chinese government is providing a guarantee for mainstream schools to implement a more inclusive campus culture and promote LRC's inclusive education. Among these are that the government should increase funding subsidies for special education in mainstream schools, and plan and implement commonly-available music textbooks for visually impaired and sighted students during the compulsory education stage of mainstream schools. Mainstream schools are the key to promoting music teachers to practice their teaching strategies and improving the quality of music teaching for visually impaired students. They should fully support the on-the-job training of music teachers and develop a more inclusive campus culture throughout the school; meanwhile, they should also actively implement the resource classroom model or itinerant teacher model promoted by the Chinese government in accordance with the status quo. However, although the government and mainstream schools both play a vital role, what really improves the quality of music teaching for visually impaired students is the quality of interaction between teachers and students. That is music teachers should strengthen relevant on-the-job training when needed, maintain a positive attitude towards learning and teaching, and must be clear about the differences in learning needs and teaching methods between visually impaired students and sighted peers, and increase the participation of visually impaired students in music courses, music activities, and music-making through continuous music teaching practices, and to promote their social inclusion on a broader level. All in all, music teachers are an essential and core component to improving the quality of music teaching for visually impaired students, but mainstream schools and governments should support them vigorously and continue to make corresponding policies and adjustments. Therefore, as far as the Chinese government, mainstream schools, and music teachers are concerned, the three parties should continue to reflect and implement more positive changes.

SPA-019

## **The Influence of Music Environment on Young Children's Musical Development: A Waldorf Kindergarten as an Example**

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### **Abstract**

Music is identified as one of human's multiple intelligences (Gardner, 1983). Edwin Gordon (1997) proposed that children's musicality will continue to develop along with the interaction between genetics and environmental stimuli before the age of nine. According to above theoretical backgrounds, we believe the sooner the better that children develop music intelligences, and a rich musical environment must be provided to stimulate their musical potential. Nevertheless, children's musical development is reflected in their musical performance. By observing children's musical performance, we can explore the stages of their development in music learning (Welch, 2007). This study aimed to use a Waldorf kindergarten as an example to explore the influence of musical environment on young children's musical development. The researcher observed and analyzed the music environment content provided by the kindergarten and the music behaviors of two 4-year-old children from January 22, 2018 to July 10, 2018. Through the literature review, the researcher developed the music development indicators for dynamic, rhythm and pitch, in order to analyze the music behaviors of the two children.

Based on the observations and analysis results, the conclusions of this study were as follows:

1. The music environment provided by Waldorf Kindergarten was not for music teaching purpose. The teacher used pitch to bring in words and songs as transition to switch daily routine. Music was every moment to accompany children.
2. In Waldorf Kindergarten music environment, the development in dynamic of young children was consistent with or better than the same age children according to the literature.
3. In Waldorf Kindergarten music environment, children's development in rhythm, regardless of rhythm, beat, tempo, was consistent with or advance to their age according to the literature.
4. In Waldorf Kindergarten music environment, the two children's development in pitch was in line with their age according to the literature.

Based on the conclusions, the researcher made recommendations to kindergarten teachers, music teachers, teacher training, parents, and researchers who were interested in early childhood music education.

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SPA-020

## **The Development Status of the Credit System in China's Professional Music Education**

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### **Abstract**

Credit system acts as a teaching system in institution of higher education. It was established in the late 19th century in America. Experience 100 years of gradual improvement in practice, it has become the main system and mode in higher education management. In the early 20th century higher professional music institutions in China conducted credit system and in mid-20th century it drew academic year system from the former Soviet Union. In the 80's of 20th century, in order to meet the diverse needs of community's cultural talents, each institution conducted reform on teaching management system and embarked on the way of credit conversion. Professional music education has its special significant which is different from normal higher education, the credit system has its own advantages and specific requirements. Credit system reform in higher professional music education must strive to make the two aspects' advantages and characteristics reach ideal state.

In this paper it starts from generation of credit system in higher education system and development clue to make a comprehensive description and comparison, focuses on credit system management mode and characteristics in higher music education in Europe, the United States and other countries. Marking a milestone in the development of credit system in Europe, the Credit System is significantly influential in professional music education. This research analyses the development of conservatories in mainland China in terms of their credit systems and teaching management. Explores the possible impacts that Credit System may have on their teaching system reform and their assuring educational and teaching quality. The objective is to provide pertinent ideas and thoughts working towards the ideal of borderless higher music education.

SPA-024

## The Significance of “Shigin” in Japanese American Communities: Examining Nikkei Shigin Practitioners’ Traditional Japanese Roots

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*Sahomi Honda*  
*Chiba University, Japan*

### Abstract

#### Background

In 2015, The International Organization of Migrants announced that the numbers of immigrants has reached 244 million (3.3% of the world population). In today’s global society, an increasing number of people are traveling between countries. The musical and cultural identities of these global citizens have been a growing subject of attention in the music education community. As Japan and other countries become super-aging societies, understanding the rich, lifelong relationship that some people have with music will provide inspiration for the future direction of music education.

#### Prior Work

This is not the first time that researchers have focused their attention on the musical experiences of immigrants. Sean Ichiro Manes (2009) wrote about how a Japanese American Shamisen instructor translated Japanese musical notation into English along with other challenges of teaching Shamisen in the U.S. Jane Southcott & Dawn Joseph (2015) conducted semi-structured interviews with the members of an Italian women’s choir community in Australia during which they discussed the importance of combatting isolation through communal music-making.

#### Objective

The objective of this research is to clearly show what *shigin* musical activities mean to Japanese American communities. The art of *shigin* involves reciting Chinese poetry (or Japanese poetry written in Chinese) called *kanshi*; though this genre of traditional Japanese vocal music originally began in the 19<sup>th</sup> century, *shigin* continues to have many devotees across Japan to this day. This research will focus on the viewpoints of Japanese American participants who are active members of *shigin* poetry groups to determine what meaning people find in *shigin* recitals.

#### Method

We attended several meetings of *shigin* poetry groups in Seattle and Los Angeles between 2017 and 2019; after each meeting and performance, we conducted written surveys and semi-structured interviews with the participants (over 120 people in total) to determine what *shigin* meant to them.

#### Conclusion

We found that most of the Japanese Americans who practice *shigin* found it to be important and enjoyable in one or more of the following three ways: as a mean of networking through *shigin* performances, as an academic exercise of learning *Kanshi* poems, and as a way of maintaining a healthy lifestyle through vocalization. We also considered how *shigin*’s particular appeal is related to other musical activities.

SPA-029

## **Assessing Alignment between Curriculum Standards and Teachers' Instructional Practices in China's School Music Education**

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### **Abstract**

Alignment between curriculum standards and teachers' classroom instructional practices is critical in accessing the effectiveness of curriculum implementation and students' learning. As a part of the ongoing reform movement, the study is intended to investigate the implementation status of national music curricula in schools. By providing SEC-based empirical evidence, the study can also help both education decision makers and teachers to be reflective, critical and creative in improving their curriculum content and teaching practices. The research questions are:

- RQ 1: What are the intended learning goals be achieved for each music content defined in the national curriculum standards?
- RQ 2: To what extent are music teachers' instructional practices aligned with the standards in general?
- RQ 3: What variation exists in teachers' enactments of a curriculum in terms of emphasis in learning contents and objectives?

Using a modified version of the Surveys of Enacted Curriculum (SEC) for music, this study explored the alignment between enacted curriculum and the national curriculum standards in Chinese school system. Standards and instructional practices were represented using sets of two-dimensional matrices that comprised content themes and five learning domains: Cognitive, Affective, Psychomotor, Social, and Cultural. The alignment result showed an overall high level of alignment (0.81-0.90) between the two, where the degree of alignment decreased gradually from low to high grade bands. Individual variations are evident in both learning content emphasis and learning objective, in which more emphasis was put on cognitive, affective and psychomotor development than social and cultural aspects. The music SEC provided a promising common ground for comparisons of music curriculum enactment across school, regions and, possibly, education systems. The incorporation of the five learning domains ensured that most of the intended learning outcomes from school music education are articulated in the standards-based system.

SPA-030

## **Professional Music Teachers' Knowledge and Beliefs: Re-Forming Pedagogical Content Knowledge**

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### **Abstract**

The concept of “pedagogical content knowledge” (PCK) was introduced by L. S. Shulman. He specified 7 categories of professional knowledge required for teaching, and also defined PCK as the “special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding” (1987, p.8) among them. Though some researchers have argued the existence of PCK, others have supported the notion that PCK is too general of a term and each of the 7 types of knowledge are integral. Furthermore, these frameworks have been used, expanded and challenged by a number of authors in mathematics, science, social studies, music, along with others. Within music education, several researchers have investigated how PCK affects the transfer of instruction and preparation for class teaching. Ogawa and Murakami also examined the professional knowledge and skills of talented teachers, and proposed a transformative model in which PCK, SCK (Specialized Content Knowledge) and SSP (Selecting Strategies in Practice) were shown.

The purpose of this study is to verify our model of organized professional music teaching knowledge. In study 1, 13 experienced music teachers in elementary schools were asked about their music knowledge, understanding and skills. In order to collect the data, a 26 item, 5-point Likert-type questionnaire was conducted. As a result of factor analysis (principal axis factoring with varimax rotation), PCK, SCK and SSP emerged as 3 factors. The majority of the teachers reported SCK (Mean=4.4) and SSP (Mean=4.5) were related to the core of professional music teaching strategies.

In study 2, the responses of 42 university students in a pre-service teacher training course were gathered and compared before and after their teaching practice using the same survey form as Study 1 (added “Are you able to”). There were significant differences between the before and after teaching practice via the Wilcoxon signed rank test ( $p < .05$ ). All students recognized the effectiveness obtained by the opportunities of practice. Some evaluated themselves more highly (73.4%) compared to before their practice, others revealed an unsatisfactory level of detecting their lack of musical knowledge and skills (13.7%).

The results of this study support our theoretical transformative model in which the 3 domains combine, and music experience in teaching practice is very effective for the development of pre-service teachers' musical knowledge and skills. Music educators should help students organize their training period in order to guide the development of student competence.

SPA-031

## **Inclusive Music Education in the U.S. and East Asia: Creating Positive Learning and Performance Opportunities for All**

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### **Abstract**

Diversity can be defined on many different axes, such as gender, race, culture and age, and all of these challenge music educators to find creative answers to the question: “How do we create a more inclusive music education system?” Inclusive music education can benefit potential students by giving them more opportunities, just as it benefits the community by providing more cultural outlets and the music world overall by bringing in new voices, yet even in the 21st century, there remains a lack of diversity in music education and organizations. One aspect of providing more learning and performance opportunities in different is understanding which axes of diversity are most crucial to a given region. This paper addresses diversity in the U.S. and East Asia and explores several examples of education programs, conferences, competitions and in the United States and East Asia. Furthermore, I will discuss best practices regarding how we can design and create an inclusive music education program and how to support this kind of music education. Recently, classical music institutions have made progress towards creating models and goals for diversity and developing new programs that incorporate musicians and educators who are from underrepresented groups and minorities. Some music institutions now include minority composers’ music in audition materials, and music competitions include diverse repertoire according to race and gender. It is important to note, however, that in places like East Asia, inclusivity can be achieved in different ways compared to the U.S., and in fact the notion of diversity must some degree be targeted to each culture. For example, the Korean government has funded and created programs and provided services and music education opportunities to refugees from North Korea and to multicultural families who are quite a minority within the decidedly homogenous Korean society. Regardless of these regional nuances, however, creating positive musical learning and performance opportunities for all will help to make every society more diverse and inclusive.

SPA-037

## **Music for Well-Being: A Focus on Hospital**

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### **Abstract**

The *Hush Foundation* was established in 2000 and grew from an initiative of physician, Catherine Crock AM, in response to her work with children undergoing painful medical procedures at The Royal Children's Hospital Melbourne, Australia. Working alongside anaesthetists in the development of new pain relief systems for these young patients, she sought to reduce the stress and anxiety felt by patients, families and staff – through music. This presentation positions the interaction of musicians, composers, commissioners of musical works, and influences of life's experiences within a larger setting of the fourth industrial revolution.

The *Hush Foundation* undertook additional research to transform the environment of the operating theatre and recovery rooms through the commissioning of especially composed music from some of Australia's foremost musicians and composers and recorded by professional ensembles. The resulting Hush Collection has focused on a classical music offering with Australia's most well-known and loved composers, conductors and orchestras donating their time and talent to produce a growing number of albums of music.

The approach taken for this presentation is a case study of an evolving activity. Experiences of those involved in the *Hush Foundation* and the making of the Hush Collection albums have been documented. Relevant elements of the fourth industrial revolution are incorporated in the study.

The Hush Collection has grown to 19 volumes of music, sold to the public and shared with palliative care, nursing homes and general surgery in hospitals in Australia and overseas. The National Composers in Residence project (volume 18) engaged with young patients at children's hospitals around Australia. The composed songs were inspired by the adolescent patients with chronic illness and mental health challenges who the composers worked with during hospital residencies. The outcome of this Project, *Collective Wisdom* features new and original works composed by six established and six emerging composers in Australia. The Project has resulted in a composer's brief with suggestions that compositions should be in major keys, optimistic, and consistency in tempo and dynamic choices. The Foundation has spread across all the specialist children's hospitals in Australia, with live performances taking place in suitable hospital spaces.

The involvement of musicians in the *Hush Foundation* illustrates their strengths, through their musical practices, to contribute significantly to the community - especially in therapy, healing and well-being. The Foundation operates in partnership with multi-disciplinary groups and musicians work with different aspects of engagement supporting non-musical attributes as outcomes.

SPA-038

## **Impact of Teachers' Previous Learning and Teaching Experience on Their Current Pedagogy and Beliefs: Multiple Case Studies on Three Hong Kong Instrumental Teachers**

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### **Abstract**

In Hong Kong, not all instrumental teachers necessarily graduate from a university or conservatory with a music major, many of them receiving performance training instead of learning pedagogical skills. In addition, unlike some professions, such as medical doctors, lawyers, and engineers, Hong Kong does not have a statutory organisation to supervise the qualifications and professional development of instrumental teachers. As a result, the development, both of pedagogical skills and the necessary professional attributes required of an instrumental teacher, have not received the attention they deserve. The purpose of this study was to explore how Hong Kong instrumental teachers perceive their professional development paths with reference to their own learning and teaching experiences. Purposeful sampling was employed as the means of selecting participants for the diversity of their backgrounds. The selected participants were three female instrumental teachers who taught the piano and violin. Perceptions of teacher evaluation and the impact of learning experiences on teachers' professional development were collected from the participants through interviews, teaching diaries, and field notes.

Several themes emerged from the data collected over an approximately six-month period. First, all the participants experienced long musical apprenticeships. Second, the teachers rarely perceived that pedagogical skills are 'learnable' skills as performing skills. Finally, all the teachers were only interested in practical, examination-oriented professional development programmes, as opposed to academic or pedagogically-oriented outcomes such as journals or conferences. After emerging the themes from data collected, this study discussed the musical apprenticeship learning experiences for teachers, dominant preference of performance qualifications and the issue of unitisation in the professional development of music teachers in Hong Kong.

There are several implications for music teachers and professional development programme providers arising as a result of this study. It is suggested that teachers should teach music as a creative art, rather than the reproduction of a series of printed pages. In addition, professional development programmes for music teachers should focus more on instructional practices than content knowledge in a bid to boost already trained musicians' pedagogical preparation. Furthermore, instrumental teachers' ability and willingness to learn from research is far behind that of other professionals, such as medical doctors and scientists. Finally, teachers should aim to develop a broader view and vision of their professional development, rather than focusing purely on following the practical performing examination path. The unitisation of professional development choices would appear to be the most urgent and pressing problem faced by instrumental teachers.

SPA-040

## **An Exploration of Chinese College Music Majors' Self-Regulated Learning in Music Practice**

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### **Abstract**

The research on music practice has pointed that mastering an instrument is not only a matter of several thousand hours of practice but also engaged with motivation, cognition, learning strategies, and so on. Since the 1990s, relevant researchers have started to understand how musician students' behaviors, motivations, and metacognition work during their practice process through the lens of Self-Regulated Learning (SRL) theory to clarify what behavioral, cognitive, and motivational resources needed for effective music practice. Currently, the level of self-regulated learning ability is generally considered to be an important factor affecting the practice efficiency and musical achievement of music instrumental learners.

The purpose of the study is to explore the current situation of Chinese college music majors' self-regulated learning in music practice in the Mainland China context, and to fill the gap that the majority of studies that conducted in the western context and focused on musician students majoring in western musical instruments (e.g., piano, violin).

The presentation will focus on reporting three research questions:

- 1) What are the current characteristics of Chinese college music majors' self-regulated learning in music practice?
- 2) To what extent the level of self-regulating music practice between different instrument types and music styles different is?
- 3) To what extent the variables (e.g., the education level, the years of learning music, and practice duration) correlate to the level of self-regulated learning in music practice?

An online questionnaire designed base on Miksza (2012)'s Self-Regulated Practice Behavior Scale was used to collect data. A questionnaire link was distributed to Chinese college music majors by contacting familiar university teachers from February to March 2021. The data will be analyzed with descriptive and inferential statistics for an in-depth understanding of this topic.

This study will reflect the current situation in terms of college music majors' practice in the Mainland China context, which will provide insights for future research in developing self-regulated learning ability in music practice. Also, in the higher education, this study will become a useful reference to help educators and administrators to refine musical instrument learning curriculum, update the teaching methods to help Chinese college music majors develop their practice effectiveness and self-regulated learning ability.

SPA-041

## **Teaching Cantonese Opera in Schools for Cultural Identity: A Multiple Case Study in Hong Kong and Guangzhou, China**

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*Zhaoxia Wang*

*South China Normal University, China*

### **Abstract**

Since the return of Hong Kong's sovereignty to China in 1997, Cantonese opera has been included in the Special Administrative Region's school music curriculum. In 2017, the Government of Guangdong Province issued an ordinance to promote the transmission of the traditional music genre through all channels, including school education. Cantonese opera has been officially included in the policy agenda of both Hong Kong and mainland China, to preserve it and to promote national and cultural education in schools.

Hong Kong people have been facing a challenge of identities. The initiative to develop Moral and National Education as compulsory subjects in schools in 2012 was opposed by younger generations. This was one of the reasons for the protest event "Occupy Central". At present, there appears to be conflict between younger generations striving for their "Hongkongese" identity, and another group that embraces and defends their Chinese national identity. A broad-based concept of national education has been proposed, which is a comprehensive model that should include national, political, social and cultural identity. As Cantonese opera is an art form replete with Chinese cultural elements, and thus suitable for promoting Chinese cultural identity.

This paper reports part of a larger study examining the extent to which learning Cantonese opera in Hong Kong and Guangzhou schools may contribute to the development of Chinese cultural identity in students. Based on the Social Identity Theory, a multiple-case study in which four schools (2 primary and 2 junior secondary) from both cities will be implemented from November 2020 to May 2021. The major purpose of the study is to investigate how teachers in both cities develop students' cultural identity through teaching Cantonese opera in schools. Researchers will visit the schools regularly over three months, observe the classes and interview teachers in semi-structured format and students in focus groups for feedback and reflection on students' development of Chinese cultural identity.

Initial findings reflect that: 1) teachers from the two cities perceived differently in the goals of teaching Cantonese opera in music classes, and 2) teachers' training may impact on the quality of teaching in developing students' cultural identity. This study will provide insights for nurturing cultural identity through traditional music learning in schools, which is a common issue in global music education.

SPA-044

## **Exploring the Pedagogical Possibilities of the Idea of Composition Based on Children's Interests and Strengths**

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### **Abstract**

Music-making activities in elementary schools in Japan follow the Japanese national curriculum. The current trend of music-making within the curriculum focuses on elements such as timbre, rhythm, tempo, melody, dynamics, and beat. These activities are expected to help children learn the characteristics of the various elements of music and their functions. However, children may not be able to exercise their creativity freely in such activities due to restrictions based on learning content; in some cases, the music they create may all be similar. Recent studies have reported cases in which teachers deliberately set fewer musical elements when children's improvisation activity, thereby reducing restrictions for the children and eliciting a variety of expressions from them. The idea behind this is to create multi-stylistic collage-style music by first focusing on each child's intention—what they want to attempt and what they are good at—and encouraging them to try these expressions. One of the authors of this paper developed a brand-new learning material, based on the idea of “composition based on children's interests and strengths,” in 2017.

This study aims to illustrate the activities carried out using the learning material, taught by the authors of this paper, in two classes of the fifth grade (age range of 10–11 years) in Nara, Japan. It focuses on creative music-making practices and the pedagogical possibilities of the idea, through discussing their music-making and creative process.

As a result, children could make music with a mixture of diverse expressions. Students mobilized everything for their performances, including a variety of instruments, use of rhythmic patterns, singular sounds that had an impact, and quotations from their music repertoire. Furthermore, based on the characteristics of the children in each class, the content of the music for class 1 and class 2 differed.

The pedagogical possibilities of the idea of “composition based on children's interests and strengths” are threefold: first, as we could illustrate from the classes, this idea contributes in eliciting a variety of expressions from the children; second, it facilitates children's realization that they can incorporate these various expressions into their music; and third, it allows children to think of each member's interests and strengths as a starting point of creative activity. Although this is a different approach from the aforementioned current trend in Japan, this need not be limited to music and can be generalized to many other creative projects.

SPA-050

## **Localized or Diversified Music Teaching: A Study of Folk Song Selections in Taiwan Primary School Music Textbooks**

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*Ziqi Fu*

*Beijing Language and Culture University, China*

### **Abstract**

The selection of folk songs repertoire in primary school music textbooks in Taiwan shows obvious characteristic of localization. Due to the influence of politics, society and geographical factors, the limitations of folk song teaching in primary school music textbooks in Taiwan are quite prominent. In order to understand the characteristics and problems of music selection in primary school textbooks in Taiwan, explore the role and value of Chinese folk songs in primary school music textbooks, and promote the inheritance of Chinese folk songs and the cross-strait exchanges in music culture, this study combs and compares the primary school music textbooks of the Kangxuan edition, the Hanlin edition and the Renyin edition, trying to find out: (1) the proportion of folk songs in Taiwan and mainland textbooks, as well as the proportion of mainland folk songs and Taiwan local folk songs in different editions; (2) the trend of folk songs used in primary school textbooks of different grades; (3) the differences between Taiwan local folk songs and folk songs from other regions of Chinese mainland in teaching objectives and methods. Through reviewing literature, collecting data of the repertoire and analyzing different editions of folk song materials, the results show that there is a serious lack of diversified folk song repertoire in primary school music textbooks in Taiwan (eg.Chinese mainland folk songs take only 5% of the repertoires in Taiwan music textbooks while the diversified folk songs take 21% of the repertoire in the Renyin edition). In addition, the lack of introduction to the cultural background of traditional Chinese folk songs in textbook compilation makes it difficult to carry out music teaching in depth. With the deepening of music and cultural exchanges between the mainland and Taiwan, diversified Chinese folk songs, as the carrier of Chinese traditional culture, should be paid attention to in Taiwan's school music education.

SPA-051

## **Making the Tang Poetry Unforgettable: A study of Tang Poetry Song Teaching in Elementary Schools**

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*Beijing Language and Culture University, China*

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### **Abstract**

Chinese ancient Tang poetry is an important part of Chinese culture and Chinese teaching. As educators pay increasing attention to the inheritance of traditional culture and ancient poetry, the poems of Tang Dynasty have been widely applied in music curriculum among primary schools in Beijing in recent years. However, the efficiency of its application still needs to be studied in depth. The purpose of this study is to verify the effectiveness of teaching newly composed songs with Tang Poetry as lyrics on students' memorization of tunes and lyrics according to the Ebbinghaus Forgetting Curve model. This study investigated 125 students (K1-K6) in four primary schools in Beijing. Followed by the conclusive analysis of previous studies and discussions on the feasible directions of future research, this study proposed three research questions: 1) Are there any statistically significant differences in use of song for memorizing Tang poetry? 2) To what extent does the use of song influence the rate of forgetting and lasting effect of a learned Tang poetry? 3) To what extent does the use of song influence on the accuracy (and fluency) of Tang poetry memorization? The researchers collected data of performance of retention by means of the "recitation method" and made a quantitative record of the results of the recitation during the following intervals: 19 minutes, 65 minutes, 8 hours, 1 day, 2 days, 6 days, 30 days. The memory rate of each recollection and length of time which was necessary for the original learning and relearning were recorded and analyzed. Results found that the application of Tang poetry songs have positive functions in memory rate, accuracy, fluency and lasting effect. Results suggest that applying Tang poetry songs in elementary Chinese and music teaching not only help students learn the basic singing skills, but also deepen students' memory and understanding of ancient poetry. In addition, it is an effective way to inherent Chinese traditional culture.

SPA-055

## **Exploration of Blended Learning in Higher Music Education in the Post-Pandemic Era**

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### **Abstract**

Global COVID-19 exposed the vulnerability of education, and promoted the process of education informatization. In early 2020, affected by the pneumonia epidemic, the vast majority of higher education in China adopted the form of online teaching. Offline teaching began to resume in the second half of 2020, but a considerable part of online learning resources have been used continuously, and blended learning has been further promoted. This study reports the results of a small-scale comparative study that investigated the teaching activities of "online teaching during the epidemic period" and "blended learning in the post-pandemic era" of music theory course in Beijing City University. The research used questionnaire survey, semi-structured interview, network teaching platform to collect research materials, combined qualitative and quantitative research methods to compare the differences in learning motivation, learning experience and academic record of students in the same course, using different teaching forms of "online teaching" and "blended learning". The research results show that "blended learning" has different advantages of different degrees in learning motivation, learning experience and academic record compared with "online teaching". Although some of these advantages are not always clearly distinguished from the more common experience of higher music education, some effective practice paths are determined in teaching, which is helpful to the reform and exploration of music education. In the post-pandemic era, the trend of education informatization is irresistible. The significance of "technology enabled music education" should not only be limited to an emergency means, but also become an important part of the future flexible education system. One of the most important issues should be how to do it. Based on the characteristics of music discipline, combining the advantages of online and offline, exploring a better mixed path will be the development direction to enhance the resilience of education and conform to the trend of education.

### **Keywords**

post-pandemic era, blended learning, higher music education, comparative research

SPA-068

## **How May I Help? Teaching Assistants' Support in Music Lessons for Children with Severe Intellectual Disability**

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### **Abstract**

#### *Theoretical background*

Teaching assistants' support is crucial to the learning of students with severe intellectual disability (SID) (Martin & Alborz, 2014). The collaboration between teachers and teaching assistants is one of the key factors influencing the support provided for students (Moran & Abbott, 2002). It implies that the way teaching assistants are involved in music lessons can affect the music learning of students with SID.

#### *Aim*

This qualitative study aims to explore the collaboration between music teachers and teaching assistants, and how such collaboration contributes to the music learning of students with SID. Both music teachers' and teaching assistants' perceptions were explored to understand their expectations and experiences in music lessons. Musical interactions between teaching assistants and students were also investigated to evaluate students' music learning under the support of teaching assistants.

#### *Method*

This study adopts a qualitative approach. The data were collected through interviews and class observations. Two classes of students with SID were selected based on the music teachers' experience and professional training in music education and special education. The two music teachers and their teaching assistants were interviewed after a series of music lessons. Three music lessons from each class were observed, and the lessons were video-recorded for analysis.

#### *Results*

Results suggest that teaching assistants expect music teachers to guide them to evaluate students' music learning, and develop their skills to entice students' musical responses. When music teachers' instructions are clear, teaching assistants display more spontaneous musical interactions with students. The teaching assistants are also more observant to students' musical behaviours. Teaching assistants who are expected to involve musically in class are more ready to facilitate students' music-making behaviours.

#### *Conclusions and implications for music education*

It is common for teachers in special schools to collaborate with teaching assistants in classrooms for children with SID in Hong Kong. However, the way music teachers collaborate with their teaching assistants can be diverse. Such diversity leads to differences in teaching assistants' involvement in music lessons and their musical interactions with students. It also affects teaching assistants' support provided to facilitate students' music learning.

SPA-069

## **A Practical Pedagogical “STEP5” Approach Based on the Learning from Chinese and Finnish Piano Teaching**

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### **Abstract**

There are many types of pedagogic approaches and teaching methods for instrument playing applied around the world. China is an example of competitive society, where the aim of piano teaching is intensive program with strict teacher control, measurable results with hard practice, and advanced performance skill development. Although the strict “Pear Garden” training tradition from the Tang Dynasty times has ceased to exist, the Chinese instrumental educators still prefer a lot of mechanical practices and repetition with self-discipline. However, an alternative “Happy music education” approach is popular in Finland, mainly focusing on creativity, expression and student-oriented teaching, in contrast to heavy pressure for achieving quick results. In the mode of happy music education, teachers have enough patience and trust in their students, and particularly the students face fewer formal examinations or assessments.

This study compares the similarities and differences in piano teaching between Chinese and Finnish modes in terms of teaching environment and materials, teaching methods and results (short-term and long-term), and teaching evaluation and organization structure of the music education. The objective of this study is to understand the pros and the cons of the two systems.

As a result of the study and based on more than 25-year practical experience from piano teaching in China and Finland, complemented with experience from music studies in both countries, there might be no “one-size-fits-all” optimal piano teaching method or pedagogical approach for all students. Nevertheless, we have learned that combining superiorities from Chinese and Finnish approaches and developing a comprehensive pedagogical toolbox, both teachers and students can achieve better results. Based on the learning, we have created a practical pedagogical “STEP5” approach that includes five principles: (1) personalization, (2) motivation, (3) effectiveness, (4) sustainability and (5) quality, for achieving better quality of teaching and learning, meanwhile keeping the students happy and motivated.

The purpose of the study is to show that there are many things Chinese and Finnish can learn from each other. For instance, to combine the best elements from Asian and Western approaches would produce new possibilities for developing piano teaching forwards. We also suggest that there is still room for further studies in formalizing the practical pedagogical approach presented and its wide application for further feedback.

SPA-071

## **The Intercultural Link of the "Aesthetic Education" Movement in the Early Republic of China**

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### **Abstract**

The word "aesthetic education" is not a Chinese word, but originated in Europe as a noun concept of aesthetic education. Republic over Chinese new culture movement leads "aesthetic education" movement is an important content of cultural modernization, its source is has the essential characteristic of the cross-cultural connections, the new idea behind using the new vocabulary to re-examine the Chinese traditional education, and its modern meaning, at the same time, innovative western etymology connotation in China, so as China's modern aesthetic education began. Based on the research perspective of intercultural theory, this paper traces the direction of "aesthetic education" movement in the early Republic of China. On the one hand, it further explains the origin of the "aesthetic education" movement in the early Republic of China from the cross-cultural etymology of "aesthetic education"; on the other hand, it analyzes the cross-cultural experience of the aesthetic education thought of Schiller, the master of German classical aesthetics, which is the basis point of the movement of the cross-cultural connection of "aesthetic education" in the early Republic of China.

SPA-076

## **Enriching Children's Experience of Hearing with an Original Sound-Collecting Instrument: A Pilot Study**

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*Kobe Design University, Japan*

*Mao Sawamizu*  
*Yamaha Music Foundation, Japan*

### **Abstract**

#### **Background**

Musical activities for children are being actively conducted these days. It is also not unusual to introduce innovative digital devices into experience-based programs. Based on this background, we are motivated to ask: How can new technologies contribute to deepening children's musical experience?

#### **Aim**

This study aimed to evaluate the effectiveness of our original musical instrument, the "Mycas" (a contraction of "my customized maracas"), introduced into a preschool activity to enrich children's experience of hearing. The Mycas looks like an ordinary maraca, but its function is unique. It can record sounds with a built-in microphone and save audio files into an SD memory card. Then, by shaking it, the saved files are replayed from an internal speaker. We expected that this sound-collecting instrument would motivate children to explore various sounds and, as a result, they might become sensitive to the ecology of sound-producing events, which is a fundamental element of musical experience.

#### **Method**

The sessions were conducted once every week at an on-site day-care center and continued for three weeks (three times in total). One music instructor, five children (two boys and three girls) aged 3–4 years, and a childcare worker participated in the sessions. After a demo, each child was given a Mycas and encouraged to interact with it and record sounds within the nursery room. Finally, they were asked to play the collected sound files with a movie, "The Sound of the Forest," that is used in regular music activities held in the center, but the sound and interactive functions of the movie were turned off in this session. We videotaped the sessions and analyzed the participants' behaviors. We also conducted interviews and questionnaire surveys with the instructor after each session.

#### **Results**

The results showed that Mycas successfully elicited active performance from the children in a series of activities. While using it, all children were enthusiastic about exploring acoustic events as well as recording and replaying them. Further, when sharing the collected sounds with each other, they concentrated on listening to the sounds replayed on each other's Mycas.

#### **Conclusion and implications**

We concluded that the process of recording and replaying sounds on their own provided a fresh and enjoyable experience to children. This resulted in cultivating self-initiative and a

collaborative attitude in the children, implying that our instrument has the potential to enhance children's sense of hearing and make musical activity more social.

SPA-078

## **Leaving the Profession: Exploring Experiences of Music Teachers who Depart the Profession During the First Five Years of Teaching**

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### **Abstract**

Teacher attrition is a noticeable problem in the field of music education in the United States. Many factors contribute to the decision of a music teacher deciding to adopt a new profession at the start of their career. Some of these factors are common among music teachers and some are personal factors that are unique to the individual. This qualitative research paper sought to document the lived experiences of teachers who decided to depart the profession of music education. Emphasis was placed on teacher preparedness programs such as the bachelor's degree in Music Education and what specific aspects are lacking.

Interviews were conducted with three individuals who taught music no more than 5 years and decided to leave the profession. Those same individuals participated in a roundtable-like, focus group discussion to compare their experiences and highlight specific concerns from their undergraduate music education experiences. As a primary tool, narrative inquiry was utilized to preserve and epitomize their short experiences in their music education career. Following the interviews and focus group session, the researcher utilized coding methods to itemize specific themes and concerns for both the profession and the undergraduate music education experience.

The current paper sought to highlight questions for redesigning and restructuring for undergraduate music education programs to aid music teachers. Emphasis was placed on current course structure associated with individual Bachelor of Music Education programs of the participants as well as practical applications experienced and needed in those programs. To promote primary and secondary confidentiality, as well as freedom of speech during the sessions, the participants were notified that their names as well as names of institutions, professors, colleagues, etc. will be redacted as to protect the identity of those involved. Following the individual interviews and focus group, the sessions were transcribed with names removed or given an alias. This allowed the sessions to remain honest and true to telling of their lived experiences during both their undergraduate and teaching experiences.

Based on specific concerns for teacher attrition, conclusions were drawn for suggestions for further research for undergraduate music education. These conclusions included (1) what is currently being offered in undergraduate music education that aids music teachers, (2) what is currently not being offered that should be a component of undergraduate music education, and (3) what offerings are considered irrelevant and should potentially be redesigned, restructured, or removed from undergraduate music education.

SPA-079

## **Inspiring a Regenerative Approach to Music for a Post-Pandemic World and Sustainable Future**

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### **Abstract**

Whilst University of Macao commemorates its founding under its present title some 40-years ago, Colégio Memorial Moon Chun, began its life less than a decade ago, at the start of 2013 academic year when it moved onto a newly-acquired Chinese island of Hengqin, joined by the rest of the University some twelve months later.

The island campus, a multibillion construction now all but complete, was handed over at midnight July 20 2013, as officials from Guangdong border control withdrew from the north gate of the University's campus, a gesture for which there is 'no recent precedence', New York Times, 17 July 2013.

Fast forward to first semesters 2019-20 and 2020-21, and the College saw a veritable stream of master classes and music workshops, resulting in residencies by Clare College Choir Cambridge; Austrian jazz ensemble, Michaela Rabitsch & Robert Pawlik Quartet; and Hungarian concert pianist: Endre Hegedűs.

Together with Stradivari Piano Trio, the semester was capped by a Macao SAR initiative to bring the Vienna Philharmonic to Macao. Envisioned as alfresco performances in the University's Library piazza, forecasts of severe tropical winds conspired against a wide, open-space locale and consecutive performances were moved to Centro Cultural. That the residency was conceived not by flagship cultural industrialists but as a collaborative venture says much about the organic nature of association between town and gown.

Formal table with Lusophone music performed by undergrads contributed to a rich cultural environment with College ensemble; Tetrad - comprising fellows and young musicians at Salon Clube Militar - a venue which provided formative performance experience. 2020 semester culminated with College freshmen Henry Che's professional début with Macao Orchestra, as soloist in Mozart's Violin Concerto No 3 in G. That there were visits by Shanghai Conservatory and Tsinghua University during the same period says much about the College's cultural standing.

How has such a journey been possible in a time of neo-liberal capitalism, aggravated socio-political tension and radical violence, when curricular content is driven by employment relevance and hyper-competition; a period of pandemic and economic crisis deeply affecting Gen Z and impacting on music education across the world? One in which universities reeling from aftershock have migrated towards blended learning and intensive campus testing, yet where all-too-scant time has been given to cultural EQ, increasing transformative learning modalities, acknowledging the sensory, regenerative value of arts and music as part and parcel of wrap-around pastoral, mental-health and restorative well-being.

SPA-083

## **Out of the Comfort Zone: The Learning Experience of International Students in U.S. Music Education**

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### **Abstract**

*Experience* is often regarded as the most effective way to learn and to acquire knowledge in education (Dewey, 1938). In particular, exposure to new situations and cultures provides a different level of knowledge, one unobtainable from books. Therefore, people go out of their comfort zone or study abroad to obtain such experiences. In some cases, a family migrates to a distant land so that their children can have a meaningful and educational experience, and higher education is no exception. The purpose of this case study was to investigate four international students representing diverse cultures in the United States. Exploring the life of future researchers and practitioners in U.S. music education provided a sense of their self-perceptions as international students at US universities. Research questions were related to how the participants in music education described their experiences as international students in the United States; specifically, they indicated how they represented their culture, how they would benefit the diverse music education field, and how they maintained their identities while acclimating to American culture.

Purposeful sampling (Creswell & Poth, 2018; Yin, 2018) was used to identify participants who were (a) legal F-1 or J-1 status in the United States, (b) currently enrolled in an advanced graduate program, (c) affiliated with a university, and (d) in music education. Data collection included semi-structured interviews, participant journals, artifacts, and field notes for three months. Through data analysis, three overarching themes emerged: (a) hidden culture, (b) contextual knowledge of subject, and (c) equity and equality, in each case along multiple dimensions. The findings shed light on what music educators should know about the self-construal of international students, and what challenges these students face in higher education. This study was needed to understand the perspective of current international students and to support their place in music education. Furthermore, this study sought to provide guidance for prospective student researchers who intend to study abroad in the United States, and international music educators who help those students prepare for success in higher education.

*Keywords:* diversity, identity, music education, higher education, ethnicity

SPA-085

## **Early Childhood Music Intelligent Development Based on Multivariate Perception**

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### **Abstract**

The purpose of this article is to explore the significance of learning keyboard instrument for children aged 4-6 and its role in the development of music intelligent. First, the problems of music education in early childhood and the challenges faced by children's musical instrument learning are presented. Then, the problems of music perception and music learning in children were analyzed and studied by means of current situation investigation, actual teaching mode evaluation and learning method result measurement. This paper discusses the "trusted practice" model of music education through the divergence, correlation and causality of music perception and cognition, and by using the research methods of psychology, phenomenology and pedagogy, establishes the trusted music cognition model of multiple perception, and puts forward the music learning mechanism from music perception to cognition. The results show that music education in early childhood is based on multivariate perception training, to seek a happy learning process, and the development of music intelligence through happy learning.

SPA-086

## **Understanding the Challenges for Adult Beginners at Piano Practice from an Analysis of Errors**

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### **Abstract**

Adult beginners at piano playing tend to have positive characteristics related to learning, such as being analytical, goal-oriented, and attentive. While some adult beginners face the need to acquire performance skills, for example, in teacher training, some people learn to play the piano just as a hobby. From an educational standpoint, it is important to understand the tendencies of their errors in playing and how these errors can be reduced over time with practice.

The purpose of this research was to investigate the types of errors that adult beginners at piano playing experienced during their practice time and how they improved their performance. Eight adults (M = 6, F=2; mean age = 42.5 years), who were beginners at keyboard playing, participated in an experimental study. All the participants were given a sheet, with music newly composed for this study, and asked to practice it for three minutes on an electric piano (Yamaha Digital Piano P-125) after watching a demo. After the three-minute practice, each participant was asked to perform the piece once from the beginning to the end. A set of three minutes of practice followed by a performance was repeated five times. After all sessions, each participant took part in a semi-structured interview. All performance data, including practices, were recorded with two cameras set at different angles, and exported as MIDI audio data. Audio and video data were analyzed and the errors identified were categorized into three types: beat interruption, rhythm errors, and pitch errors.

The data revealed that errors of beat interruption were most frequent among all types of errors and remained up to the final stage of practice. The distribution of decreased errors was not always linear, but was highly likely to be graphically presented as a zig-zag line with over-adaptation and self-regulated processes. The interview data indicated that adult learners had different strategies and priorities for playing. The results showed that some new processes learned could temporally interfere with other parts of playing, and a certain amount of time is needed to assimilate what they achieved. The study also suggested that understanding the learners' individual needs during their practices could be crucial, as well as support for practice strategies.

SPA-088

## **Transitioning from Absolute to Creative Evaluation: Applying Trial and Error on the Time Axis**

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### **Abstract**

This paper investigates evaluation in music education from a philosophical point of view. In traditional evaluation, achievement is measured by tests developed based on attainment goals set by the teacher. However, achievement based on a quantitative assessment and ranking is separate from the student's individual learning process, and it may even hinder a student's progress and growth potential. To prevent this, it is necessary to review the evaluation protocols used in music education. David J. Elliott, Marissa Silverman, Gary E. MacPherson, and other researchers assert that music education should be based on the student's happiness. However, few studies have addressed the issue of how evaluation relates to the purpose of happiness, as most have focused instead on efficient evaluation methods. However, the methods of evaluation are changing. In recent years, performance evaluation methods that use portfolios and rubrics have emphasized the process of learning and qualitative dimensions. Even so, these methods focus only on experiential knowledge based on the student's unique context without considering the significance of the student's life and happiness. Therefore, it is necessary to reexamine the existing evaluation methods, including portfolios and other approaches, after defining the significance of evaluation in the relationship between recognition and desired goals, based on conscious and unconscious goals oriented toward life and happiness on the time axis. This is a philosophical question. Thus, this paper discusses the significance of evaluation in music education from the perspective of philosophy, especially the epistemology of Japanese philosophers Bin Kimura and Kitaro Nishida. The results show a need to shift from absolute evaluation to creative assessment. In ontology, maintaining existence through evaluation and future choices is a deliberate act of the pursuit of happiness through trial and error. In such a system, the subject of one's own self and the world is constantly renewed. Moreover, plurality is unity, unity is plurality, and the two cannot be separate. Nevertheless, contradictions that cannot be recognized without segmentation generate trial and error of the movement and action of the phenomenon. Given such contradictions and non-persistence of phenomenon, people must have the ability to assess new values. In other words, teachers and researchers must investigate ways to create viewpoints, criteria, and measures for evaluation itself for a better educational practice. This investigation is a basic study that pursues the essence of evaluation and offers a practical perspective to recapture evaluative behavior.

SPA-091

## **Hong Kong Popular Music Education and Its Discontents**

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### **Abstract**

In face of the new age of creative economy, global cities such as Hong Kong need to develop their creative and cultural industries with their own characteristics, which can contribute to both economic growth and job creation. Many cities have been pro-active in developing policies to boost their music industries and conducting researches on popular music education to examine how to engage young people with popular music. However, in-depth researches on this topic are far from adequate in Hong Kong. While film and design industries have received special attention in Hong Kong, the popular music industry is also a significant sector to be considered, but there has been a lack of systematic research on how to facilitate its sustainable development. Hong Kong popular music had since the 1970s been the market leader and trendsetter of Chinese as well as Asian music industries, exerting profound influence on the younger generation in not only Hong Kong but also Asia. Due to the transformation of global mediascape, the influence of Hong Kong popular music has been diminishing in the new millennium. Meanwhile, thanks to education reforms in the new millennium, Hong Kong students are encouraged to deal with everyday experiences, and thus popular music has received more attention in the school curricula. Against this backdrop, this essay explores the (dis)contents of popular music education in Hong Kong through the examination of various local popular music education programmes, assessing their effectiveness of enhancing the musical creativity of youngsters. The opportunity to produce and/or play popular music would not only develop their creative and social skills, but also contribute to their personal growth. Adopting an approach that places the young audience as the base, this essay will identify the ways to engage young people and design appropriate popular music programmes to enhance their creativity as well as growth. It endeavors to develop creativity and intellectual capital through research based knowledge transfer for Hong Kong popular music. Although the focus is Hong Kong popular music education, this essay considers it in the light of Asian music as a whole. It will hopefully generate a more nuanced understanding of the influence of popular music education on the energetic music culture in cosmopolitan cities such as Hong Kong.

SPA-094

## ***Programming Education in Japan: Approaches and Implications for Music in Elementary Schools***

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### **Abstract**

As digital technologies reshape societies around the world, computational thinking and programming are being introduced in the school curricula of several nations. In that context, Japan has launched a cross-curricular reform aimed to integrate *programming thinking* (computational thinking) in all subjects. However, questions should be posed on how computer science concepts may be meaningfully integrated into music, in addition to the impact of those measures on music education.

This study examines Japan's *programming education* in elementary school music, officially implemented nationwide in 2020. After an overview of that reform, Japanese sources on *programming* in music-making activities are translated and subjected to a thematic analysis assisted by QDA Miner, a qualitative research software tool. Due to its critical orientation, this analysis takes special account of the interplay of computer science and music learning contents.

Findings reveal that the integration of *programming* in music is based on general definitions that highlight logical thinking, not on a specific theoretical framework aimed at music learning goals, which may lead to creative learning processes being oversimplified. Furthermore, tensions between flexible and fixed-goal approaches are pointed out in music-making activities within this policy framework, as well as interpretations of IT terms that have permeated music education, namely, *algorithm* and *program*. Following that, and stressing the need for specific strategies that can effectively support music learning goals, it is argued that *programming* in arts education should not constrain students' spontaneous expression but transcend logical thinking and foster their creativity within a flexible environment.

Regarding the implications of *programming education* for this field, music may risk being relegated to secondary roles in relation to computer science, as suggested by approaches that seem to define it as a means for assimilating IT-related concepts. That fact raises questions about changes in this subject sparked by the *infotech* revolution of our time, along with challenges and goals particular to this country, such as *society 5.0*. Additionally, further debate is also considered necessary on how teachers, policymakers, academic societies and the entire community, including technology developers, can generate innovative practices for music education in this context.

Even though *programming* in music seems to be in an initial stage, this study may shed light on some of its key aspects, which might also be of interest for other nations.

SPA-095

## **“I Want to Know More About the World”: A Case Study of International-Mindedness as a Means of Music Teachers’ Professional Development in China**

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### **Abstract**

The concept of “international-mindedness” is central to many international curricula, and often sits at the heart of international education policies and programs. Research indicates many strengths and advantages to international-mindedness in education. However, in China, a majority of teachers who do not teach in international schools will have few opportunities to access or learn about this style of education.

The purpose of this study was understanding participants’ experiences with professional development with a focus on international-mindedness through an online course. This course was the “station” or mode by which to introduce the concept of international-mindedness in adopting international music teaching methods to xiaowai (out-of-school) music teachers. In particular, this research addressed the following questions: 1. Did the professional development in “international-mindedness” change teachers’ understanding of, and reflection on, music education? If so, how? 2. How have the teachers experienced implementation of international-mindedness during their teaching?

This study was designed as an intrinsic case study. Results from these teachers’ journals, teaching reflections, and interviews reveal teachers’ experiences in regard to international-mindedness throughout the online course; and some benefits, limitations, and barriers they encountered when they tried to switch their traditional way of teaching into an international mode. The conclusions from this research include: (1) international-mindedness may be essential for xiaowai music teachers from China to change their traditional way of teaching; (2) there are some visible and invisible gaps among Chinese music teachers in their application of international-mindedness to their teaching environment; and (3) in regard to Chinese music teachers’ professional development, there is a need to explore a more “Chinese” way to implement international-mindedness.

Key words: international-mindedness, music teachers’ professional development, Chinese xiaowai music teachers, teachers’ experience, international curriculum and assessment

SPA-097

## **A New Measurement for Pitch-Matching Accuracy of Song Singing Based on Absolute Semitone Differences**

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### **Abstract**

Pitch-matching accuracy in song singing has been widely tested using ratings scales. The main drawback of these scales is that they are relatively subjective and summative, relying on the perception of the assessor(s). Young children's singing is often quite inaccurate against a song model. Consequently, this study sought to design a more objective measure which could also be used to reveal the missing detail and validity of subjective ratings.  $N = 1,608$  song singing products, including  $n = 696$  one-year longitudinal singing performances, were collected from Grades 1 to 6 in seven schools across rural and urban areas in Hunan and Guangdong provinces in mainland China from 2017 to 2018. All participants sang three familiar children's songs: *Twinkle, twinkle*; *Little donkey* (a Chinese nursery song); and *Happy birthday*, with no starting pitch given. Performances were audio recorded.  $n = 134$  (8.3%) sung performances were randomly selected and analysed using the two separate measures: the Vocal Pitch-Matching Development scale (VPMD) and a new software-based measure, based on absolute semitone errors. In the new measure, each sung pitch was compared with a related standard pitch, based on the sung key as defined by the first sung pitch. Each sung product was entered into *Praat* for frequency analysis and simultaneously played as pitch using *Sing & See* software. The sung products – based on *Praat* frequency and *Sing & See* pitch – were inputted into an Excel file for each target note. Secondly, analysis was undertaken to calculate sharp and flat semitone errors, noted from -8 to 8 (0 means no semitone error), based on the sung key. Thirdly, a different colour was applied to characterize each semitone error to illustrate visually the most common sung key. Fourthly, semitone error was recalculated by the most dominant key centre, taking its absolute value noted from 1 to 9 (9 means no semitone error). Finally, the percentage of pitch accuracy of each song singing (100% means no pitch error) was calculated and analysed by *SPSS*. The ratings using the VPMD scale and the new scale for three songs were positively correlated ( $r(134) = 0.713$ ,  $p < .001$ ,  $r^2 = 0.508$ ). These results suggest that the new scale is a reliable measure to test the pitch accuracy of song singing, and is appropriate to use in further studies to provide a more objective judgement.

SPA-100

## **Metacognition in Instrumental Teaching: A Multiple Case Study of Four Hong Kong Piano Teachers**

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### **Abstract**

In music education, research has been focusing on metacognition and the strategies that lead to better outcomes, causing self-regulation and even continued music learning. Many music instrumental teachers are concerned with effective ways of teaching which lead to successful results for students. However, there is a research gap on metacognition in Hong Kong music education as little is known about the perception of Hong Kong instrumental teachers towards metacognition. The study aims to find out to what extent Hong Kong instrumental teachers recognize and embed metacognition into their teaching, and to understand their considerations and the factors that affect their teaching strategies.

In this multiple case study, purposive sampling was employed. Four studio piano teachers were selected purposively with diverse backgrounds, teaching experience and music qualifications. Each case study was triangulated into two parts, naturalistic observations within the music instrument lesson and semi-structured interviews with teachers. Data was collected through the real situation of music teaching, which helped to reveal the strategies used for teaching and understand the meanings of their actions. All the data were transcribed and analyzed by coding and categorizing.

From the findings, themes based on various metacognitive behaviors and teaching approaches were emerged, mainly in relation to the elements causing the awareness in metacognition teaching. First, the level of awareness is related to the ways of becoming a piano teacher and teachers' perceptions of music teaching. Second, extensive teaching experience and passion in music playing would lead to metacognition teaching. Third, teachers determine their decision in embedding metacognition teaching according to the ages and competency of students and the expectations of parents. This study offers an in-depth insight for understanding the popularity of metacognition in studio-based piano teaching. Finally, the challenges and difficulties of applying metacognition in instrumental teaching in Hong Kong has been discussed.

SPA-101

## **Relationship Between Inferiority Awareness "Onchi" and Singing Skills of Japanese Junior High School Students**

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### **Abstract**

The purpose of this study is to clarify the relationship between "onchi" consciousness and singing fundamental skills, vocal pitch matching and internal feedback, of Japanese junior high school students. "Onchi" is just a slang word though most of Japanese people tend to describe someone singing out of tune with the comprehensive term "onchi." Junior high schools in Japan actively hold singing activities not only through music classes but also through school chorus contests. However, a questionnaire survey on singing of 680 junior high school students in Japan revealed that 50.2% of the students answered that they were "very onchi" or "a little onchi" (Obata 2019). On the other hand, it was clarified that in order to overcome "onchi" of adults, it is more necessary for them to recognize whether they are singing on pitch, in other words internal feedback, than to match the pitch (Obata 2007). Nevertheless, junior high school students who think that they are "onchi" by themselves do not know how they can sing on pitch and do internal feedback. Therefore, in November 2016 the author performed a questionnaire survey and singing skill's test for second grade students (13-14 years old) in Public Junior High School A. The results of the questionnaires performed for 120 students showed that 53.3% answered that they were "very onchi" or "a little onchi". On the singing test of vocal pitch matching, the students who had matched 3 of the 3 tasks were 52.5% and those who had matched nothing were 15.8%. On the singing test of the internal feedback, 69.5% of the students were able to recognize if their singing pitch correct or not while 30.5% of the students were not to do so. Furthermore, the t-test results showed significant difference between two groups whether students has "onchi" consciousness or not, regarding their capability of performing internal feedback or not ( $t=2.027$ ,  $df=116$ ,  $p<.05$ ), and regarding the capability correct pitch matching ( $t=2.129$ ,  $df=118$ ,  $p<.05$ ). The results suggest that teachers in junior high school have to focus on the students' own voice and own consciousness toward singing rather than singing voice in group such as choruses.

SPA-108

## **A Phenomenological Study of Male-Female Role Stress in College Music Teachers**

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### **Abstract**

#### **Theoretical**

This study focused on the stress of the college music teacher. The theoretical framework of this article is based on the description of occupational role stress by Kahn, Wolfe, Quinn, and Snoek (1964) and Beehr (1987). They are Role Conflict, Role Ambiguity, Role Overload, Underutilization of Skills, Resource Inadequacy, and Nonparticipation. The role pressure theory represents the main theoretical development of organizational psychology in the field of pressure.

I reviewed the body of literature on teacher stress and the factors that may make music teaching uniquely stressful. Researchers have studied issues related to the professional stress of school music teachers, but few studies have specifically focused on the factor of role stress. The results of these studies show that music teachers feel dissatisfied with their professional life due to lack of support from the administration(e.g., Krueger, 2000), students(e.g., Heston et al., 1986), parents, or other teachers(e.g., Gordon, 2000).

The findings from these studies more than adequately describe the "what" of stress in the school music teacher's work life, but what the difference between the female and the male college music teacher? It's still a remaining question.

#### **Purpose**

The purpose of this study is to clarify the role pressures of college music teachers, especially the differences between these role pressures among college teachers of different genders. This study focuses on four role stressors that affect job satisfaction: role overload, underutilization of skills, resource inadequacy, and role conflict.

#### **Method**

This study is qualitative research and employs a multiple case study design. I chose four participants with similar job descriptions. They are from different universities in China.

#### **Conclusions and Implications**

These results fill important gaps in the literature on gender differences in response to educational outcomes and contribute to a better understanding of the process of connection between stress response, and academic outcomes. This research helps practitioners, policymakers, and school administrators to better understand the issues related to the role of teachers: employee turnover, dissatisfaction with the profession, low work efficiency, and high work pressure. Gender differences were also found in the connection between stress response and outcome. These results fill important gaps in the literature on gender differences in response to educational outcomes and contribute to a better understanding of the process of connection between stress response, and academic outcomes.

SPA-111

## **Scientific Piano Method for Adolescent Beginners: Challenges of Piano Education in Contemporary China**

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*Chieko Mibu*

*Elisabeth University of Music, Japan*

### **Abstract**

In contemporary China, it is not only young people pursuing a tertiary musical education who study music. Many adolescents are confronted with studying music due to China's growing social-education culture, which encourages them to get knowledge and skills related to the arts, in hopes by their parents that they will be able to contribute meaningfully and survive on their own upon entering the society. Additionally, due to China's college entrance examination-supported score policy, many adolescents seek a spot in China's the best comprehensive universities and try to take their special examination as art specialty students. For the reasons above, the number of late piano beginners is increasing significantly. Such beginners seek specialized education, exceptional instructors, and effective pedagogies. The same problem also exists among Japanese late piano beginners who struggle to learn piano in nursery teaching training schools. Thus, a scientific and efficient pedagogy is in pressing demand.

This research focuses on exploring the effective piano methodology and the scientific teaching strategies in physiological aspects for late beginners who began their musical education in adolescence.

Regarding this research's methods, several dimensions have been included. 1. The contents of existing piano pedagogy or method books are carefully examined and re-organized chronologically to extract any practical proposals or references for adolescent beginners. The scientificity of piano performing postures from the references above, including hand position, has also been verified via contemporary physical and physiological theories. 2. In order to understand adolescent beginners better, questionnaires for both students and instructors are undertaken and analyzed. The problems arising from gender differences and the difficulties faced by late beginners playing the piano can be viewed.

In this presentation, the summary of the research on the historical piano pedagogies and method books, and the results of the questionnaire analysis will be reported. Besides, the physical analysis via mechanics, and the physiological analysis of the economical use of locomotive organs, will be discussed. Also, it will show the practical and scientific pedagogy for adolescent beginners, especially in performing posture. Regarding to the result of this research, which aim to help instructors teach late beginners using proven scientific concepts.

SPA-112

## **Performing as Family: Parents' Roles in Babies' Music Education Experiences**

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*National Institute of Education, Singapore*

### **Abstract**

This paper discusses the observations and analyses from a case study examining the creation and presentation of a sonic experience for babies 18 months and under in Singapore. The research inquiry, "what is the role of parents (&/the family) in a sonic experience for infants 18 months and under", was met by a unique phenomenon where the researcher performed multiple roles in a multi-sensory sonic experience - as performer, mother and wife, and has implications for music education in parent-child relationships.

The family dynamics of the performing trio is discussed through John Bowlby's theory of attachment, as well as Mary Ainsworth's notions of the 'strange' versus the 'familiar'. The researcher noted that she was not only a performer in the presentation of the sonic experiences, but also a mother responding to her own baby's needs as part of the performance. This was similar for the researcher's co-performer – the baby's father – who performed in response to his baby's needs, resulting in a choreographic presentation by the trio that reflected Ellen Dissanayake's conception of 'mutuality' through 'rhythm and modes', where there was synchronicity in the researcher and her co-performers movements. It was also postulated that the responses by the researcher's baby resonated with other babies and their families as an expansion of 'mutuality' to 'belonging' that reflects a sense of communal resonance amongst the participants. Amongst parent-child dyads in the participants, it was also noted, in line with notions of attachment theories, that parents served as secure bases for their babies to establish familiarity with the sonic environment, sonic objects as well as performers. Thus, the research asserted that the intersubjective interactions between parent-child directly affects the experience of their babies in a sonic environment.

Such research results demonstrate the importance of parent's roles in their babies' sonic experiences. For babies as young as 18 months and below, their attached caregivers are their first experiences of music education. This research implicates that parents' familiarities and comfort levels towards sonic experiences affect their babies' experiences, as discussed through theories of innate intersubjectivities and attachment. This paper asserts the importance of sound in a baby's life with socio-emotional implications and demonstrates how parents form their babies' first encounters of socio-emotional communication through early music education experiences.

SPA-122

## **U.S. Preservice Music Teachers' World Music Preference and Its Transfer to Untaught Pieces**

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*Hyesoo Yoo*  
*Virginia Tech, USA.*

### **Abstract**

In contemporary music classrooms, it is crucial to broaden student's music preference to culturally diverse songs in order to nurture openness and intercultural sensitivity. Studies showed that familiarity is correlated with students' preferences for Western music pieces and world music pieces (LeBlanc, 1982; Yoo, Kang, & Fung, 2018). While it is impractical to help students to familiarize with all world music pieces in music classes, music teachers may expect students to transfer their familiarity and preference to other world music pieces in a similar style.

Transfer can occur from one task to another when both tasks shared similar features (Haskell, 2000). Shehan (1985) tested whether elementary student's preference for non-Western music genres transferred to untaught pieces of the same genre. Transfer did not occur in her study. The exposure period, the extent of immersion, types of music, and research participant's developmental stage could be variables to explore further.

The purpose of this study was to investigate whether transfer occurred from one world music genre taught pieces to untaught pieces of the same genre among preservice music teachers. Eighty-three preservice music teachers were provided a high-immersion, culturally-diverse music curriculum in a semester. Participants learned 18 African, Asian, and Latin American folk songs in small teams from culture-bearers via video conferencing. Then they team-taught the same songs to their peers. Before and after the curriculum intervention, their preferences for 18 taught and 18 untaught pieces were tested.

A repeated-measures ANOVA with three within-subjects factors (Time: Pre vs. Post, Teaching: Taught vs. Untaught, and Continent: Africa, Asia, and Latin) was computed. All main effects were significant ( $p < .001$ ); interactions between Teaching and Continent ( $p < .001$ ) and between Time and Teaching ( $p < .05$ ) were also significant. The three-way interaction effect was significant also ( $p < .001$ ). The Bonferroni method was used in *post hoc* comparisons and yielded significant differences in the preferences for music across all three continents.

While there were significant increases in preferences for the taught pieces across all continents, preferences for the untaught pieces yielded significant increases too. We infer that the preferences for the taught pieces were transferred to the untaught pieces as a result of learning only the taught pieces. Whereas Shehan (1985) studied upper elementary students in the traditional classroom setting, we studied preservice music teachers, who took the roles

of learner and teacher, allowing for deeper interpretation and immersion that enabled the transfer.

SPA-123

## **Before Nightfall: A Case-Study of Distributed Creativity in a Contemporary Art Music Ensemble**

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*Katie Zhukov*

*Sir Zelman Cowen School of Music and Performance, Monash University, Australia*

### **Abstract**

The past three decades have witnessed a growth in research that queries the view of creativity as the sole endeavor of a “genius” creator. Studies emerging from cultural and social psychological perspectives argue that creativity is distributed, drawing on social interaction, communication, and collaboration as key elements in creative work. Theories of creative collaboration and collaborative creativity not only recognize the distributed social processes outlined above, they also acknowledge the need for creative teams where complementary knowledge and skill sets are distributed across the group. Such complementarity (rather than replication) provides a greater diversity and depth of knowledge and skill and potentially yields more diverse creative outcomes. Whilst distributed creativity has been explored in some arts making contexts, as yet there has been little investigation of distributed creativity in music making contexts.

This paper aims to investigate this gap through a case-study investigation of a unique music creation project, *Before Nightfall*. *BN* is a series of artistic encounters between a contemporary percussion ensemble and internationally renowned guest artists, with each encounter occurring across the course of a single day. Starting in the morning, ensemble members and the guest artist begin the creation of a new collaborative work, developing musical, spatial and conceptual structures that form the basis of a concert-length piece, performed before nightfall.

The paper reports the analysis of one event developed on-line during the Covid-19 lockdowns of 2020. The lockdown restrictions created a further shaping force on the collaboration: not only did musicians create the work in the 8-hour period, this was also largely undertaken in isolation and/or on-line, with the final presentation of the work via video.

The 6-member team was comprised of 3 percussionists, a sound engineer, a sound artist and a film-editor. Data were generated through: audio-recording and transcription of 2 planning meetings prior to the scheduled project day; video recordings of musician experimentation and collaboration on the day of creation; and, post event video-prompted interviews that draw on excerpts of the final presentation to elicit perspectives of the collaborative and creative processes. This case study reveals how musicians have engaged in and adapted their collaborative practices through the social isolation of the pandemic and illustrated the working dimensions of distributed musical creativity. These findings raise critical questions concerning the juxtaposition of collaboration in the contexts of social isolation and the role of technology in mediating and initiating new forms of creative collaborative practices.

SPA-124

## **Professional Development for Music Teachers in China: From the Perspective of Mentors' Instructional Leadership**

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*The Education University of Hong Kong, China*

### **Abstract**

In many countries the mentoring system is adopted for teachers' pre-service and in-service training, such as the United States, China, New Zealand, Singapore and the United Kingdom. As a developing country with a large population, China has a huge education system. In order to ensure this system operate with high quality, the educational administration department has set up a systematic, hierarchical, country-wides mentoring system which is called Teaching and Research System(TRS) to ensure the quality of China's basic education. At present, China has three levels of Teaching-Research Offices at the provincial, municipal, district levels. In all levels of Teaching-Research Offices, each subject has a special person in charge of teaching and research, that is the mentor—— Teaching-Research Officer(TRO). They are frequently involved in the process of teacher teaching and professional development, so they are also teacher educators. This research is a doctoral research and it adopts the exploratory sequential design of mixed method research to explore the elements of instructional leadership of music TROs in the context of Chinese education. The research questions are: 1) what are the connotation of instructional leadership of music TROs? 2) How do music TROs implement instructional leadership? 3) How do music teachers evaluate the instructional leadership of music TROs? The research will be divided into two stages. The first stage is a case study. The collected data are coded and analyzed through observation and interview, and the functional dimension of music TROs is established. In the second stage, questionnaire survey will be used. It is divided into several parts such as revise questionnaire, pilot study, re-revision, formal test and data analysis. This research will help to improve the music TROs' work efficiency, so as to promote the professional development of teachers and the quality of music teaching, and ultimately achieve the indirect purpose of improving students' academic level. At the same time, the research can also provide reference for national policy makers to promote the development of music education in China.

SPA-126

## **Nationalism and Multiculturalism in Asian Country's Music Education: Focus on South Korea, Japan, Singapore, and China**

*Jong Mo Yang*

*Busan National University of Education, South Korea*

### **Abstract**

Most Asian countries started music education from the mid-19th century through schools built by Western Christian missionaries. The music education was centered on Western music until the middle of the 20th century and was a tool for religious ceremonies. However, since 1950, music education in Asian countries has increased interest in their own traditional music, and recently, music education has emphasized their own ethnic music and multicultural music.

China considers the harmony of Chinese community music and multicultural music in music education(Wai-Chung Ho, 2016, 40). Japan is shifting its focus from international education to national education by mandating the teaching of four Patriot Songs every year in Japanese elementary school music textbooks(文部科學省, 2017, 54). And Singapore strengthens nationalism by setting up National Education Songs and incorporating them into music textbooks(Jong Mo Yang, 2014, 28). In addition, Korea emphasizes national music by maintaining a high proportion of traditional music in music textbooks at 32.3%(Hyun Jung. Kim, 2014, 133). In music education, the issues of ethnicity and multiculturalism have been used to raise national identity in the native language of music (Dong Eon Rho, 1991; Cheng-Ji Jin, 2002) and to have basic skills as citizens of the state (Jong Mo Yang, 2014).

The purpose of this study is to compare and understand aspects of nationalism and multiculturalism in Asian countries' music education. Music is a medium that expresses people's thoughts and feelings, and music used in a particular country contains the thoughts and feelings of certain people, which can be music unique to the nation, and make it possible to have a national identity through music. This study notes this point.

The content of this study is to compare and analyze the music of music textbooks in various countries. The research subjects are music curriculum and music textbooks from four countries including Korea, Japan, Singapore, and China.

The conclusions of this study are as follows. First, Ho & Law (2009, 439) reconfirmed the conflict between nationalism and multiculturalism found in Chinese music education. Second, Korea compares the proportion of traditional music and music in the world among Asian countries, balancing nationalism and multiculturalism in music education. Third, Singapore is a multi-ethnic country, where Chinese, Indian, and Malaysian folk songs appear as nationalist music, emphasizing national music to reinforce national consciousness. The music of the world deals with European music, American music, and some Asian music. Fourth, Japan shows that traditional music is limited, but compulsorily contains music that can reinforce national consciousness.

SPA-128

## **Potential of ‘Romantic Theory’ for Music Education in Contemporary Era: For Delivering Musical Knowledge and Enhancing Creativity and Wellbeing**

*Hanah Kim*  
*University of Glasgow, U. K.*

### **Abstract**

Human beings have had an enduring relationship with music in almost all cultures on record. As a medium for stimulating ‘creativity’ and ‘wellbeing’ that have arisen as important themes in modern society, music also takes a prominent stance in the current era. On the other hand, contemporary music education has been increasingly squeezed out of the curriculum in many nations, owing to the pressures of time and its reportedly low relevance to employment.

The principal objective of this research was to investigate ways of fostering musical creativity and wellbeing in primary schools. Furthermore, it aimed at providing curriculum guidelines while ensuring the acquisition of necessary academic knowledge and skills. The chosen theoretical framework was the concept of ‘Romantic Irony’, a literary device that is ‘subjective in its capricious destruction of illusion and mood’. Romantic Irony is accomplished by manipulating musical components and using techniques in unconventional ways. I applied this concept to help devise an effective curriculum encompassing listening to music, singing, playing instruments, and composing.

Particularly, this research focused on Scottish music education. Scotland’s *Curriculum for Excellence* (CfE) makes considerable claims for creativity, emphasising child-centredness and autonomy—proposing a process-based curriculum and interdisciplinary working. Secondly, CfE aims for an inclusive vision of education that places the commitment to wellbeing at the centre of its priorities.

The study consisted of two types of interventions. The first part of the research was allocated to investigating theories of creativity, wellbeing, and Romantic Irony alongside the educational practices. Secondly, for the empirical part, I conducted ‘Action Research’, approaching fields with the intention to enrich contributions to practice. The classroom interventions were divided into 3 Vignettes to stimulate pupils’ innate musicality, to deliver basic theoretical knowledge, and then to provide opportunities to apply skills in relation to specific topics. Thereafter, academic conversations with experts were conducted to examine professional views of the researcher’s approaches and to search for the directions that music education ought to follow.

The research confirmed that delivering music sessions with a relevant philosophical base and emphasising both theory and practice could strengthen the benefits of music education. Possible solutions for the challenges also emerged, such as providing additional sources and expanding collaborative work between schools and the community.

In conclusion, music education preserves a rich potential for promoting the experiences of creativity and wellbeing for children, which matter so much for attaining the good life in this protean 21st-century society.

SPA-129

## **Exploring the Factors Affecting Music Teachers' Technology Acceptance in Chinese Higher Education: A Qualitative Study**

*Xiangming Zhang*  
*University of Hull, UK*

### **Abstract**

The integration of technology and music education has attracted the attention of many music teachers and researchers, particularly during the COVID-19 pandemic, when methods such as online teaching are becoming increasingly prevalent around the world. In China, the use of technology in music education is an evolving and innovative pedagogy that offers music teachers the possibility of effective teaching and learning. However, there is still a lack of sufficient understanding of the factors that influence the acceptance and use behaviour of Chinese music teachers towards technology. This study examined Chinese music teachers' perceptions of technology use based on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). This qualitative study aimed to identify potential factors that may influence music teachers' acceptance of technology and use of technology for teaching. 20 in-service music teachers from Chinese higher education institutions participated in semi-structured interviews. Using deductive thematic analysis, the results of the interview data indicated that Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, and Habit were the five most important aspects promoting their acceptance and use behaviour. In contrast, Hedonistic Motivation did not seem to be associated with teachers' adoption and use behaviour of technology tools. This suggests that when the need to use technology arises, music teachers are not only influenced by the current social context, but they tend to prioritise whether the technology will benefit teaching performance. Besides, the ease of use and convenience of technology are also key factors for teachers to consider using technology. While most previous studies have used quantitative analysis to explore the relationship between these factors and technology acceptance, this study uses qualitative analysis to further identify the influence of these factors and provide insights into how music teachers can better utilise technology for effective teaching in higher music education in China. At the same time, this study provides valuable insights for assessing Chinese music teachers' acceptance of technology use, thus informing the literature on technology acceptance models.

SPA-130

## **The New Standards for Taiwanese School Music Curriculum and Its Implementation After COVID-19**

*Wen-Fu Li*

*Assistant Professor, National Taichung University of Education, Taiwan*

### **Abstract**

Respond to the individual and social need for the next digital generation, in 2019, the Ministry of Education, Taiwan has implemented the new music curriculum standards which are a portion of the arts curriculum in the 12-Year Basic Education Curriculum (12YBEC) for Taiwanese free education first to 12th grade.

A number of innovative adjustments have been made in the 2019 edition in order to align with the 12YBEC's core perspectives: taking initiative, engaging in interaction, and seeking the common good. The new arts curriculum reveals three highlights: (1) emphasize on enabling students to realize design thinking and employing digital technology to empower their creativity in arts expression; (2) focus on arts integration and interdisciplinary learning; and (3) entitle individual school and teachers to possess more freedom to design the teaching content and select instructional practices to create an equitable and diverse learning environment for students with different musical potential and cultural backgrounds.

The COVID-19 pandemic occurred in March 2020 has significantly impacted human daily life including entire education system all around the world. During campus lockdown with all face-to-face teaching suspended, most countries utilize online platforms as alternative ways to provide education. The pandemic is a big and rush change that push school education into a total digital age while the large majority of teachers and students from K-12 had no proper training related to remote or online learning. The sudden changes have raised concerns about whether (1) teachers possess the capacity of managing a high-quality teaching and assessments using online platforms; (2) schools and students' home are equipped with proper digital devices that are necessary for digital solutions; (3) parents also possess the capacity to support their children's remote or online learning at home; (4) distance learning can still meet students' needs of social and emotional learning. Additionally, in the aspect of music learning, whether (5) online learning can still fulfill the practice of music making which is considered as one of the core objectives for school music curriculum.

This article aims to explore the 12YBEC's origins, its development background, and compares its philosophy with other developed countries' contemporary policies for music education. The gap between the new music curriculum standards and school educational practices was investigated. In the midst of the COVID-19 pandemic, finding the alternative ways for music teaching and learning when a school lockdown is enforced for a long period time was also discussed.

SPA-134

## Teaching Strategy for Making Creative Music Using K-Pop

*Sumi Kwon*

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### Abstract

Improvisation in music is defined as the art of thinking and playing music at the same time. In general, improvisation conjures up random activities without planning, but actual improvisation is an activity of making creative music that understands and expresses musical ideas on the spot without prior planning with internalized musical background. There are many prior studies of the educational usefulness of improvisation, but it is not easy to experience improvisation in the actual piano classes.

The general guiding strategy of improvisation presented in prior studies is 'planned training'. One of the main purposes of planned training is to develop skills for young learners, especially those with limited musical experience, to improvise through intensive development of internalized musical background knowledge. In the study, Kwon(2019) largely classified improvisation teaching methods into "based on indicated musical elements" and "based on question and answer." And a teaching strategy was presented for each method, in which planned training could be carried out according to detailed musical elements such as rhythm, pitch, chord, scale, & form etc.

In particular, by actively utilizing K-pop melodies, which are mainly used to reduce the burden of mistakes and to play them without feeling "wrong," it gives fun and confidence to improvise. The K-POP group's songs (for example, BTS & Black Pink etc.) which have recently been ranked on the Billboard chart, are being used as teacher accompaniment, and young students improvise by creating its counterparts with class instruments such as keyboard, recorder, xylophone, etc.

In this presentation, I would like to introduce a teaching strategy that utilizes K-Pop, which has recently attracted a lot of interest worldwide, as a musical material, among the learning activities for improvisation. The significance of this presentation is to inspire young learners' musical interests by introducing musical materials of various cultures and styles into the music education, and to actively participate in creative music making activities.

SPA-137

## **The Influence of Performance Anxiety of Career Adaptability and Career Optimism in Music Students: Self-Efficacy as a Mediator**

*Yang Rong*

*Shanghai Conservatory of Music, China*

*Wang Qi-Ran*

*Beijing Normal University, China*

### **Abstract**

Music performance anxiety has traditionally been an important issue related to musical performance, both for professional performers or music majors. Although extensive research has been carried out on the negative effects of musical performance anxiety on musicians, including biological and psychological vulnerabilities. Nevertheless, literature that focuses on the relationship among music performance anxiety, self-efficacy and career development of music majors remains limited. China has many high-level music conservatories that prepare students for performance and teaching careers. Based on Social Cognitive Career Theory (SCCT), this study is designed to explore the impact of musical performance anxiety on music majors' self-efficacy and future career choice within the Chinese context.

Participants were 360 students majoring in music performance and music education from several regions in China, who had internship experience in related fields (e.g. private teachers, schools or orchestras), completed a set of questionnaires that included Music Performance Anxiety Inventory for Adolescents (MPAI-A), Self-Efficacy Formative Questionnaire, and Career Future Inventory (CFI). Students who suffered from high MPA were interviewed trying to explain why do MPA affect self-efficacy and future career inventory from different perspectives.

The results show that music performance anxiety has significant differences in students' self-efficacy, which is mainly in terms of gender and major differences. Comparably, females suffered more MPA than males. Performance students had higher MPA than music education students. In addition, MPA also has an obvious negative effect on music learners' self-efficacy and future career choice, which plays a mediating role between self-efficacy and three perspectives from career future inventory.

As MPA has a significant negative impact on music majors' self-efficacy and career expectations, music colleges could strengthen education on MPA-coping strategies, and shape an appropriate learning environment to help students gain a better sense of self-efficacy. At the same time, students may also can enhance their self-efficacy, find MPA management, and try to reduce the destructive impact of MPA.

SPA-138

## **The Influence of Teacher Emotional Support of Career Optimism in Music Students: Self-Efficacy as a Mediator**

*Yang Rong*

*Shanghai Conservatory of Music, China*

*Wang Qi-Ran*

*Beijing Normal University, China*

### **Abstract**

Extensive research has demonstrated that teacher emotional support has a significant positive impact on students engagement and academic achievement. Compared with students studying other majors, music students have a separate tutor who is under a profound influence on the individual students during the undergraduate level. The aim of this study is to investigate in which self-efficacy and career optimism of music students is impacted by teacher emotional support. The research questions are: 1) Does the emotional support of professional tutors has a positive impact on the self-efficacy and career optimism of music students? 2) How exactly does this effect happens? 3) What kind of emotional support do music students need?

Participants were 360 music students majoring in music performance and music education from several regions in China, who had internship experience in related fields (e.g. private teachers, schools or orchestras), completed a set of questionnaires that included Teacher Emotional Support Scale, Self-Efficacy Formative Questionnaire, and the career optimism section of the Career Future Inventory (CFI). Based on the results of the questionnaire, three students with strong teacher emotional support and three who were weak were selected to conduct structured interviews to gain insight into the specific impact of teacher emotional support on self-efficacy and career optimism of music students.

The results show that teacher emotional support has a significant positive effect on music students' self-efficacy and career optimism, which plays a mediating role between self-efficacy and career optimism. Among teachers emotional support for music students, the academic support for students is particularly important.

Teacher emotional support has a significant positive impact on the academic self-efficacy and personal career development optimism of music students. Therefore, teachers' emotional care for music students could be emphasized. Appropriately changing educational concepts, encouraging students more and respecting students' personal development choices are conducive to improving music students self-efficacy and helping them maintain an optimistic attitude towards future career development.

SPA-139

## **Connecting Performance Technique with Music: A Comparative Analysis of the Teaching Methods of Hans Leygraf and His Mentor Anna Hirzel-Langenhahn**

*Asami Inakagata*

*Doctoral Student, Tokyo University of the Arts, Japan*

### **Abstract**

Emotional expression is often regarded as an important element in music performance. Many prominent musicians, however, consider performance technique a requirement to gain freedom in emotional expression. This is not necessarily easy to acquire and has been a major concern for both teachers and students. Hans Leygraf (1920-2011), a renowned Swedish pianist and educator, had a unique teaching method for the piano. During the early stages of piano instruction with his students, he would deliberately emphasize on basic performance techniques. His method was inspired by the teaching of one of his mentors, Anna Hirzel-Langenhahn (1874-1951), who actively sought finger skills to create tone color.

The aim of this research is to clarify how Leygraf taught music from the perspective of technical instruction. I compare Leygraf's teaching with that of Hirzel-Langenhahn. In addition, I will elaborate on what they both emphasized in their technical instruction, and what Leygraf developed independently as his own teaching method.

My analysis is based on Leygraf's instruction in *Fundamental Piano Lessons* (2 DVDs, 2006) and Langenhahn's teaching in *Greifen und Begreifen: Ein Weg zur Anschlagskultur* (1964, 19-). All conversations and actions between him and his students in the DVD lessons are transcribed in this study. The latter, which is a book, includes not only guidance by Hirzel-Langenhahn, but also commentary and annotations by editors, disciples, and translator. All of the contents have been categorized into different sound and playing techniques through proper review and labeling.

Both Leygraf and Hirzel-Langenhahn instructed their students to consciously examine these sounds and techniques by dividing them into smaller elements. Furthermore, the students learned how to merge each element. Leygraf specifically taught skills that can be applied in the musical context by teaching connected sensations with musical interpretation.

Through this research, it can be suggested that Leygraf's teaching method systematically develops a student towards gaining freedom in emotional expression. He did not regard technical practice as a mere training and preparation for performance, but positioned it as part of trial and error in interpreting music. These findings provide a pedagogical insight into teaching students how to connect performance technique with music.

SPA-140

## **Music-Evoked Autobiographical Memories of a Young Adult Cohort: What Can They Tell Music Educators?**

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*University of California, Riverside, USA*

*Genesis Garza Morales*

*University of California, Riverside, USA*

### **Abstract**

Musical engagement both in school and in out-of-school contexts during the adolescent years has been well-documented in music education literature, with a focus on diverse aspects of everyday musical experiences and consumption. Knowing adolescents' musical culture and how they integrate music in their everyday lives can help music educators better navigate ways to support students in building a musical life beyond school. The present study aims to expand the existing literature on adolescents' musical engagement through a retrospective narrative of young adults. By exploring music-evoked autobiographical memories of our study participants, we aim to examine how they engaged and interacted with music in their teenage years and seek possible implications for music educators. As part of a large-scale research project on music-evoked nostalgia, 140 undergraduate students (aged 18 – 25) at a large state university in the U.S. took part in a one-on-one music experiment in which they identified and listened to five pieces of music most likely to bring back valued memories. Participants also completed a series of questionnaires and participated in an interview to share personal memories associated with the self-selected music. Data collection has recently been completed, resulting in 700 pieces of music and over 35 hours of interview data. We are currently analyzing data, focusing on the musical elements of the collected music (e.g., styles/genres, popularity, country of origin, arousal/valence level) to identify any common characteristics. Interview data from 50 randomly selected participants are also being analyzed, with a particular focus on participants' memories on how and where they learned the music. A preliminary analysis shows that popular music predominated participants' self-selected repertoire (over 95%) but these were from widely varied time periods, which may suggest "cascading reminiscence bumps." In addition, several (tentative) themes emerged from the interview data: (1) active music sharing in the home environment as well as among peers; (2) heavy influences of digital technologies and media, along with multimodal experience of music listening; (3) taste in music and identity formation; (4) the significance of music for the emotional function in the adolescent years. Detailed analysis of data, accompanied with implications for music teaching and learning, will be presented at the conference.

SPA-141

## **Reflections on the Year of Change: Adaptive and Creative Use of Online Technologies by Australian Tertiary Music Teachers**

*Carol Johnson*

*Melbourne Conservatorium of Music – The University of Melbourne, Australia*

*Brad Merrick*

*Melbourne Conservatorium of Music – The University of Melbourne, Australia*

*Leon de Bruin*

*Melbourne Conservatorium of Music – The University of Melbourne, Australia*

### **Abstract**

Teaching music online at the tertiary level was not a common pedagogical practice across Australia prior to 2020. For many Australian music teachers, the 2020 COVID-19 scenario required some form of new technology use in their teaching. To identify the extent to which music teachers adapted their use of technology in teaching, we initiated a research project to: 1) explore and analyse the opportunities and challenges faced by tertiary music instructors during this period; and 2) examine the impact and changes as a result of the shift to fully-online music teaching. The research focused on Australian university music instructors (full time, part time and casual) responded to, and adapted during their shift from face-to-face teaching to online teaching.

A random sample of Australian tertiary music teachers from all states and territories were invited to participate and respond to an online survey that explored 20 categories and areas of practice. Through a combination of rating scales and open-ended questions, the data collection employed a mixed methodology to gather information about participants use of specific technologies, as well as their attitudes and preferences for technologies when teaching music online. For this presentation, the discussion will draw on a range of initial findings with reference to the following five themes:

- Teacher confidence with technology
- Creative teaching approaches and pedagogy
- Blended and online modes
- Modification to assessment and curriculum
- Student engagement – communication, collaboration and community.

Initial data found that teachers were required to be adaptive in the ways that they engaged with technology as they taught during COVID-19, with many identifying different approaches to foster student engagement, while also regularly modifying teaching strategies. The adaptive and creative responses of the participants suggest that teachers gained confidence in their capacity to use technology as the year progressed, with many adopting new modes of delivery. Similarly, many participants also identified their preference for the traditional face-to-face modes, highlighting the challenge that exists for teachers to adopt new pedagogy.

These preliminary findings will also form the basis of key recommendations for future research in this important area of music teaching.

SPA-142

## **An Investigation of Creative Music Pedagogies Used in a Graduate Music Teaching Program During COVID-19: Student Reflections and Insights**

*Brad Merrick*

*Melbourne Conservatorium of Music – The University of Melbourne, Australia*

*Leon de Bruin*

*Melbourne Conservatorium of Music – The University of Melbourne, Australia*

### **Abstract**

This presentation is based on a research project that employed a qualitative methodology to examine students' responses via an online survey. It looks to consider the benefits and challenges of enacting creative pedagogical approaches in the tertiary context and examine emerging educational practices with regard to twenty-first century learning and technology. Underpinning this research was the intention of exploring how creativity practices were employed to realise twenty-first century capacities, incorporating technology that looked to provide deeper and more profound learning experiences, while developing self-reflection reflection, growth and sustainability. The project will examine which type of teaching methods, content delivery, and online learning found addressed their needs in a creative (unique) way as they used Canvas and Zoom for their lessons across many subjects.

This report explores the delivery of a tertiary degree in Music Teaching, specifically addressing the following areas:

- Curriculum design, delivery and assessment,
- Entrepreneurial approaches to learning through student centred activity,
- Online learning, student access, self-regulation and self-assessment,
- Learning environments (including online and technology-based practice) that mirror global change, capacities and expectations.

Using a qualitative methodology, students were invited to complete a series of items that consisted of open-ended questions. These asked participants to indicate the teaching and learning activities and delivery modes they had found to be the most suitable for them as part of their study in Music Teaching degree program. Data were analysed thematically to derive an understanding of the learning experiences that they found most useful.

This presentation will provide an overview of the emerging findings related to the key areas of the study, along with small examples of activities that were used in classes and were found to be valuable for the students during this time. It will highlight the need to be both responsive and adaptive with the use of technologies when teaching in an online environment, considering the ongoing needs students, organisation of resources, as well as purposeful teaching and learning experiences. Although much of the data is specific to the COVID-19 scenario, the recommendations provided are applicable more broadly to teaching in various contexts and will assist all teachers. Importantly, these can be considered more broadly for application in music education across the different learning experiences, i.e., performance, composition, musicology and aural.

SPA-143

## **A Participant Observation in “Language Activities”: From the Perspective of “Against Interpretation”**

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### **Abstract**

The purpose of this paper is to analyze the use of language in music education. According to the report by the Central Council for Education of Japan in 2008, language forms the foundation of intellectual activities, communication sensitivity and emotion. Previous study in Japan demonstrated: the images and emotions that students want to express are clear by sharing their images and emotions by language (Mizoguchi, 2016). According to the concept suggested by Sontag (1996), the Greek philosophy eventually created the separation of ‘form’ and ‘content’ in art, and therefore, ‘form’ is art itself and ‘content’ is interpretation of art by language. That move makes ‘content’ essential and ‘form’ accessory. However, if excessive stress on ‘content’ that should exist as essence provokes the arrogance of interpretation, the art itself would be silence. What is needed is a vocabulary for ‘form’ of music itself rather than a vocabulary for ‘content’ such as the images and emotions.

The research question of this paper, therefore, is: what kind of vocabulary do students need to describe music? In order to clarify how students use languages, a participant observation as a method was employed in at Junior High School, Japan. The students tried to create music that didn’t stick to functionality of harmony or coordination. The students made the group of six and created one graphic score by superimposing their graphics. The author analyzed ‘language activities’ based on the two groups by dividing the comments between group into ‘form’ and ‘content.’

The results from this study demonstrated that they all paid their attentions to musical ‘form’ such as structure although each student differently felt and thought of music. In particular, the students in the first group were engaged in ‘language activities’ closely related to musical ‘form’ without being biased towards musical ‘content.’ However, in the second group, the students were more ‘content’ oriented since they tended to imitate sounds from physical objects such as an airplane and the running sounds. From these results, two considerations can be presented. First, by means of focusing on musical ‘form’ such as timbre and dynamics, ‘language activities’ can be utilized to focus on not the images or emotions but music itself. Second, music teachers should precisely clarify the purpose and the method for ‘language activities.’

**Keywords:** Form; Content; Language Activities

SPA-145

## **An Exploration of the Factors Affecting Hong Kong Children's Motivation in Early Childhood Education Under Extracurricular Activities**

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### **Abstract**

Hong Kong parents are now attached importance to extracurricular activities. Previous studies have highlighted that participating in extracurricular activities can stimulate children's development in various components, such as academic achievement and social competence. In Hong Kong, some teachers have adopted Kodaly and Orff approaches in early childhood music education. The aim of this study is to investigate factors that affect children's motivation in early childhood music education under extracurricular activities environment. Children's motivation in childhood music learning is crucial among music educators as music plays a significant role in children's development process in terms of both musical and intellectual domains.

The current multiple case study consists of five pre-school children who have participated in two groups of extracurricular music classes. The music classes were adhered with the Orff teaching method. Data of the study is collected and triangulated through semi-interviews and structured observation. Each case consists of parents and their children who have participated in the early childhood music classes. Structured observation is adopted in this paper to study children's motivation and behaviour during music lessons. This study is constructed based on the concept of self-determination theory which is an empirically based, organismic theory of human behaviour and personality development. This paper focused on one of SDT's mini-theories, basic psychological need theory, which discusses the role of three basic psychological needs: autonomy, competency, and relatedness.

The findings reveal that children's motivations in the classes were varied according to different fulfilment level of the basic psychological needs. It was found that relatedness was the key factor affecting students' overall motivation level in the prescribed settings. Students' sense of relatedness grew over with their learning period. The level of relatedness was also affected by class size and curriculum design – the larger size demonstrated a higher level of relatedness due to more frequent group activities. Competency could be enhanced by prenatal music exposure and parental music guidance which had brought to the students. Autonomy was found in the freedom to choose songs and musical instruments by the students in the classes. The result from this study will be informed to early childhood music educators and parents. Moreover, the findings from the research are intended to inspire future research exploring suitable ways to increase children's motivation when they are participating in the music classes.

SPA-147

## **Nurturing Elementary Piano Students: A Descriptive Study on an Integrated Pedagogical Approach**

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*So Ming Chuen Allison  
HK Music Institute, Hong Kong, China*

### **Abstract**

Since the past decades, most of the Hong Kong piano students have been focusing on graded examinations of performance. They are strong in score reading and performance with preparation in detail in advance. However, they usually find difficulties on practical musicianship, including improvisation, harmonization, ensemble and play by ear etc. An integrated pedagogical approach, is developed to strengthen the above abilities. The approach is aimed at beginners with some previous experience of the piano, it focuses on listening and creativity, rather than reading music. The approach includes 42 lessons (60 minutes per lesson) which covers performance, aural training, music theory, piano technique, harmonization, music appreciation, composing, arranging and memorization etc. The approach starts with understanding basic musical elements such as melody, harmony rhythm. In each unit, particular focus is given to one element of music, but other elements are also incorporated organically and/or reinforced. During the later stages, students are provided with various 'recipes' on how to combine musical materials and create their own music. By the end, students will become a well-rounded musician, will learn better through self-evaluation and in a group situation through evaluation of others. Plus, self-motivation and deep understanding of key musical elements and being able to apply them confidently to piano playing.

This study aims to examine the integrated piano pedagogical approach. Six piano beginner students and three trained piano tutors will be participated. Each student will take ten pilot lessons of 60 minutes, totally 60 pilot lessons will be observed, while a questionnaire will be distributed to all the participants for their feedback. Afterwards, selected participants will be invited to join in a series of semi-structured interviews. A student concert will be held towards the end of the ten pilot lessons, in order to assess students' learning achievements.

In sum, this study explores the outcome of the integrated piano pedagogical approach, in terms of teaching and learning interest, satisfaction, musicianship abilities and skills. The approach is implied for improvement in nurturing all-rounded musician, both in performance and in musicianship.

SPA-149

**Effects of Intercultural Music Courses on Ethnic Identity, Intergroup Attitudes and National Identity Among Adolescent Students from a Multi-Ethnic Area in China: A Mix-Methods Intervention Study**

*Guan Tao*

*Education University of Hong Kong, China*

**Abstract**

Drawing on the musical identity theory and the four dimensions of ethnic identity, this mixed-methods intervention study has explored the impact of an intercultural music course on ethnic identity, intergroup attitudes and national identity among junior high school students from Yi, Han, Mongolian and Tibetan ethnicities in a multi-ethnic area in China. The study involved collecting qualitative data before, during and after the intervention (the intercultural music courses). In the initial phase of the study, collected qualitative data were collected to explore potential barriers before the intervention began. Then during and after the trial, further qualitative data were collected (i.e., observation, interview, focus group and reflective dairies) to understand the participant students' experiences with the intervention. At the baseline, at the mid-point of the trial, and at the end of it, quantitative data were collected using three questionnaire surveys.

The quantitative results showed that the intercultural music course (intervention group 2 and 3) significantly enhanced the ethnic identities, intergroup attitudes and national identity of junior high school students from four ethnicities, while the regular music courses (intervention group 1) and non-music intervention (control group) did not significantly affect ethnic identity, intergroup attitudes and national identity. The qualitative findings suggested that the ethnic music and native languages, the local music teacher and culture bearers, the discussions, interactions and close relationship between students and teacher, and the collective musical engagement might play an important role in the construction of ethnic identity, intergroup attitudes and national identity for the participant students from Yi, Han, Mongolian and Tibetan ethnic groups.

Ultimately, this study argues how to balance educational resources and realize educational equity in multi-ethnic areas in China, and explores the potential of developing intercultural music courses in similar contexts. Furthermore, this study develops three analytical frameworks from ethnic identity, intergroup attitudes and national identity respectively, and discusses the theoretical and practical implication of them to the future research.

SPA-150

## The Curriculum of Music Education and the Actual in Wales

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### Abstract

The United Kingdom of Great Britain and Northern Ireland, the UK, established education systems prior to the rest of the world. The UK is the foremost country in the research field of education along with the United States and has also produced many pedagogies. In Japan, there can be seen many pieces of academic research regarding education in UK. However, Few of them have taken into consideration the differences between four constituent countries: England, Wales, Scotland, and Northern Ireland. Especially, in the field of music education, there has been no research focusing on Welsh system.

The purpose of this research is to clarify the history of music educational curriculum in Wales which has been overlooked in Japan. Specifically, I researched how music education in Welsh schools began and has continued until the present day and how the current curriculum has been put into practice, both of which has revealed the uniqueness of music education in Wales.

Firstly, I described the transitions of school educational systems and music education in Wales. Educational system in Wales has developed in parallel with that in England. However, there were some factors behind its independent development; (1) there was a time in England when negative views on Welsh society were widespread, (2) Welsh National Curriculum was enacted because Wales alleged the necessity of cultural and historical differences from England and demanded musical curriculum including Welsh songs.

Secondly, I translated Welsh National Curriculum into Japanese and considered its differences and characteristics in comparison with English one. It can be said that Welsh National Curriculum has many detailed and specific descriptions compared with English one. In addition, in the curriculum, we can see the word "Wales" or "Welsh" quite often, which indicates that the whole schools are trying to protect, develop and shape Welsh society.

Furthermore, the lectures I took from a professor at Bangor University has clarified several things; (1) music education is to teach and learn music, (2) many Welsh folk songs are selected as teaching materials at schools and (3) schools closely cooperate with events held in the local area.

Lastly, I offered some implications for music education in Japan; how music appreciation and Japanese traditional music classes should be, and what "music education" itself should be.

SPA-151

## **Development of Music Teaching Materials and Teaching Plans for Cultural Diversity in Japanese Schools**

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*Shiga University, Japan*

*Kenjiro Miyamoto*  
*Gifu Shotoku Gakuen University, Japan*

### **Abstract**

Over the last three decades, the number of children with foreign roots and multiple linguistic and cultural backgrounds has increased in Japanese schools. We have to be aware that thinking about education on the assumption of a single language and culture is out of touch with reality. Therefore, we have conducted research for development of music teaching materials and teaching plans that assume cultural diversity in Japanese school.

We firstly drew important points of the argument from the review of theoretical and practical research of intercultural or multicultural music education in USA and Germany. The former is one of the multi-ethnic nations and the latter has accepted many immigrant workers. There were three discussion points that have been derived from the review.

The first is how to connect the learning of music itself with the learning of the historical, cultural, and social background of music. To address this point, we have set the condition that the learning of the music itself and the learning of the cultural background are compatible and linked.

The second is how to define one's own culture and different cultures, and the boundary between them. We believe that understanding "other music" in the light of one's "own music" enables us to capture the diversity of music culture as being related to ourselves. Accordingly, we set the condition that children proceed with learning while going back and forth between their own culture and different cultures.

Thirdly, we view the "musical culture" of individuals as complex and variable due to the various environment surrounding them, including school, home, mass media and social media.

Based on the three points above, we tried to develop music teaching plans for cultural diversity that could be applied to Japanese school. For a conceptual model of teaching plans, we choose several themes "X and music" such as "play and music", which relate music itself and the cultural background of the music. Looking at these relations children are expected to discover similarities and differences between multiple music cultures while going back and forth between their "own culture" and "different cultures", and to understand the diversity of music itself.

In this presentation, we present teaching plans based on two themes. One is "play and music", which focuses on children's play songs, and the other is "life/events and music", which is linked to community life.

SPA-152

## **Beyond the “Outstanding Practice”: An Investigation of the Student-Centered Pedagogical Implementation in Music Demonstration Lessons in Guangdong, China**

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### **Abstract**

In recent decades, the student-centered approach aligning with the constructivist epistemology represents mostly the examples of the “best practice” pedagogy for an educational shift from emphasizing the content and skill memorization to supporting students’ autonomy and individuality. However, identifying any “best” or “excellent” practices is easily challenged by its ignorance of the effect of various contextual implementation. In fact, in China, although the “student-centered approach” has been officially written in the Music Curriculum Standards issued by the Ministry of Education, research reported that inadequate support from the school administration, limited understanding of the curriculum guide, and long-existing oriented-examination are still the practical barriers in most regions.

This research project aims to conduct both observational and interpretive methods to discover the implementation of the student-centered pedagogy. With the research questions in (1) what specific classroom behavior can be observed and (2) in what activities teachers and students interact with each, 19 selected “outstanding” Music Class Demonstration (MCD) lessons in Guangdong province have been observed with non-participant observation with a sequential observational method. As a unique observational document, MCD teachers acting as the learning models allow others to learn and imitate their instructional behavior and pedagogy. Data from the 19 elementary level music lessons were analyzed by a software called MAXQDA for both statistical and interpretive analysis. Time-event sequential data with an observation coding scheme were conducted for quantifying the time spending on teachers and students in class and their specific interactions during the lesson. Interpretive vignettes were documented to further explaining the observational phenomenon.

Findings in the study indicate that a student-centered approach was still lacking constructivist implementation in the demonstration lessons in China. Observable phenomena such as a majority of teaching content was designed for singing, passive learning was observed, and formalized sequential patterns occurred in almost every class for lesson structure revealing the issue of lacking concentration on individual students’ previous experience and progressive cognitive construction. Further, these findings resonate with evidence of research from other Asian countries, with a similarly large number of students, shortage of equipment support, and lacking appropriate perception of the education reform, which may raise new perspectives to interpret the implementation in different contexts.

SPA-155

## **Development of New Textbooks for Transmission of Local Folk Music and Culture in School Education: A Case Study in Shunde, China**

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*Bo-Wah Leung*

*The Education University of Hong Kong, Hong Kong, China*

### **Abstract**

Shunde is a region in the city of Foshan, Guangdong Province in China. Folk music of Shunde in China is characteristic in terms of their relevance of the working lives of farmers and fishermen. However, the musical genre has not been well transmitted to the new generations. While compulsory school education is an effective channel to promote and transmit the local culture at an early age, the local government of Shunde, Guangdong Province of China has been collecting local folk music of Shunde and develop new textbooks for school teaching.

This presentation reports the development of a textbook series entitled “Local folk music of Shunde” for school music education. We record the rationale and characteristics of the textbooks, and report the situation of how the textbooks were used in schools. A number of songs and folk music were collected, including salt-water songs, pastoral songs, dragon boat singing, gongs and drum cabinet, lion dance, dragon boat racing, Cantonese opera, and Shunde nursery rhymes. We invited various artists and senior people in the region to demonstrate their music making for our recording and transcription. The contexts of these songs were investigated and connected with the musical elements for thorough understanding of the pieces. We also involved various artists to teach school music teachers to learn to sing and play with the music for their teaching. While schools have different teaching focuses, we incorporated those schools which are eager to transmit local culture to the students in this project. Exemplary music classes were recorded for promotion and demonstration for popularization. Application of the textbook series has effectively promoted students’ understanding and encounter of the local folk music in the cultural context. The book series has been adopted for primary 1 to 6 as a kind of regional music in the country.

The project has been impactful in various aspects. Local schools in Shunde have developed their own teaching and curriculum characteristics; they were invited to present their experiences in various national events. Cantonese, the local dialect, has been fading away since many teachers come from other provinces who do not speak the dialect. Through this project, Cantonese was also promoted to the other parts of China, in which the local culture of south China is well known. The project was also commended by the academics since it helps in promoting and transmitting the local culture to the younger generations, while music could be subsumed in people’s daily life. This project is a case study for sharing on how local folk music could be promoted and taught in school music education.

### **Keywords**

education policy, folk music, music education, music textbooks, transmission,

SPA-159

## **Peers Learning: A Student Program of Online Musical Instrument Accompaniment Training During Epidemic**

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### **Abstract**

Due to the influence of COVID-19, the prevalence of online courses soared in 2020. This was even true of music classes-- the traditional face-to-face classes moved online. In order to accommodate demand, some for-profit online tutoring institutions emerged, including Fast Accompany Training, Small Leaf Training, and VIP Accompany Training. The research object of this paper is to follow the effectiveness of a free online tutoring project carried out by a music club established by students of the Affiliated High School of SCNU, a famous senior high school in south China. The project recruited high school students with various musical instrument skills to provide online free accompaniment tutoring for children aged 6-12 who were learning to play musical instruments. Parents booked time online, and after learning about the students' interests, the club assigned corresponding student volunteers to carry out the accompanying practice in the form of online guidance. The project has had great response, which not only attracts the unanimous praise of children and parents, but also attracts more and more high school students as volunteers to actively participate as accompanists.

Through interview and analysis based on educational principles, the success of this mode of teaching lies in the positive significance in both aspects of teaching and learning: ostensibly, the young children benefit by gaining valuable skills in playing their respective instruments. However, this program conferred benefit on the tutors as well; without this volunteer opportunity, many young musicians stop practicing in response to heavy academic pressure in high school. The achievement as volunteers can also effectively reduce the study pressures of high school. This program helped students regain their sense of purpose in continuing to learn music. Additionally, this program helps the tutors to improve their communication abilities, as they must effectively communicate to teach concepts online. This is exactly the purpose of this student club: its initials "D & C" stand for Dedication & Conversion - serving society with a dedication to public welfare and promoting personal conversion through music learning.

Children who are guided by accompanist training from older peers will learn more from this kind of online learning. The children were more engaged and willing to learn from their peers than their parents or teachers in professional accompanying practice institutions. The high school students were strictly selected as excellent students; this kind of outstanding student aura makes parents willing to let their children participate in such tutoring, not only because the program was offered for free, but also because the young children could be influenced by the power of a fine example. The design of the program was intended such that outstanding youth could influence the music education of young children, bringing benefits to both sides of teaching and learning.

SPA-162

## **Exploring the Inclusion and Equity in Music Education**

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*Kenta Tsukahara*  
*University of Ryukyus, Japan*

*Shuhei Chiba*  
*Aomori Akenohoshi Junior College*

*Yohei Koeda*  
*Hirosaki University Special Needs School, Japan*

### **Abstract**

As Edward Said (1991) argues, European music's autonomy and hegemony have been believed and taken for granted for at least a century. At the very moment when the avant-garde or contemporary music of the West challenged European tonal music tradition and looked to the non-Europe for a way out of its impasse, music education in Japan found itself inscribed with the framework of the superficial or counterfeit nineteenth century musical traditions of the West along with an aspect such as a major or minor key function. Presupposing the audience, many music teachers have valued music composed by professional composers above anything children could achieve themselves, and failed to understand the value of music beyond concert and competition. The purpose of this paper, therefore, is to develop a new music education curriculum in order to bring inclusive education into music classroom, based on the concept of soundscape and universal design. The research question was: how can music teachers develop all the children's creativity at nursery, elementary, secondary and special needs schools? In order to answer this question, the authors undertook an action research at secondary and special needs schools as well as semi-structured interviews with junior college students in the department of early childhood education in Aomori, Japan. The action research showed that all students from secondary and special needs schools were able to collaborate and create their own music without valuing foreign music and music composed by others. What should be noted here is that the junior high school students learned most from the special needs students (children with pervasive development disorder; down syndrome; autism and so on) in terms of musical flexibility and creativity. After the class, a junior high school student commented: "Not knowing what to do, his (a special needs school student) moves let me know a model." Through the concept of soundscape as a tool towards universal design in music education, there must be a way for all the students from the nursery, elementary, junior high and special needs schools to work together at some point. The interviews with junior college students, at the same time, showed that many students in the nursery department have blind faith in European tonal music. Based on the above, the authors also attempted to propose a new curriculum design in order to bring the inclusion and equity into the music classrooms, referring to Rashomon Approach as a social constructive evaluation.

SPA-163

## The Importance of Using Sound Education for Japanese Children with Hearing Impairment

*Sumie Tonosaki*

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### Abstract

Music education at schools for the deaf in Japan has a tendency to teach children based on visual information, because it is believed that hearing impaired children cannot listen to the sounds at all.

Previous studies demonstrated that many teachers believe music education are difficult for hearing impaired children (Tonosaki, 2017; Sakuta and Yuasa and Kato, 2018). For example, in singing classes, music teachers present the hands as the pitch of each notes (Tonosaki, 2017). According to a quantitative research by Isaka and Shichi (2017), many music teachers think that deaf children have little creativity, therefore, teachers do not expect any musical activities at deaf schools. My previous research found out that many children at the deaf school can actually listen to sounds by using the cochlear implants and the hearing aids (Tonosaki, 2017). However, there are little researched about practices that allows hearing impairment children to actively listen to sounds.

This paper, therefore, attempts to prove that deaf children have the hearing ability and use it to create music through practice of *A Sound Education* by the Canadian composer R. Murray Schafer. *A Sound Education* is effective developing listening and creativity for disabilities children (Koeda, 2016; Imada and Koeda and Kanazaki and Tonosaki, 2019). An ethnography was taken at as a research method. The reason for using observation is to compare the action and remark before and after practicing *A Sound Education*. I observed the daily life of children with hearing impairment outside of the music class. Two children in elementary school were selected. Child A is a boy and age of 9, child B is a girl and age of 12. Those students practiced some exercises based on *A Sound Education* such as soundwalk, using a sheet of paper as an instrument and sound diary. Through these exercises, children with hearing impairment could listen to the sounds by wearing hearing aids and cochlear implants, and came to play with the sounds in the daily life. For example, child A played with the sounds of blackboard, wall and his own voice. Child B was interested in differences of her footsteps.

As a result of this research, I found that deaf children can interact sounds through *A Sound Education* outside of the music class and develop to their ability for listening.

*Keywords:* Sound Education, deaf children, ethnography, creativity

SPA-167

## **A Study on the Design of Music-Centered Integrated Class Based on the IB PYP**

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*Sung-Ji Kim*

*Korean Music Education Society, Korea*

### **Abstract**

The International Baccalaureate (IB) is an internationally accredited curriculum that develops the intellectual, personal, emotional and social skills needed in a rapidly globalizing world for students, adopted by schools in many countries including Korea. The International Baccalaureate Primary Years Programme (IB PYP) presents the curriculum in which six subjects and six transdisciplinary themes are integrated, and focuses on helping students to actively explore each subject and transdisciplinary theme. It has been gradually introduced into public education in Korea and researches on it have been done. But most researches are less focused on the music curriculum, particularly on integrated music in the IB PYP framework. In this context, the purpose of this study is to investigate ways to integrate music with other subjects based on the IB PYP.

To this end, the essential elements of the IB PYP and six transdisciplinary themes were reviewed. Next, based on the IB PYP framework, the scope and sequence of the art in the IB PYP and the standard achievements and music elements and concepts of primary music in Korean 2015 revision curriculum were analyzed and compared, and then current music textbooks for grades 3-6 in Korea were classified according to six transdisciplinary themes. Finally, proposal for designing music-centered integrated classes based on the transdisciplinary themes of the IB PYP was presented, and practical lesson plans were exemplified. This study gives implications for the direction and implement of integrating music with other subjects based on transdisciplinary themes. It is expected that the in-depth research on the music-centered integrated class will be continued connected with the IB PYP.

SPA-171

## **An Investigation of the Self-Efficacy of Pre-Service Music Teachers in Implementing Inclusive Education in Eastern China**

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*Xu Minqi*  
*Independent researcher, China*

### **Abstract**

The Special Education Promotion Plan (2017—2020) promulgated by the Chinese government in 2017 indicated that inclusive education should be developed in an in-depth and comprehensive way with high standards. Pre-service teachers' teaching goals, motivation, efforts, and sentiments are directly influenced by their self-efficacy. Therefore, this research aims to measure the self-efficacy of pre-service music teachers in inclusive education implementation through adopting the Teacher Efficacy for Inclusive Practices (TEIP) scale, items for measurement included knowledge of content and pedagogy, managing classroom environment and behavior, and the ability to work collaboratively with parents and paraprofessionals. Based on purposeful sampling, this study: (a) measured the self-efficacy of pre-service music teachers in eastern China in implementing inclusive education; and (b) compared self-efficacy differences caused by gender, region, grade, and experience. A total of 376 pre-service music teachers from Hebei, Zhejiang, and Guangdong provinces responded to the questionnaire with 28 items. Finally, 234 validated responses were utilized in the analysis. The results showed that: (a) the pre-service music teachers in eastern China have a moderate level (level=6,  $M=3.79$ ) of self-efficacy in implementing inclusive education. However, they felt they could successfully cooperate with parents and paraprofessionals ( $M=4.13$ ); (b) the key factors affecting their self-efficacy in implementing inclusive education are their grades and knowledge of special education laws and regulations, rather than genders, regions, whether they had gotten on with the disabled, whether they had been trained in special education, or whether they had any experience in inclusive education; (c) males had more sense of self-efficacy in letting ordinary children and special needs children conduct collaborative learning as well as dealing with physically aggressive students. ( $p=.033$  &  $.044$ ); (d) The students in lower grades enjoy more sense of self-efficacy in implementing inclusive education than that of higher grades ( $p=0.024$ ); (e) those who knew special education laws and regulations had higher self-efficacy ( $p=0.029$ ). Besides, this study also discussed the impact of a unified curriculum for pre-service music teachers on the implementation of inclusive education.

SPA-172

## **An Investigation of the Sense of Professional Identity as Pre-Service Music Teachers in Zhejiang Province**

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*Zhang Yanhan*  
*The Education University of HongKong, HongKong SAR, China*

### **Abstract**

The Action Plan for the Revitalization of Teacher Education (2018-2022) issued in 2018 by Chinese government, advocates that developing the sense of professional identity as pre-service teachers should be highly-regarded, due to its direct influence on the pre-service teachers' attitudes toward their careers and study. This research adopted the Teacher Professional Identity for tuition-free normal college students, items for measurement included intrinsic values, extrinsic values, and acts of volition. Based on purposeful sampling, this study: (a) gauge the status quo of the sense of professional identity as pre-service teachers among music-major students of normal universities and colleges across Zhejiang Province; (b) analyze the differences in sense of professional identity as pre-service teachers across genders, year(s) of study, administrative regions and educational institution categories. Finally, 274 validated responses are were utilized in the analysis. The results showed that: (a) the sense of professional identity as pre-service teachers among the music-major students admitted to normal universities and colleges across Zhejiang Province is above-average (level=6, M=4.33). They were found to have paid more attention to the extrinsic values of teaching careers, such as respectability and satisfactory working environment (M=4.70), but were nonetheless short in terms of efforts made (M=3.73); (b) Statistically significant differences ( $p=0.014$ ) were found in sense of professional identity between the genders; relative to men, women were found to develop a higher sense of professional identity across the board; (c) No statistically significant difference ( $p=0.226$ ) was found in the sense of professional identity across various years of study. Freshmen, sophomores, and juniors displayed the highest levels of contributions from extrinsic values, while seniors and postgraduates trumped the others in from the intrinsic value; (d) No statistically significant difference ( $p=0.804$ ) in sense of professional identity was found among cities, towns and rural areas. Those who came from towns displayed the highest contribution from intrinsic values, while those from cities and rural areas surpassed those from towns in terms of contributions from external values; (e) Statistically significant differences ( $p<.001$ ) in sense of professional identity could be observed across educational institution category, as pre-service music teachers admitted to colleges saw the higher sense of professional identity across the board compared to those admitted to universities.

SPA-174

## Evaluations of Vocal Ensembles Are Associated with Performers' Expressive Movement

*Diego D. T. Pinto*  
*Northwestern University, United States*

*Steven J. Morrison*  
*Northwestern University, United States*

### Abstract

**Background.** Movement by individual instrumental and vocal performers influences listeners' perceptions of specific musical parameters as well as broad evaluations of expressivity and musicality. Expressive movement has been associated with more positive performance evaluations, although less consistent results have been reported among vocal groups where, in some cases, more negative evaluations were given to performances that included expressive movement. Such results may not be independent of preferred performance practices for specific music genres or listeners' experience as performers.

**Aims.** The purpose of this study was to further investigate the relationship between expressive body movement and listeners' evaluations of vocal ensemble performance. We sought to answer whether and how expressive movement or the lack thereof influence performance ratings among listeners with varied music backgrounds.

**Methods.** Participants ( $N=266$ ) were solicited using Amazon Mechanical Turk (MTurk), and were adults (age 22-75 yrs,  $M=39.66$ ,  $SD=11.52$ ) living in the U.S who demonstrated varied levels of music experience (Goldsmith MSI general scale, max score = 126, median = 73.5,  $IQR=53-88$ ). Using a Qualtrics online survey, participants used a 6-point Likert-type scale to rate performances of vocal quartets on expressiveness, accuracy, and preference. Stimuli consisted of excerpts of an SATB quartet performing four renaissance madrigals under one audio and three video movement conditions—*no movement*, *upper-body movement*, and *full-body movement*—resulting in twelve different audiovisual combinations. Identical high-quality audio performances were used for each condition. Participants first listened to the four songs in audio-only format, then watched an audiovisual performance of each under one of the three movement conditions.

**Results.** Using within-subjects ANOVA, we identified significant differences among ratings of expressiveness, accuracy, and preference. Audio excerpts were judged to be less accurate and less preferred, while *full-body movement* video performances were most preferred. *No movement* video performances were rated as least expressive. There was no interaction between movement condition and participants' music experience in any category.

**Conclusion and Implication.** Among these unfamiliar vocal music performances the inclusion of visual information was generally preferred over audio alone. However, the absence of expressive movement in the video condition resulted in the perception of a less expressive performance. These findings suggest that a lack of expressive movement in vocal performances could compromise listeners' perceptions of expressive singing. Singers and choir directors might consider the display of expressiveness through movement a vital part of their preparation.

SPA-175

## **A Case Study of An Elementary School Teacher using Makey Makey for Music Creating**

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### **Abstract**

The purpose of this research aims to discuss an elementary school teacher using Makey Makey to music creating activities as well as student's learning outcomes and learning interest in using Makey Makey. Since 2001, Taiwan has officially promoted the integration of Information Technology as a supplementary medium into teaching various subjects. Ministry of Education encourages teachers to develop different teaching strategies and utilize devices to integrate Information Technology into music teaching. Makey Makey is a control board that can be programmed or combined with software to interact with various conductive materials through a computer.

Researcher makes a case study to investigate the curriculum design, teaching interactions, as well as student learning outcomes and interest in a 6<sup>th</sup> grade music classes in an elementary school. Data collection includes classroom observation records, audio-visual recording equipment, interviews, and so on. The observed teacher is the special artistic director in the elementary school who has 50-year experiences in teaching music, chorus, dance, drama and other arts integrated courses. Orff approach is introduced as music instruction in observed elementary school, while music creating plays an important role in upper grades because of their readiness of solid musical ability.

There is a lack of academic literature on Makey Makey. Although there are cases of application in various disciplines, very few applications in music teaching are shown. For those who intend to prepare Makey Makey music lessons, they need to work with teachers from other disciplines or form "teaching teams" to conceptualize teaching and implementation. This study is still in progress and we expect to see the implementation of the teaching to enhance students' creativity and interest in learning. Research on the integration of information technology into music teaching is still developing, and we hope that more research will be conducted to make better use of technology in music education.

The expected results of this case study are as follows:

1. Students enjoy music creating rather than afraid of it after learning from the case teacher.
2. The assistance of Makey Makey can stimulate student's motivation in learning music.
3. Students' musical ability has impact on their development of music creating.
4. When music teachers instruct music composition, results of students' music creating are limited to time and requirements of the composition.
5. By using Makey Makey and carrying out creative ideas for teaching, we are able to integrate different disciplines and present cross-disciplinary learning in music class.

SPA-178

## **Music Teacher Instruction Competence Evaluation Index Construction: A Vision of the Experts**

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*Aiqing Yin*

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### **Abstract**

#### **Background:**

Music teachers are the leading force of music education and the prerequisite for improving the quality of music education. The instruction competence of music teachers is the key factor affecting the teaching quality and effect, and also the core factor reflecting the status and role of teachers. To cope with the new requirements and challenges, what kind of instruction competence and how to evaluate the instruction competence of music teachers have become the core issues of this study.

#### **Aim:**

This study aims to investigate what are the necessary instruction competence for a music teacher and construct an evaluation index system through a questionnaire survey and Delphi method.

#### **Method:**

A total of 1468 music teachers from 7 regions /provinces responded to the survey and snowballing recruitment process eventually resulted in a panel of 12 expert palpation. A consensus on what are the necessary instruction competency for a music teacher by using two rounds of questionnaires.

#### **Results :**

Findings reveal that the positive coefficient of experts consulted by the questionnaire was 93%, and the mean of expert authority was 0.72. The mean of necessity of the first and second level indicators determined was greater than 4.00, and the mean of clarity was greater than 3.5, which met the requirements of Delphi method. Finally, seven first-level indexes, 21 second-level indexes and 63 observation points were formed, including the ability to understand students, the ability to design teaching, the ability to implement teaching, the ability to reflect on teaching, the ability to understand music specialized content, the ability to understand pedagogical content and the ability to understand pedagogical content knowledge.

#### **Conclusions:**

The music teacher instruction competence of evaluation index system provide a reference for the music teacher evaluation ,explore the current instruction competence level of music teachers and to effectively promote the establishment of an evaluation system and mechanism for the instruction competence of music teachers.

SPA-184

## **Parents', Pupils' and Instrumental Teachers' Perceptions of Graded Music Examinations in Relation to the Cultural Educational Context in Hong Kong**

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*Graham Welch*

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### **Abstract**

Taking graded music examinations has always been a commonplace activity within the process of instrumental learning in Hong Kong. A high rate of entry for graded examinations, such as from the ABRSM, Trinity College London, Central Conservatory of Music, and Shanghai Conservatory of Music was recorded in the past ten years. Previous studies suggest that graded music examinations have beneficial effects, such as concerning motivation, certification, and a formal measuring of musical achievement. Although relatively few studies have examined the role and effect of these external examinations within the instrumental learning and teaching process in Western countries, it has been observed that there is an association between the perceived importance and advocacy for taking these graded examinations as part of the competitive culture in the Hong Kong education system. Nevertheless, there is very limited evidence on how pupils, parents, and instrumental teachers perceive and employed these examinations. This study, therefore, aims to understand how stakeholders perceive and value graded music examinations in the highly achievement-based society of contemporary Hong Kong.

The study was based on a theoretical framework inspired by Bronfenbrenner's Social-ecological systems theory (1994) aiming to look at relationships and interactions between layers of contexts and individual's perceptions and behaviour. The study took place in 2018 and 2019 in Hong Kong and included  $N=182$  questionnaire responses from instrumental teachers, parents, and pupils and  $N=14$  individual interviews. Three cases were drawn from the interviews to form groups of trios (teacher-pupil-parent) to study interactions between stakeholders and group relationships of perceptions.

Results suggest that instrumental teachers, parents and pupils have different perceptions and levels of agreement about the value of graded music examinations, such as beneficial effects, level of association with the Hong Kong education environment, and also pedagogical approaches towards graded examinations. Although most participants agreed that motivation was one of the key reasons for taking graded examinations, there was an observed tendency that more emphasis was put on non-musical functions, such as gaining credit in schools, certification, aiding future studies, and for comparisons between pupils. Negative issues were also raised as a result of the over-emphasis on graded examinations, such as an unhealthy variance in the quality of instrumental teaching, huge competitiveness between pupils, and also social inequalities in accessing examinations. Results imply that reconsideration is needed on the function and role of these examinations in a highly achievement-based context.

SPA-186

## **An Analysis of Eye Movements According to the Ability of Pre-Service Elementary Teachers to Read Music**

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*Korean National University of Education, South Korea*

### **Abstract**

Eye movement research is a method used to study cognitive factors that are the basis of expert knowledge for each area, and it has been increasing recently. This also applies to the study of eye movements in music reading, and since music symbols are accompanied by motor counterparts, eye tracking in music reading makes it possible to grasp what subjects are reading while performing. The purpose of this study was to analyze the eye movements of pre-service elementary school teachers while reading music and playing the piano to find out the difference according to music reading ability. To this end, each subject was asked to read a 5-bar single line melody and a 5-bar melody in parallel motion through a computer monitor and play on the electronic piano at the same time. Meanwhile, the eye tracker attached to the bottom of the computer monitor detects the eye movements. The results were as follow: First, total fixation number, mean fixation duration, and total fixation duration were different between reading a single line melody and reading a melody in parallel motion. Second, there was no significant correlation between music reading ability and total fixation number and mean fixation duration. Third, music reading ability was influenced by the way of music reading approach. Based on these findings, the study suggests implications for developing music reading ability.

SPA-189

## **Student Voices: The Perceived Values of Hong Kong Primary School Music Ensembles**

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### **Abstract**

While learning a musical instrument is believed to enhance Hong Kong student profiles as suggested by scholars, it is not uncommon to see the kids in Hong Kong to start learning musical instruments since kindergarten. Although learning a musical instrument is not the main focus of the music curriculum in Hong Kong primary schools, many schools organize a great variety of music ensembles and these participate in local and international competitions. Participating in competitions is seemed to carry so much value among the students in Hong Kong. At present, research on Hong Kong school music ensembles is limited, especially from students' perspectives. The aim of the study is to investigate the perceived values surrounding Hong Kong primary school music ensembles from the perspectives of the students, the music ensemble participants. Based on the main research question, the following structured research questions have been developed: (1) What are the similarities and differences on the beliefs of music ensembles between the students of two primary schools? (2) How do these beliefs interact or conflict among the students? (3) How do these interactions form meaningful learning context for enhancing and exploring future possibilities regarding school music ensembles?

Two primary schools were invited to participate in the study through questionnaire studies (N=161) and focused group interviews (n = 10). Expectancy-Value theory was employed to construct the questionnaire and interview questions surrounding music ensemble competition and performance. Findings indicate that students are concerned about their intrinsic interest, competency, teachers and parental expectations regarding music ensembles. Some of the students value their personal achievements gained by taking part in ensemble competitions. However, the focus group interviews reveal that students in one school placed a high priority on winning other schools in music ensemble competition, which conflicts to the students interviewed in the other school.

This study reveals that students' values surrounding music ensemble competitions may highly depend on the context of the school. However, music ensemble competitions tend to be a norm for schools to participate and strike for the best result. It provides significant insight into why music ensemble competitions are so well supported from students' perspective, as well as filling a current research gap concerning primary school music ensembles in Hong Kong.

SPA-193

## **Kindergarten Education Policy Implementation: Principal Perceptions, Practices and Challenges in Integrating Music Education to the Curriculum**

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### **Abstract**

Previous studies have suggested that music is a powerful medium for enhancing children's holistic development. The Hong Kong SAR Government's recently-issued *Kindergarten Education Curriculum Guide* has recognized arts education as a key area in the current curriculum framework, and music is officially recommended as the kindergarten daily activity. Further, the curriculum guide was themed 'Joyful Learning through Play', and it has clearly stated that 'play' should be the focus of the curriculum. Alongside with "learning through play", the curriculum guide has also specified that other approaches and core values, such as "child-centeredness", "real-life themes", and "integrated approach", should be adopted in the major domains of the kindergarten curriculum, including arts education. Despite the growing significance of arts education in the kindergarten curriculum, music has long been marginalized in the education of Hong Kong, and it is often regarded as a non-academic luxury by various stakeholders (e.g, parents, principals and teachers).

Throughout the process of integrating music to the kindergarten curriculum, principals' conception, perception and practices are impactful factors for the ultimate success of implementation. A wealth of literature has explored teacher perception on early childhood music, but research on kindergarten principals' perception remains underexplored. To address this gap in research, this study aims to examine principals' beliefs about, perception of, practices and challenges in integrating music to the early childhood curriculum. The participants consisted of twelve principals who were purposively selected to cover kindergartens of a range of sizes (small, medium and large), programme durations (half-day and full-day) and kindergarten types (non-profit-making kindergartens and private independent kindergartens). In-depth interviews and classroom observations were conducted. Thematic analysis was employed to analyze the data collected.

The conclusions drawn from this study suggest that principals' proactive approaches and positive attitudes may modify the passive role of kindergarten teachers in the implementation of official kindergarten curriculum guide in Hong Kong, elevate the status of music education in kindergarten education among other study areas, and foster the adoption of innovative and developmentally appropriate pedagogical approach in music classrooms. The findings of this study will fill an important knowledge gap about the implementation of current education policy in early childhood arts education. Significantly, they will provide the higher institutions with evidence-based recommendations on the development of principal professional training framework through which the challenges of implementing the music curriculum in early childhood education could be addressed, with wider implications to other creative arts across the globe.

SPA-196

## **Learning in the 21st Century: A Qualitative Examination of a Psychological Skills Programme for Secondary Band Students**

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### **Abstract**

The importance of psychological skills for optimal performance has been well-examined in the sports domain (e.g., Wang et al., 2004; Weinberg & Williams, 2006); however, these skills have remained relatively understudied in music education contexts, such as Secondary school students making music together in large ensembles (e.g., the school band). Given that these skills aim to develop independent musicianship and adaptive learning dispositions, they might contribute to 21st Century learning through the development of key 21st Century Competencies (21CCs; e.g., Voogt & Roblin, 2012).

This paper reports preliminary qualitative findings from an ongoing study that examines the effectiveness of a psychological skills programme designed specifically for Secondary Band students in Singapore, focusing in particular, on how these skills contribute towards the development of 21CC. The specific research questions are: (1) Based on the literature from the educational, sports, and music domains, what would a psychological skills workshop specifically conceived for the school band (Secondary level) consist of? (2) How might the skills taught in this workshop contribute to the development of 21CCs through band?

The initial phase of this study comprised a comprehensive survey of extant literature to curate the workshop; this was followed by the actual intervention study where the skills were taught to Secondary school band students in Singapore. Data collection comprised focus group discussions/interviews with the student participants, their band directors, and teachers. The qualitative data were then transcribed and analyzed with codes guided by extant 21CC frameworks (e.g., Trilling & Fadel, 2009).

Based on the survey of literature, the research team found that skills from the sports literature (e.g., Wang et al., 2004) that may be adapted for the school band include goal setting, mental practising, talking to oneself positively, and imagery. Importantly, the skills taught in the workshop have the potential to contribute to the development of key 21CCs such as collaboration and communication. Based on the findings, implications for the practice of music education will be discussed in this presentation, highlighting how in particular, psychological skills may be interwoven effectively into instrumental music education programmes.

SPA-197

## **A Comparative Study on the Evaluation Standards of Music Courses in Senior Middle Schools**

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### **Abstract**

Teaching evaluation is an activity of value judgment on the basis of qualitative or quantitative measurement, and it is the last step in the Classroom activities. A good evaluation can reflect and respond to student problems and provide implications for improvement. This study adopts the comparative method with a content analysis of The Music Curriculum Evaluation Standards of High schools in China and Japan, in order to discover the advantages of the standards in both countries and promote the diversity of music teaching evaluation. Results show that: 1) The basic idea of evaluation principles of the two countries are different. Evaluation system of China is based on the evaluation of three core competencies (aesthetic perception, cultural understanding and artistic performance), while Japan's system is based on the subject objectives and learning guidance content in the curriculum standards, to develop different evaluation standards for each class; 2) The evaluation methods of the two countries are different. In China, there are two methods of daily performance and academic quality evaluation. Japan's system divides the music subject into four parts (singing, instrumental music, creation, and appreciation), each of which is subdivided into three major aptitudes (learning attitude, thinking and performance, and knowledge and skills).; 3) The evaluation content of the two countries is basically the same. Although the evaluation method and process are different, the detailed content is very similar in both countries. It is all related to music elements, students' learning attitude, appreciation ability, cultural understanding and practical performance; 4) The evaluation tools of the two countries are different: China adopts student self-evaluated music growth record books and quality level examinations. Japan uses the teacher evaluation form and the class review form, and the final grade is given in conjunction with teacher observation and description. Generally, the evaluations of the two countries have their own characteristics, and they can learn from each other in the subsequent evaluation, and further improve the teaching efficiency.

SPA-199

## **Sounding Our Lives: Examining the Impetus of Sound Works by Singapore Contemporary Artists**

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### **Abstract**

If we give time and space to listen to the sounds and observe the images and objects around us, our lived and living cultures will unravel before us in their multitude of possibilities and perspectives. This paper takes on the psychophysiological foundations of soundscapes, of keynote sounds, sound signals and soundmarks, as a key theoretical thread to examine the works of Singapore contemporary artists that utilizes sound as a significant medium threading through their creative process.

The larger research study with which this paper stems from, is a funded two-year qualitative case study exploring how emerging Singapore contemporary artists articulate their personal identities in relation to dominant notions, and their own conceptions, of the relationship between self and society, between the individual artist and national discourses about the arts and the role of the artist within the nation state of Singapore. Extensive recorded interviews and site visits were conducted where possible to capture the creative processes and body of works of artists, including material artefacts and resources gathered from the web. The gathered data were then openly coded to surface particular themes linked with self and society intentions.

In this paper, works of five artists who have journeyed into the sound worlds of daily living to create reflective and collaborative works, utilising the arts in social-emotional and communicative ways, as well as the articulation of identity politics and environmental concerns, were extracted as points of departure towards a critical dialogue in the implications of deep listening, the use of technology and creation of soundscapes, while also suggesting strategies within the general music classroom to uncover and recognize students' sense of space and place in their lived environment. This safe space created through the arts has the potential of allowing students to reflect upon their musical well-being while also encouraging empathy towards self and society.

SPA-201

## **Visualizing the Soundscape by Sonography: Implementation of Creative Activity in Junior High School**

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### **Abstract**

Music education in Japan, in many classrooms, musical activities have been monopolized by “Singing,” “Playing the instruments” and “Appraising” (these three categories are provided by the Course of Study: governmental curriculum guideline) based on Euro-American tonal music. Creative activities have been gradually progressing since the introduction of “Creative Music Making” after 1980s. Many music teachers, however, have a tendency to avoid undertaken creative music making in comparison with other activities since the staff notation in European classical music is treasured in Japanese music education. In the Course of Study, those activities need to be carried out evenly without being biased towards specific activities. Moreover, those activities unfortunately try to meet high technical demands. The Canadian composer R. Murray Schafer (1977) argues that music, which was originally inseparable from the natural soundscape, has already been forgotten today. Schafer points out the gap between musical expression based on the staff notation separated from the acoustic environment and sonography which attempts to describe the acoustic environment.

The purpose of this paper is to develop a brand-new pathway between acoustic environment and musical expression which can be utilized in music classrooms. Sonography is used as a tool to describe acoustic environments visually in soundscape research. In this paper, I, however attempted to use the concept of sonography as a graphic notation in order to make a connection between musical expression and acoustic environment.

A qualitative research including observation as well as interview surveys was taken as a method. Some music classes undertaken at the Hirosaki University Junior High School were observed. The music classes consisted: 1) sound listening as “Appraising;” 2) making graphic score as a connection between “Appraising” and “Creative Music Making;” 3) creating students’ own works of music using graphic score as “Creative Music Making.” After the observation, I interviewed the music teacher. The interview contents were analyzed by KH coder, and the characteristics and effectiveness of the practice were derived by Co-occurrence Network analysis.

As a result from both observation and interview, it was found that this series of activities could be easily undertaken intuitively even with little musical experience. The author certains that the concept of sonography proposed by Schafer can play a significant role to make a linkage between acoustic environment and musical expression.

keyword: soundscape, sonography, graphic score, creative music making

SPA-205

## **Music Teachers' Concerns for Fostering Music Creativity of Students with Intellectual Disabilities [ID] in Hong Kong Special Schools**

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### **Abstract**

#### Theoretical and contextual background

Neoliberalism is believed to be effective and efficient for the market to operate. Applying neoliberalism in education results as students' right of free and compulsory education. This ideology has transformed to become the policy of "One Curriculum for All", that respect and parents' choice of sending their children with ID to mainstream or special schools. Under the common music curriculum for all, students with ID in Hong Kong special schools are expected to achieve the learning targets, including "Developing creativity and imagination" that students will develop their music ideas and creating skills, in addition of performing and listening skills. However, the traditional Confucian educational ideology that values achievement and rote-learning is deep-rooted in the socio-cultural context of Hong Kong. Music creativity has been defined by music scholars to be either a process, a product or a flow. Research literature shows that mainstream music teachers may lack of confidence in their content knowledge and pedagogic skills to implement music creativity in school music curriculum. The knowledge about developing musical creativity of children with ID is very limited. The interplay of neoliberalism and Confucianism and music creativity will be applied in explaining the results of this study.

#### Purpose of the study

This study aims at investigating the concerns of special school music teachers in fostering music creativity of students with ID in Hong Kong.

#### Methodology

This is qualitative study. Purposeful sampling was used to recruit nine respondents from all types (mild, moderate and severe) of schools for children with ID. Face-to-face interviews was employed for collecting data. Data were analyzed according to the research focus.

#### Results

The concerns about fostering the musical creativity of students with ID are found to form two categories:

- (1) teachers' needs for (a) more teaching time and (b) subject-specific professional development; and
- (2) students' needs for (a) adequate teaching aids, such as computer software, visual aids, and adapted musical instruments and (b) teachers' guidance, such as physical assistance, design of adapted curriculum and instructional activities.

Teachers' concerns of students' needs demonstrate their mindset of "teacher-led" musical creativity rooted in Chinese educational ideology instead of Neoliberalism.

#### Conclusions and implications for music education

Musical creativity is embedded in the socio-cultural context of the teachers and learners. New research direction should explore how musical creativity is interpreted and nurtured at the levels of the music teacher education and school music education for children with ID.

SPA-206

## **An Exploratory Study of Music Listening and Anxiety Level Among Hong Kong Undergraduate Students**

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### **Abstract**

According to a survey conducted by the University of Hong Kong in 2018 ( $n = 1,119$ ), 54.4% of undergraduate students in Hong Kong expressed a mild degree of anxiety symptoms. Previous studies suggested that music listening can be a healing tool for alleviating anxiety. To investigate its effectiveness, this research further explored the relationship between music listening and anxiety level of undergraduate students in terms of (1) music listening time, (2) music preference, and (3) music listening mood. The research used a multi-methods design. Participants were 230 undergraduate students from eight universities in Hong Kong, selected using the convenience sampling method. Participants answered an online survey that consists of 23 items for three components: (1) music listening habits, (2) music preferences, and (3) Hamilton Anxiety Rating Scale (HAM-A) with 14 anxiety symptoms. In comparison with some Western countries' students who scored 15-20 (mild level) over the range of 0-56, Hong Kong undergraduate students had a higher average anxiety level of 22.74 (moderate to severe level). Semi-structured interviews were also conducted with five participants, who had suffered from mild or severe anxiety disorder before. The interviewees provided reflection on their anxiety experiences and music preference. Pearson's Correlation result suggested a significant negative correlation ( $r = -.448$ ,  $p < .001$ ) between music listening time and anxiety level. ANOVA result showed a significant difference between music listening preference and anxiety level,  $F(8, 221) = 10.26$ ,  $p < .001$ . Post hoc comparisons using the Games-Howell test indicated that the mean anxiety score for rock music ( $M = 33.04$ ,  $SD = 10.92$ ) were significantly higher than western classical music ( $M = 14.22$ ,  $SD = 7.55$ ,  $p < .001$ ) and light music ( $M = 19.10$ ,  $SD = 11.93$ ,  $p = .001$ ). The interview data provided further evidence that listening to classical and light music helps to relieve anxiety, while rock music cannot. Results showed a significant relationship between music listening and anxiety level. It shed light on music listening's effectiveness on anxiety relieving. Further implications for music education include (1) adding more music appreciation activities of classical and light music in the curriculum, (2) organizing some music appreciation trips to the nature as suggested by the interviewees, etc. Future research may include a more in-depth investigation on anxiety and long-time music listening.

SPA-207

## **From Needs Analysis to Curriculum Development: Senior Secondary School Music Curriculum in Macao SAR**

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### **Abstract**

#### Theoretical and contextual background

After Macao's return to Chinese sovereignty in 1999, the then Education and Youth Affairs Bureau [DSEJ], has started to reform the curriculum of schools in Macao. The DSEJ implemented a 15-year free education policy with a condition on the schools to follow the official curriculum framework. Following this education reform, the Music Curriculum for Junior Secondary Schools and the Music Curriculum for Senior Secondary Schools were developed and published. Applying needs analysis research as an approach for curriculum development has been used for developing the curriculum in disciplines other than music. Needs analysis is a strategy for curriculum makers to better cater for students' needs, abilities and interests. At the municipal level, the development of central curriculum is often regarded as a top-down decision. Research on the development of a central school music curriculum of a city is missing in the literature of music education. This study adds knowledge to the literature of music curriculum development.

#### Aim of this study

The purpose of this study is to investigate the needs and expectations of music teachers and students of senior secondary schools about the direction for developing music curriculum for senior secondary schools.

#### Methodology

This is a qualitative study. Purposeful sampling was applied. At the first stage, the researcher worked with the DSEJ to discuss the procedures and criteria for recruiting music teachers to join the curriculum development team. At the second stage, the researcher worked with three participating schools to develop some curricular exemplars for senior secondary music classes according to the teachers' preferences. At the third stage, music teachers tried out, evaluated and improved the curriculum exemplars for sharing with other music teachers in Macao. Qualitative research tools, such as individual interviews with teachers and focus group interviews with students and classroom observations were used to collect data. All collected data were analyzed according to the research focus.

#### Results

Teachers' needs and expectations in the senior secondary music curriculum were content knowledge and pedagogical skills in music curriculum development and implementation. A diversifying range of professional development opportunities is needed to meet the diversifying music and music education background of music teachers. Students' needs and expectations in the senior secondary music curriculum include their preferred content and instructional strategies.

#### Conclusion and Implications for Music Education

Conducting needs analysis to include the voices of teachers and students in music curriculum development is a meaningful practice. New research direction should explore the application of needs analysis in developing music curriculum at all levels.

SPA-208

## **A Documentary Analysis on Kindergarten Music Education in Hong Kong**

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### **Abstract**

In Hong Kong, all kindergartens under the Kindergarten Education Scheme are subject to the Quality Review (QR) assessment. Starting from 2018-19 academic year, the QR reports are published on the Education Bureau (EDB) website. Results in the QR assessment determine whether kindergartens can obtain Government subsidies. Many parents use the QR reports to select a kindergarten for their children. Music is a subdomain of the learning area “Arts and Creativity” in the Kindergarten Education Curriculum Guide (KECG), hence it is included in the QR assessment. Specifically, the QR assesses the quality of music lessons according to the KECG objectives and Performance Indicators, which focus on the development of sensory abilities, self-expression, creativity, active exploration, and hands-on art experiences.

This research aimed to analyse the types of music activities described in the QR reports. This topic is relevant given the limited research on music education practices in Hong Kong kindergartens. Analyzing these reports is significant because teachers and principals knew the assessment dates in advance, hence they had put the greatest effort into preparation. Accordingly, these reports demonstrate the best examples of teachers’ classroom practice in music. This exploratory study conducted a summative documentary content analysis of 163 QR reports written in English from 2018 to 2020. MAXQDA was used to conduct quantitative analyses of key terms, word cloud and word tree to visualize word frequencies and interrelationships, and coding according to coding schemes. Inter-reliability was calculated with a second coder, 0.95 as measured by Cohen’s ( $\kappa$ ) kappa.

Findings revealed that: Music was mentioned in most reports (99%). Singing (42% of the reports), rhythmic movements (25%), and musical instruments (17%) were the terms most frequently emerged in the reports. Consistently, content analysis showed that the most common music activities were singing, movement, and instrumental music, while rhythm and beat was the most common musical element. In contrast, activities related to self-expression, musical creativity, dancing, and other sound producers were rarely identified. Findings suggested the existence of discrepancies between curriculum proposals and practice. Teachers fell short of implementing music activities that can achieve the KECG’s key objectives, particularly on stimulating children’s creativity and self-expression. This study has implications for kindergarten teacher education and professional development. Future research can investigate teachers’ needs and preferences of music PD programmes, and ultimately help bridge the existing gaps.

SPA-210

## **Study on the Acoustic Characteristics of Nagauta Performers' Voice Techniques**

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### **Abstract**

Genres of songs have their own cultural and social contexts, and vocal expressions formed by the different body techniques acquired in each context produce a variety of auditory impressions. How, then, do voices differ as a result of such embodied knowledge? In response to this question, the authors focus on *nagauta*, a type of Japanese traditional music. We have described the process by which the distinctive tone of *nagauta* is produced using sound visualization (Ichikawa et.al. 2019, Ichikawa et.al. 2020). Previous studies identified a difference between *nagauta* and western vocal performance in the vowel production and movement between syllables.

This study aimed to identify the acoustic characteristics that create the essence of *nagauta* using visualization. We focus on embellishments known as *atari* (added when the same pitch is maintained), a unique singing way of *nagauta*.

As the research method, four *nagauta* performers and two western style accomplished vocalists were asked to sing part of the *nagauta Sanbasou*, and sound frequency and loudness analyses were conducted. The western style vocalists were instructed to imitate the singing style of the *nagauta* performers. Focusing on the embellishment form, comparisons were made between the voices of the western style vocalists and the *nagauta* performers, and among the voices of the four *nagauta* performers themselves.

The analysis showed that in the embellishment section, the two vocalists were roughly able to imitate the timing of the *nagauta* performers, and they were also able to follow the pitch. However, regarding acoustic pressure (loudness), the vocalists demonstrated a rise in loudness as the basic frequency rose, while all four of the *nagauta* performers showed a fall in loudness. In addition, regarding the movement of sound before and after the embellishment, the change in the acoustic pressure level by the vocalists when moving between syllables was moderate. Although there were individual differences, the change in the acoustic pressure level by the *nagauta* performers was significant. It can be said that the *nagauta* performers express embellishment by skillfully manipulating pitch and timing as well as the acoustic pressure.

This voice analysis encompassing multiple parameters showed the complex voice operation of the *nagauta* singers. The result, while only a single example, can provide insights useful for the teaching and learning of traditional vocal music.

SPA-211

## Community Music Design in Music Education

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### Abstract

In many traditional music activities, both those conducted in schools and communities, the relationship between instructor and learners or participants is prescribed in a unidirectional manner. The purposes of this paper are: to propose and develop the concept of community music design; to explore a new activity in order to create a freer relationship between instructor and participants. An intensive literature research was undertaken as a method. Although the concept of community music is still being discussed, there are various activities as Community Music Activities in the UK and North America. According to Community Music Activity Commission in the UK, it should encourage the development and improvement of life of the community, the development of the music culture of the community and the dissemination to other communities. In addition, active music-making is being carried out in collaboration with facilitators and participants. While at the same time, the Canadian composer R. Murray Schafer proposed the concept of soundscape and has continued to be involved in music education in a broad sense. He also played an important role to develop an activity called "community music" (Wakao, 2011 p.77). Referring to Schafer's community-oriented educational idea, the author attempted to relativize the conventional community music. Wakao (2001) states that Schafer's concept of community music contributes for dissolving the such hierarchies as provider and recipient, teacher and child. The significant findings of this paper were:

- 1) The terms community music was first proposed artificially and intentionally especially in the UK and the US.
- 2) Schafer, on the other hand, introduced the term community music more directly and naturally from various sound excises based on his concept of soundscape.

In conclusion, the author advocates a direction towards the future of community music by referring to the definitions of music and community by Schafer as well as the Japanese political scientist Toru Yano (1988) and then proposed the new concept of community music design.

SPA-212

## **A Study on Exploring and Analyzing Alternative Material for Elementary Music Creative Activities Centered on Music Elements In South Korea**

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### **Abstract**

The purpose of this study is to analyze the creative activities presented in 『Magic Finger Piano』 by Sumi Kwon, who is a music educator, a professor and a pianist in South Korea, method books as an alternative material for creative activities centered on music elements in elementary schools, and to present them as appropriate source for music creative activities in elementary schools. For this purpose, previous research on the current music curriculum of South Korea and creative activities for current 3-6th grade textbooks was analyzed, and based on the analysis results and suggestions; development and improvement of detailed directions regarding using materials of creative activities of elementary music textbooks were derived. This study then analyzed 11 representative creative activities presented in a total of seven volumes of 『Magic Finger Piano』 method books to explore the possibility of being alternative sources for music elements centered creative activities such as improvisation in primary school music class. As a result of analyzing 『Magic Finger Piano』, they present the creative activity materials contained as rhythm-centered creative activities using one note, rhythm-centered creative activities using two notes, a various scale-centered creative activity such as mode or minor keys, melody centered creative activities, and form-centered creative activities. In addition to these musical creative activities, these results confirmed that the requirements derived from previous studies, the development and improvement detailed direction for creative activities in primary music class were satisfied by offering diversity of musical genres including K-pop music and activities related to instrumental music. Although 『Magic Finger Piano』 was developed for piano learners, materials that could be reproduced and implemented as improvised performances were presented, using instruments in primary school music classroom as xylophone, recorder, and melodeon as well as piano. In school music class, teachers are also required to continue research based so that more diverse creative activities can be applied based on these materials.

SPA-214

## **Process Leading Up to a One-Year-Old Singing a Song That They Like**

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*Takeyoshi Matsumoto*

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### **Abstract**

F (a one year old) was at the developmental stage of the transition from pre-speech (babbling) to speech. It was thought that a musical-training intervention performed at that time would improve F's sensitivity to sounds and speech. The purpose of this study was to clarify the process of F at the age of one from the discovery of a musical tune she liked until the time when he himself began to sing the tune, through the involvement of his mother. Test subject F was observed from age 11 months, with his mother singing to him 10 minutes daily using an illustrated children's book for one-year-olds with songs and text (stories), accompanied by movements/gestures, until the time when F began to sing the song himself using words. Regular video observations were made, and the mother kept a daily journal of her impressions. At first, F would close the book and merely move his body to the tune. Gradually, he came to open the book to a page with a tune he liked, pointing to the page while looking at his mother to tell her that he wanted her to read that page. At age 1 year 10 months, even when the book was absent, F came to make gestures, and sing "Twinkle, twinkle, little star" to himself. The process of beginning to sing a liked song involved elements of activities other than those specific to the song lyrics: the involvement of his mother in the song, the characteristics of the illustrations on the page with the song, a rhythm and tempo that made the song easy to sing, the ease of making accompanying movements/gestures, etc. The integration of songs and illustrations promoted self-initiated movements/gestures and singing. The fusion of songs and illustrations expands the "worldview" of songs for one-year-old children and could be developed into creative musical activities.

SPA-218

## **Examination of Activities Using Musical Instruments in the Early Grades of Elementary School: From the Perspective of “Integration” Between Preschool and Elementary School**

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*Jiro Hirano*  
*Elementary school attached to University of Tsukuba, JAPAN*

### **Abstract**

#### 1. Theoretical background of the paper

A long time has passed since the need for equal partnership between early childhood education and elementary school education was mentioned. There have been various studies in Japan on connection between early childhood education and elementary education from the perspective of music. However, most of them are studies on teaching materials and educational methods that can be practiced commonly across all educational stages. It is also important to examine what kind of continuity exists between the everyday learning experience of early childhood education, and the learning experience of a typical class in elementary school. It may be necessary to understand the qualities and abilities that are common across developmental stages and curricula, by taking music education as a viewpoint, for considering the integration between preschool and elementary school.

#### 2. Aim

To examine the continuity between learning experiences in early childhood education and elementary school education, through the case study of activities that use musical instruments in first grade elementary school.

#### 3. Method

The subject of this study was 32 first graders and one music teacher at a national elementary school in Tokyo, as of 20xx. The case study used were classes which conducted activities that used musical instruments. One video camera was used to capture the entire class. The video transcriptions were transcribed into ELAN and used as data.

#### 4. Summary of main ideas

At the stage of entering elementary school, most children are aware of how to play the instruments featured in class in general. Nonetheless, various experiences involving the instrument was introduced before the technical instruction was given. It can be said that children were unlearning the instrument before actually playing music, from the perspective of recognizing the relationship between the instrument, the sound, and themselves, as well as the relationship with others through the instrument.

#### 5. Conclusions and implications for music education

In early childhood education, musical instruments have various meanings other than playing music. On the other hand, in elementary school, activities using musical instruments require playing music. However, some experiences had been provided as foundation to support these activities. These experiences are the essence of musical activities, and we can also point out

its importance as an essential perspective when looking at child education from the perspective of integration between preschool and elementary school.

SPA-222

## **Pitch Memory in Musicians and Non-Musicians**

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*Cong Jiang*

*Capital Normal University, China*

### **Abstract**

#### Research background:

This study takes the implicit memory of pitch as the main research background, and takes "musicians and non-musicians" as the experimental subjects to analyze the difference of pitch memory between musicians and non-musicians. Pitch memory is the ability of memory to correctly identify the height of a sound in music. Pitch memory plays a positive role in our recognition of pitches. At present, the memory mechanism of Absolute pitch (AP) and Relative pitch (RP) is studied in pitch memory. The two types of pitches have different processing methods. The absolute pitches use the brain regions of long-term memory, while the relative pitches use the brain regions of working memory. It is found that at present, more attention is paid to the pitch processing ability of people with music experience at home and abroad, while less attention is paid to the pitch memory processing ability of people without music experience. This study focuses on the ability of non-musicians to process pitch memory, and pays special attention to the formation process and expression characteristics of non-musicians' implicit memory of pitch, so as to provide empirical evidence for music education such as solfeggio and ear training in adult education in primary and secondary schools and colleges.

#### Research objectives:

The research objective of this thesis is to investigate the necessity of pitch memory for musicians and non-musicians. To determine whether non-musicians in the two groups also have the sense of absolute pitch, whether non-musicians have implicit memory, and whether such implicit memory can be reflected in the sense of absolute pitch, and to compare the different performances of musicians and non-musicians in the sense of absolute pitch.

#### Research Methods:

In this study, experimental method, interview method and speech analysis of recording materials were adopted. A comparative study was conducted on the experimental methods for the pitch memory of musicians and non-musicians. The subjects were interviewed with detailed information such as place of birth and age by the interview method, and the recorded information was analyzed by the speech analysis method.

#### Results/Conclusions:

The conclusion of this study is that absolute pitch perception and implicit memory exist in non-musicians, and non-musicians can judge absolute pitch by implicit memory.

SPA-225

## **An Investigation on Self-Evaluation and Self-Efficacy of Music Teachers in Primary and Secondary Schools in Mainland China**

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*University of Science Malaysia*

*Cui Xuerong*

*Zhejiang Conservatory of music, China*

### **Abstract**

Teachers' professional development is the core of music education, and the development of self-efficacy is one of the goals of teachers' professional development. In this study, 300 music teachers from primary and secondary schools in mainland China participated in the "Questionnaire on Professional Development of Music Teachers in Primary and Secondary Schools" in December 2020. The teachers responded to the questions of five self-evaluation perspectives: 1) teaching attitude, 2) curriculum design method, 3) teaching skill 4) self-improvement channel and 5) self-efficacy; this presentation reports the findings of:1) an investigation of music teachers' professional development in primary and secondary schools, and 2) analysis of the factors influencing the development of music teachers,3) analysis the relationship between self-efficacy and teachers' professional development.

Data were analyzed with descriptive and univariate analysis of variance and Pearson correlation coefficient. Results show that teachers' self-efficacy positively correlates with their professional development evaluation ( $F(1, 299) = 111.54, p = .000$ ). The average score of teachers in the curriculum design method was the highest, and the score of teaching skill was the lowest, which were positively correlated. There were significant differences in self-evaluation and self-efficacy between middle and primary school teachers. There were significant differences in self-efficacy among teachers with different teaching years and ages, while there were no significant differences in self-efficacy among teachers with different educational backgrounds, professional titles, and training duration.

This study will reflect the current professional and self-efficacy situation in terms of the music teacher, which will provide insights for future research on music teaching training may contribute to the development of primary and secondary music teacher education.

SPA-226

## **Content and Procedure Recall: Undergraduate Music Education Methods Perceived as Meaningful**

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### **Abstract**

Music Education coursework is provided with the obvious and necessary need for preservice teacher development. A critical attribute of teacher training is for students to identify aspects (lessons, activities) that they themselves value. Student receptivity to teaching efforts on their behalf is consequential. Effective use of time during the considerable coursework of undergraduate programs would seem to require university faculty to efficiently provide and emphasize experiences young teachers will value and recall as personally meaningful.

In this study, undergraduate music education majors (N=72) at a large, comprehensive university in the US were asked to describe memorable experiences in course work during and after semester long (approximately 16 week) methods classes in music education. Written, open responses were requested without providing extensive questioning or guidelines in order to gather the broadest and most honest possible replies.

Initial analysis of response data indicates virtually all participants described “positive” experiences, although a qualitative distinction was not requested. Analysis consisted of a) simple frequency count after identifying central focus of individual responses, b) categorical coding, and c) citation of examples from written open responses. Among the highest frequency responses were those researcher categorized as “activities” and “social,” with most students citing group work of a communal nature (movement, learning folk dance, drumming circles, etc.) and music creating experiences. Paired interpretive activities were specifically cited (“profound”), as were game-oriented methods. Other citations included class discussion and debates (learning community experiences). While methods with prerecorded music were rarely cited, generating in-class musical events seemed to be valued and was cited, despite the undergraduate courses sampled having no specific public performance concomitant expectations.

Responses from the current study imply that instilling confidence through positive, memorable participatory classroom experiences is one alternative to widely emphasized ensemble performance and studio outcomes. Previous research has examined undergraduate anxieties, suggesting many worries about insufficient knowledge and teaching difficulties are normal and will abate somewhat with experience in the field.

SPA-228

## The Delicate Community Singing in China: A Case Study in Xiamen

*Mingzhu Zhong*  
*China*

### Abstract

This study explored the practices of community music-making as a place-based activity in a music training institute setting. One case study in Xiamen is introduced to identify the meaning, process, context of community music-making in China, especially for the young generation.

A review of the literature related to psychology and sociology indicated that community music is effective in both physical and psychological of improving citizens' quality of life as an appropriate, enjoyable, and beneficial form. At the same time, the formation of activities needs specific conditions: time, space, people, which consist of the uniqueness of the activities. Exploring these questions in the Chinese context are the research goals of this study.

A qualitative method was used in this study including observation and interview to explore the performance characteristics and development process of this activity. The facilitator was interviewed about the description of the organizational and development process as well as the future direction of the organization, while participants were interviewed about their experience, feelings, and thoughts about the activity. Participants' emotional and learning states were recorded as part of the data through observations.

The results show that community music activity in this case organized by private profit organizations has its special delicate characteristics. First, it has a rich form of expression in the performance including a live band, many teachers teaching at the same time, and a professional film team to shoot the performance. The activity is sustainable because it brings in additional commercial income for the organization by using the internet network to build up its reputation and brand. Most of the participants are around 25-35 years old with some middle-aged women. Young participants claimed that it is a way to make like-minded friends, as well as connect with older participants. It is also a way to reduce stress.

There is still room to explore whether future development will require the involvement of government organizations. The facilitator also mentioned that if the activity is to generalize to other areas while some structure may need to change to solve the financial issue. Since there is only one case, the limitation lies in its particular context. these findings indicate a positive effect on citizens' participating community music, it is suggested to facilitate in a wider context of China.

SPA-230

## **Guidance and Support Mechanisms for Music Teachers Using ICT Software in Composition Classes**

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*Joetsu University of Education, Japan*

### **Abstract**

In 21<sup>st</sup> century society, where the digitalization process is advancing at an ever-greater pace, a new educational aim is for students to develop the ability to express ideas by utilizing Information and Communications Technology (ICT). Currently, an effort is underway in some music departments to design creative activities using ICT technologies.

The purpose of this study is to clarify the important elements in music lessons that teachers must be able to convey to students composing their own music, utilizing this software. Also, it hopes to provide guidance and support for music teachers utilizing ICT in their classrooms.

The authors were in charge of a total of 14 hours of “Sound and Composition” classes at O. High School during the 2019 and 2020 school years that utilized music notation software. In these classes, “Sibelius” was used in 2019 and “Finale” in 2020. A third software package, “VOCALOID3”. was employed during both school years.

According to the results of a questionnaire given to pupils after a practice in 2019, about 90% found it fun to compose music with VOCALOID. However, the authors’ response to equipment trouble and knowledgeable support for specific composition procedures was insufficient. Therefore, despite spending about 4 to 5 hours on composing, only one song was completed. In order to have better classroom results, better support mechanisms and teacher training were found to be necessary.

Also, these software programs were used in multiple classes that included students with varying degrees of musical abilities. Furthermore, various students had different proficiencies in various musical instruments, for instance, some students had proficiency in playing the piano while others were skilled in playing the guitar.

As a result of the lessons, teachers were able to bridge these varying skills between pupils by utilizing the specialized ICT tools. However, while music notation software could assist the students with their compositions to some extent, it became clear that there was a need for specialized support from the teachers. In particular, teachers needed to be able to explain how chords function. Further, teachers needed to assist students in the critical analysis of their compositions.

Finally, the authors discovered that asking students to join melody with lyrics required advanced skills that could not be enhanced by ICT software. The authors believe that assistance from Japanese language teachers with an understanding of various kinds of poetry, meaning and intonation may be needed.

SPA-232

## **Sentiment Analysis of Contemporary Pop Musicians and Classical Music Composers**

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### **Abstract**

The power of music to awaken emotions in listeners has long been recognized and researchers found both positive physiological and perceptual responses to happy music. With respect to music, this raises questions about how people who are listening to music react to the music or musicians. Do symphonies by Brahms or Stravinsky evoke more positive sentiments? How do emotional responses to Jennifer Lopez and Justin Beaver compare? The researchers conducted a sentiment analysis of tweets about contemporary pop musicians and classical composers. Twitter is very well suited to analysis of sentiments evoked by musicians. Therefore, in this study, the researcher performed sentiment analysis of Twitter data to observe how tweets reflect perceptions of contemporary pop musicians and classical music composers. Music providers and listening platforms are starting to conduct sentiment analysis on music to recommend music to users. Machine-learning-based sentiment analysis techniques were used on recent tweets for the selected ten popular musicians and ten classical composers. Our results showed a high degree of 75% positive sentiments score for both. The most positive for pop musicians was Katy Perry and Shakira was the least positive. The most positive sentiments for classical composers was for Vivaldi and the least positive sentiments were for Beethoven. Moreover, on average, positive sentiments were higher for classical composers than for contemporary pop musicians. The results support the idea that people respond positively to music in general. Interestingly, there was recognition of classical composers as not only higher than for pop musicians but also showed more consistent responses in a narrower range than those for pop musicians. This was the first sentiment analysis comparing contemporary and classical musicians using big data.

SPA-234

## **Music Listening for Expanding Learners' Inner Realities: Collaboration Between Teachers and Elementary School Students**

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### **Abstract**

This study analyzes the present-day educational value of music listening classes in Japanese primary schools from the perspective of cognitive psychology and philosophy. According to the Survey on Specific Issues conducted by the National Institute for Educational Policy Research, approximately 90.1% of children answered affirmatively when asked whether they listen to music on CDs in their daily lives. However, over 57% of children did not utilize the knowledge and listening skills that gained music study when they were listening to the music at home. (National Institute for Educational Policy Research, 2010, pp.98). Based on these results, the National Institute for Educational Policy Research concluded that teachers must continually enhance their teaching skill. Moreover, it appears that fundamental problems exist in the relationship between music and people as well as in music listening research.

Ogawa (2021) noted that music education should focus on people's "inner reality" through musical experiences; however, recent studies on music listening have frequently emphasized the analytical content related to understanding the components of a piece of music. Although Shimiz (2018) stated that musical works do not require consensus between the performer and the listener when they interpreted of, music listening instruction were often fixed the value of musical works. Even if music listening instruction centers feeling and thoughts, students' action would not take into account the achievements of music instruction because student works (e.g., words and drawing) originated from students' previous experiences. This study establishes the need for student-centered studies on human growth from the perspective of performance psychology as presented by Arimoto et al. (2018) and Engeström's (1987) expand learning theory (1987). Assuming that we are equal intelligence (Ranci re (2011)), the intellectual relationship between teachers and learners needs to change during the learning procedure.

Students' musical creativity could be developed further if teachers enabled students to express their experiences according to their own inner realities. Learning Outcomes is not a fixed; co-creation between teachers and learners is an essential part of listening music in their classroom. Therefore, this study demonstrated the need for a paradigm shift in the current direction of music classrooms in fundamental schools. As a result, student-centered musical education would require a school grading system that could assess the development of students' inner realities.

SPA-239

## The Use of *Solkattu* as a Primary Method of Rhythm Instruction for Drummers

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### Abstract

With the introduction of new pedagogies and modifications of time-tested pedagogies to suit present-day musical requirements, the avenues towards rhythm instruction are endless. As a percussionist and drummer trained in both Western and Indian systems, the author has experienced the flexibility and ease of rhythm *internalization*, *retention* and subsequently, *execution* that a 'dual-system' or 'synthesized' pedagogy can enhance. The research is a product of the author's desires to promulgate the possibilities surrounding the improvement of rhythmic instruction through the adoption of a pedagogy that integrates Western and Indian methods.

The research aims to explore the viewing of rhythm syllables as a lens, through which the design of a hybrid pedagogy synthesizing rhythm instruction approaches from Western and Indian musical practices for drummers, can be conceptualized. It also proposes the adoption of the *Solkattu* rhythm syllables as a key method of instruction for drummers. The processes involved in this research highlight ways in which a recontextualization of elements from a historically rich system into a relatively novel and culturally contrasting system can take place. It also has the potential to stand as a forerunner to a much more elaborate model of learning, which can be adopted by music educators or individuals pursuing parallel research journeys.

The research process involves an initial literature review on the practice of *Solkattu*, as well as the use of rhythm syllables as is seen in more commonly adopted pedagogies of the West. The gaps within the Western approaches are then surfaced, and an attempt to address them from the viewpoint of an Indian practice is made. Expert opinions, as well as the author's personal experience, are factored into an analysis of the gaps and subsequent crafting of the lens through which rhythm pedagogy can be re-imagined.

The research findings shed light on the differences in versatility, arguing that the *Solkattu*, *Takadimi* and Gordon systems are more versatile, therefore having the potential to i) address a wider range of rhythmic concepts and ii) troubleshoot problems of varying degrees more easily. However, even within these systems, the *Solkattu* system still stands out as the most flexible. This can be attributed to its ability to extend beyond being merely a system of syllables associated with beat subdivisions.

With the discussion of findings, it is hoped that this research will provide educators and musicians alike with new perspectives from which rhythm instruction for drummers can be approached.

SPA-243

## **A Study on the Difference between the Teaching Process of Gongche Notation and Staff**

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*Capital Normal University, China*

### **Abstract**

Theoretical background: the Gongche notation is the most widely used notation in Chinese traditional music. Since the Tang and Song dynasties, many folk music genres still retain the record and inheritance of the Gongche notation. Music education in China began in 1920s, enlightenment with western music knowledge, numbered musical notation and staff learning has been deeply rooted in Chinese music education.

Objective: starting from the Gongche notation, this paper explored the difference between the learning process of the Gongche notation and the staff , tried to sum up the rules of the teaching process through the comparison of the two notation, and discusses whether it can be transformed into a more concise and accurate form of the staff or the numbered musical notation in the teaching of the Gongche notation.

Methods: the research takes the learning process of Gongche notation in central Hebei province music bands and North Gaoluo primary school in Laishui County as the research object, combining with the existing Gongche notation examples and actual musical instrument performance, compares the learning process of Gongche notation with that of staff .

Results: the results show that there are great differences in the study of two kinds of notation methods: the recognition and teaching of staff notation are clear , one character corresponds to one pitch, which is simple and easy to learn ; and the recognition and teaching process of Gongche notation is complex and more free, one character corresponds to many pitches, which is complex and changeable. The difference between them is also determined by the different nature of Chinese and Western notation.

Conclusions and implications for music education: through the exploration of this teaching process, it provides great possibility and feasibility for the learning of Gongche notation in music class. Gongche notation as a native and ancient notation method in China, needs more scholars' research and support on how to popularize it in school music education.

SPA-250

## **Teacher Efficacy Under the e-Orch Setting Teaching and Learning Environment**

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### **Abstract**

With technological innovation and support from the government, more schools are attempting to set up tablet orchestras to give students opportunities to perform and create music in an alternative way. One of the largest tablet orchestra projects, “e-Orch Music Creation and Performance in Practice Project”, involves more than ten schools setting up their tablet orchestra as an extra-curricular activity. Unlike traditional one-to-one instrumental training, students cultivate their musicianship and gain musical knowledge by actively performing classic repertoires with the relevant applications (e.g. GarageBand for iPadOS) in a tablet orchestra setting. Students are taught to perform and compose music composition collaboratively after acquiring the necessary know-how of tablet instruments. Regardless of musical background and socioeconomic status, students without prior instrumental training can participate in orchestral performance and composition.

Research in this area has largely focused on the development of laptop ensemble, with very few studies focusing on the development of musical competency through participation in a tablet orchestra in which tablet devices provide easier control on musical parameters. Without a systematic inquiry into the specific area, this research is essential to the field of music education in the twenty-first century.

The research project will investigate the teacher efficacy of the e-Orch project in six primary schools. A mixed-methods approach consisting of a questionnaire survey and semi-structured interviews developed based on Tschannen-Moran & Hoy's Teachers' Sense of Efficacy Scale is used to study the efficacy with focus on fostering musical creativity, student comprehension of what have taught, ability to plan a meaningful and effective lesson, content knowledge for your praxial placement location, the influence of under COVID-19, etc. Students' final e-Orch performance and composition have been be videotaped, analysed and evaluated.

A framework has been developed based on the research findings, which revealed the construct and understand of the problem that risen with possible measures.

SPA-251

## **An Attempt of STEAM in Primary Education Through Ensemble Activities by Using a Music Creation Software "GarageBand"**

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### **Abstract**

As well known, STEAM is an acronym for the five areas of Science, Technology, Engineering, Arts, and Mathematics. STEAM has become widely recognized as a more prominent and effective approach to interdisciplinary learning. It has been pointed out that STEAM enhances children's creativity, problem-solving ability, memory system, motor coordination, and analytical ability. In Japan, the term "STEAM education" appeared in the e-mail newsletter of the Ministry of Education, Culture, Sports, Science and Technology in 2018. In addition, the 2019 governmental document clearly indicated that STEAM education should provide cross-curricular learning with each child to help him/her to solve problems in the real world.

In line with the educational trends, we conducted classes based on STEAM education and evaluated students' subjective experiences while attending the classes. Sixty-two students in the 6th grade of an elementary school attached to Nara Women's University participated in this project. We offered the students a special lesson which let them experience ensemble activities by using "GarageBand" (a music creation software). The score used for the lesson was a mass score developed by one of our collaborators, Chi-Hin Leung from the Education University of Hong Kong. We conducted two classes (29 students for one class and 33 students for the other) and most of the students had not used "GarageBand" until then. The aims of this project were that through the classroom activities, the students would learn how to make sounds of various musical instruments by "GarageBand," learn how to record created sounds by the software, and finally learn how to play the musical instruments installed in it in the ensemble fashion.

After each class, students completed a "Classroom Experience Form" to evaluate their experiences during the lessons. The results indicated that the students showed high levels of concentration, enjoyment, happiness, involvement, excitement, interest, and a sense of fulfillment. This tendency did not differ between students who had no music training outside of school and students who had music training of any kind outside of school previously or at that time of the project. However, it appeared that the students did not notice how important

“GarageBand” activities would be for their future. Implication of obtained findings was discussed in terms of positive potential “GarageBand” has as a tool for STEAM education.

SPA-253

## **Acculturative Stress Among Music and Non-Music Major International Students in the United States**

*Yangqian Hu*  
*China*

### **Abstract**

Most international students who come to the United States hope to learn more about this country and adapt to studying here. International students help build diverse, cultural campuses, but the number of students with mental health issues is increasing. There are huge differences in the international student population of American universities, with important differences in language fluency and educational goals. These students can be non-native English speakers, and they may not be fully prepared to study in an American cultural context. Recent studies have reported on the acculturation experience of international students living and studying in America. The challenges experienced by international students often trigger a sense of insecurity and loss, and the accumulation of social difficulties may lead to acculturative stress. The factors that affect acculturative stress are diverse. Some common factors include financial pressures, homesickness, and language fluency. International students from East Asia experience anxiety because of their academic achievements, while those from Latin America care more about the connection with their families. Recently, evidence that music psychotherapy programs can effectively regulate acculturative stress has been discovered. Considering the learning experience of music courses is unique and different from other programs in the university, it is necessary to investigate the acculturative stress of international students majoring in music and non-music majors.

Aim 1: To investigate the acculturative stress of international students majoring in music and non-music majors.

Aim 2: To provide suggestions for improving the mental health of international students, enhance understanding of college instructors and domestic students of the international students' warning signals of acculturative stress.

The participants of 301 music and non-music undergraduate students from a university in the eastern United States will be asked to fill out two surveys. Both surveys and consent will be distributed through the online platform Qualtrics. After signing a consent form and agreeing to participate, participants will be asked to complete two 5-minute surveys, a demographic information survey and an acculturative stress survey (Acculturative Stress Scale for International Students). After the participants respond, the data will be used for analysis.

Data collection and analysis will be completed in April, and the full study will be submitted by June 15, 2021.

SPA-259

## **Seeking Quality: Comparative Study of Elementary Music Classrooms in the USA and Japan**

*Shinko Kondo*  
*Bunkyo, University*

### **Abstract**

What are the qualitative aspects of teacher-student interactions that teachers should employ in the 21<sup>st</sup> century? Understanding of the importance of relationship and interaction to learning is not new. Sociocultural theorists stress that learning is largely a social endeavor in which our interactions with others not only support the learning process but are inseparable from it. More recent research has shown that far from being a mere nicety, attention to building a strong teacher-student relationship plays an important role in supporting student achievement and in particular the development of creative and critical thinking. In music learning, relationship plays a pivotal role, too, and the nature of the relationship is revealed through interaction. Do the qualitative aspects of teacher-student interactions vary among different social groups?

In order to seek what kinds of interactive experiences will bring out the best in students and allow them to reach new heights in learning, I conducted a qualitative analysis of teacher scaffolding during the musical activities in four elementary general music classrooms in the USA and Japan, where wonderfully exciting music learning was taking place. Paying particular attention to what types of questions the teacher asked and how it impacted student learning process and product, I carefully observed 24 music classes between February 2017 and November 2019. Data were collected through video observation, field notes and formal and informal interview. Analysis included the construction of narrative vignettes from these data.

In the cases presented in this study, teachers used facilitative questions as vehicles to foster supportive environment, fostered the articulation of ideas, valued learner voice, connected their prior experience, used strategies for making thinking visible, and so on. Teachers also used nonverbal and musical cues to foster student musicianship.

Conversation is a medium that brings us into contact with the thinking and perspective of others and thus fosters new insight. Through dialogue, we develop trust as we care for others and learn to be cared for by them. The study also explores the issue of the essential element of pedagogic competence, the power structure of the activity, pedagogical thoughtfulness (Van Manen, 1991), and centrality of *Learner agency* (Kondo, 2019) *in music learning process*.

I hope this study offers a call for teachers and researchers from many different countries and social groups to exchange ideas and to rethink music teaching practices and music education perspectives in order to support quality education for the future.

SPA-261

## Science and Technology Empower Music Education

*Cong Kong*  
*Continuing Education College, Dean*  
*Central Conservatory of Music*

### Abstract

As 5G wireless technology, Artificial Intelligence, Big Data, Multimedia, Cloud computing and other computer information technologies (CIT) are maturing, the prospect development both in education and learning has been expanded to provide a solid technical foundation for the formation and development of online offline integration (Online Merge Offline (OMO)) teaching.

Kong Cong, Dean of Continuing Education College at Central Conservatory of Music. She focusses on the innovation of artificial intelligence and 5G Application since 2017. Kong Cong won the 3<sup>rd</sup> Prize of "Blooming Cup" 5G Application Contest" which is under the ministry of industry in 2019 and Innovation Awarding of 5G Application Collection Competition, it led by MIIT, and organized by CMCC. That's the largest 5G application.

Due to the boring and stubborn teaching skill then caused the difficult and made them experienced psychological trauma at instrumental learning point in the childhood. If VR or AR technology is used to disassemble and play virtual instruments before someone is ready to learn them, give the child a more intuitive view of the characteristics of the instruments and reduce the arbitrariness of choosing them. In addition, using the desktop AR technology to copy from the Virtual Symphony Orchestra and realize the virtual playing will help the Chinese to recognizing the Western Symphony Orchestra. With the advent of 5G era, the online education industry is developing rapidly.

The CED at CCOM APP is an online live education system of music verticality. The software applies the information technology such as electronic-mall, video live broadcast, data encrypted transmission etc., and builds the educational platform of lesson registration, live class, course playback etc., also supports the application platform of PAD and PC.

The core features and superiority of CCOM APP are as follows:

1. Multi-learner Management supporting:
2. Operation Management to Support Full Process of Registration,
3. Live classes: At present, online education is based on video recordings.

We can enjoy highest quality music education without leaving home, we call this LFH

SPA-262

## **Does Cultural Background Affect Gordon's MAP Performance: A Small Sample Test Report in Wenzhou**

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*Conservatory of music, China*

### **Abstract**

In the 1980s, Edwin Gordon's theory of musicology and Music Aptitude Profile were introduced into China, which had a certain impact on music teaching and artistic quality evaluation in China. However, through literature search, We found that most of the literature in China is about the translation or conceptual interpretation of Gordon's music theory, the number of empirical research papers on Gordon Music Aptitude Profile is rare. Therefore, this study aims to explore the applicability of Music Aptitude Profile in Chinese cultural context and the influencing factors of test results. This research adopts the methods of experiment, semi-structured interview and questionnaire survey. We selected 40 students from grade 4 of Primary schools in Wenzhou suburbs and 30 students from Grade 4 of Primary schools in the center of Wenzhou. First, they were investigated by questionnaire, and then they were tested by Music Aptitude Profile. In addition, we also interviewed the students and their teachers to understand the students' self cognition of music ability and the teachers' evaluation of their music classroom performance. We want to know whether gender, family background, region and previous music learning experience will affect the test results, and which factor plays a leading role. The results show that in different cultural contexts, there is no significant difference in the results of using Music Aptitude Profile. Among the factors such as gender, previous music learning experience, parents' music achievement, urban and rural differences, music learning experience has the greatest impact on the test results. This study can not only make scholars understand the applicability of Gordon Music Aptitude Profile in different cultural contexts, but also provide reference for the evaluation of Chinese art quality education, change the boring and rigid examination mode of rote learning, effectively realize "promoting teaching by evaluation", stimulate students' music creativity and self-identity, and respect each student's individual differences in artistic quality.

POS-004

## **Applying Machine Learning technique to Evaluate the Developmental Degree of Musical Expression in Early Childhood**

*Mina Sano*

*Osaka-Shoin-Women's University, Japan*

### **Abstract**

The author proposes to develop methodology to employ AI-based evaluation process on musical expression of body movement. Little researches using machine learning has been employed to the domain of early childhood education due to difficulty of applying quantitative approach on highly skilled profile.

This study aims to validate appropriate feature quantities calculated from 3D motion capture to facilitate quantitative models. Utilizing ANOVA, statistically effective data sets were chosen to coordinate to educate series of machine learning classifiers to fit to observations. In total, five classifiers were attempted to predict output of 3 levels of developmental degrees of musical expression with input of 13 kinetic feature quantities. Children who participated in the practice of musical expression program were 3-year-old, 4-year-old, and 5-year-old (n=76) whose activities were motion captured and simultaneously video recorded. The author evaluated developmental degrees into 3 levels based on the videos. For training process of machine learning, such 76 data sets were applied to classifiers to fit to observations. Among trained classifiers, decision tree (Boosted Trees and Random forest) and neural networks (Multi-Layer Perceptron "MLP" and Radial Basis Function "RBF") showed fair fitting. After algorithms trained, classifiers were applied to feature quantities captured from different children in 2018 (n=128). As this attempt successfully achieved fair accuracy level, the author increased data sets and adopted additional classifiers to enhance prediction confidence. Training data sets of 76 children in 2016 were again applied to the new data sets acquired in 2019 (n=87) to conduct classification and discrimination. According to the derived outcome in 2019, the classification accuracy of C & RT (Classification & Regression Trees) was the highest at 42.53% (High: 13, Medium: 5, Low: 19), and the classification accuracy of Boosted Trees as decision tree was 39.08%. As a result, based on classification accuracy from confusion matrix and sensitivity analysis, C & RT as decision tree showed superior prediction. The highest contributing factor of sensitivity analysis was the moving average acceleration of pelvis. Next, the ones having the greatest influence were the moving distance of right foot and the moving distance of right hand.

The author presented a quantitative framework to handle full-body movement of children and empirically applied its musical expression nature to computer based classifiers of predicting developmental degrees. The framework will provide objective aspect of evaluation process of musical expression and will help to achieve assurance of certain level of educators' skill.

Key words: machine learning, motion capture data, classifiers, Classification & Regression Trees, predicting developmental degrees of musical expression

POS-035

## **Instructors in Lifelong Music Learning as Reflective Practitioners: A Case Study of Six Chorus Conductors**

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*Hiroshima University, Japan*

### **Abstract**

Background: Instructors involved in lifelong music learning not only aim to convey skills to learners but also encourage learners to change their way of thinking about music and help them deepen their musical experience. Conversely, generating knowledge is in the act, and instructors reflect on their teaching acts and past experiences to solve problems and lead the direction of good music. Further, by reflecting on their actions, instructors can share with learner not only knowledge taken from past experiences but also knowledge originating from current musical experiences. Moreover, instructors can be researchers in this practice.

Aim: This study aims to clarify changes in perceptions of music and how instructors reflect on their past experiences.

Method: In this study, interviews were conducted with six chorus instructors of various ages. The data wherein the contents of the interviews were segmented into groups were organized by code, and the contents of the codes were categorized. Based on these categories, each instructor's experience was converted into a storyline and analyzed.

Summary: The six instructors reflected on past experiences from the perspective of making them their current task. Not only as music instructors but also as learners, their experiences influenced their current behavior. Additionally, the scene of "making a choice (e.g., becoming a student conductor, starting a specialized study)" existed as a time for organizing their thoughts and reconsidering the recognition of music learning. Furthermore, the way of thinking of instructors involved with the six instructors has a significant influence on the recognition of music and music learning; every instructor is aware of the facilitator's role of "I want the learner to be more deeply involved in music."

Conclusion: As a reflective practitioner, the instructor can share their knowledge with the learner and become their researcher; therefore, through these means, we can envision better lifelong music learning.

POS-045

## **The Effectiveness of Using Video-Recorded Demos and Music Notation Software in Students' Self-Regulated Practice**

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### **Abstract**

For the last year, teachers and students in a major instrument applied music course have been forced to shift to an online learning approach due to the pandemic outbreak. Previously, students had one-on-one instruction and learnt by imitating live demonstrations from teachers to tackle challenging technical or musical features of the repertoire being studied. Due to restrictions on internet speed, teachers' live demonstrations via online lessons are less effective. To combat this issue, students were advised to use video-recorded demos and music notation software as supportive tools for their self-regulated practice.

This study sought to determine the effectiveness of using both resources in the self-regulated practice of string instrument students. Over the applied music course term, viola (n=17) and violin (n=3) students from diploma and degree programmes at the Malaysian Education University used teachers' video-recorded demos and transcriptions of pieces in music notation software. At the end of the term, the participants were asked to complete a questionnaire about the effectiveness of these resources. It was found that the students' cognitive musicality and inner-hearing skills were positively impacted. Although there were no significant differences between violin and viola players in terms of using the resources, significant differences emerged with regards to the levels of the courses being studied. In particular, less experienced students tended to use the music notation software less than the video-recorded demos, whilst more advanced students were more likely to use the music notation software to enhance their intonation, rhythm, and speed control. The use of both resources led to the improvement of students' self-regulated practice and learning abilities. Quantitative analysis indicated that by following the video-recorded demos, students developed their imitation skills, musical expression, and timing. By practising along with the score typed transcribed into the notation software, students were able to adapt their practice strategies to control intonation, understand rhythmic features, follow the metronome speed, and match their timing with the digital accompaniment.

In summary, the results indicate that, in conjunction with guidance by a teacher, both video-recorded demos and music notation software can be used to develop students' self-regulated practice skills. This implies that even when live demonstrations become possible again, these resources could still be used to sharpen certain aspects of students' playing.

**Key words:** *Music students, Self-regulated practice, Video-recorded demo, Music notation software*

POS-046

## **Flute Air Jet Director: The Teaching Tool for Beginner Flute Students to Produce Quality Tone**

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### **Abstract**

According to physics, the flute tone is produced by blowing the airstream through the small opening mouth-hole to the outer edge of the embouchure hole of the flute. When the airstream is directed against that edge, it will be isolated and cause the vortex formation, which is the source of oscillation in the air that helps initiate and sustain the tone production. This physical methodology of tone production on the flute is known as the Edge Tone principle. The utmost importance for flute student is to understand the origin of flute tone and the knowledge to produce clear, quality tone by directing the airstream in the right angle to strike against the edge.

This study is conducted on research and development (R&D) methodology. The purpose of the study is to develop the teaching tool that help beginner flute students understand how the flute tone is produced scientifically. The research methodology includes 1) literature reviews for the philosophy of flute making and flute playing 2) interviewing three specialists including flute teacher, flute maker, and flute technician 3) fabricating the teaching tool 4) testing the teaching tool with the three specialists and testing the teaching tool with the beginner flute students 5) collecting and analyzing data using inductive content analysis.

The Flute Air Jet Director is a wooden tool made similarly to the flute head joint with two turbine wheels installed beneath the embouchure hole. The correct airstream angle blown into the Flute Air Jet Director should be isolated by the edge. The separated airstreams will then spin both wheels at the same speed and time, representing the ideal blowing angle to produce quality tone when blowing the flute. The Flute Air Jet Director can be used by beginner students as practice tool and by teachers as monitoring device that help students visualize the tone production in the flute.

POS-047

## **A Case Study of Using Five-Finger Pattern Approaches Piano Improvisational Application in Normal University**

*Peng-Chian Chen*  
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### **Abstract**

This case study is the teaching report of the process and the result of the junior students majoring in music from the Zhaoqing University, the Normal University in China, Guangdong, who had well-trained to play Five-Finger Pattern as the fundamental knowledge in Piano Improvisational Application Course.

A student graduating from Normal University will become a primary or secondary school music teacher who needs to accompany students' singing during the class. Therefore, Piano Improvisational Application is the required course in the curriculum of the Music Department. However, most students receive the frustration experienced due to Piano Improvisational Application is an integrated subject that coordinates professional music knowledge with the piano playing in a certain level. Hence, it is necessary not only to simplify and systemize the course but define the improvisation here as function harmony, a song accompaniment, and a song transposition rather than the Jazz Improvise.

Five-Finger Pattern is typically the first five notes from a major scale: Tonic- Whole Step- Whole Step- Half Step- Whole Step. Even though it requires all five fingers to play the five notes, it excludes the problem of piano fingering. The hands are in one position as one major key.

Students are able to say the pattern out and play all twelve major keys on the piano keyboard without any difficulties after few lessons. The result of the students who play five-finger pattern shows three benefits: firstly, after students practice the pattern, the fingers become more independent and flexible to be on the black keys with different hand shapes. Also, the coordination of two hands reacts much faster. Secondly, the five-finger pattern is the fundamental of scales, arpeggio, chord, and basic function harmony, which includes tonic, dominant, and pre-dominant note. Thus, students can play the five-finger pattern melody with simple harmony (root-note). Third, students master transposition because they are so familiar with the hand shape on each key that they only call for fingering without thinking about the specific notes.

This method helps the students from Normal University more about their teaching skills for the future. Lastly, the five-finger pattern can not only be played in major key but extended to minor key, pentatonic, mode, and significantly enhanced the abilities of improvisation.

POS-049

## **Practical Research on Appreciation Guidance of Opera Focusing on the Effects and Role of Music for High School Students**

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### **Abstract**

According to the national music education for senior high school in Japan, appreciation of synthetic art such as opera and kabuki in music education aims to relate music to many elements such as libretto, stage sets and performance of singer. However, in my lessons, most students seemed to focus on the plot or feeling of characters, excluding music in synthetic art. Therefore, I supposed that it would be effective to focus on the motif, which suggests change of characters' feelings or situation in the drama.

The purpose of this study is to examine how high school students come to understand the role and effect of music in opera by concentrating on the motif. The methods of research are as follows.

In this research, I analyze descriptive words on the worksheet and observe the students, through the three lessons to first year high school students. The aim of the lessons is to understand the mood and role of the melody called "Motif of Destiny" in *Carmen* composed by Bizet. The students try to play the melody on the keyboard so that they can fully appreciate to it. After students listen to "Prelude" including the "Motif of Destiny", they came to appreciate three scenes I chose ("Habanera" in first act, "The flower's song" in second act and Finale of forth act) in which the motif of destiny is skillfully used. The students freely wrote about the role of motif after appreciating the three scenes. I analyzed their descriptive words with KH Coder. So, two main things were shown from these activities. First, many students were able to listen to where the motif was used in each appreciated scene. Based on that, the students thought about the role of motif and related the motif to the three scenes. Second, they could understand characters change of feelings as well. From these results, it could be said that the students were able to appreciate the opera with a focus on music.

There are only a few previous studies about synthetic art in music education. Consequently, I feel that it is necessary to further research about the connection of both music and drama. Furthermore, it will also be necessary to understand the cultural and historical background of synthetic art.

POS-054

## **The Collaboration of Educational Music Programs in School Music Education: Focusing on Suntory Hall's Program**

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### **Abstract**

There have been an increasing number of opportunities for musicians to engage with schools such as 'Outreach' and 'Appreciation classes' in Japan. Additionally, music concert halls, public facilities and music organizations have developed youth education programs in which professional performers participate in various music-related activities with children.

The 2017 Japanese revised Curriculum Guideline sought a 'The curriculum open to society', and placed an emphasis on utilize children's competencies and based on it, collaborate school and society. Furthermore, the guideline stated that it is necessary to ensure that children are not only musically involved in classrooms, but are also 'proactively engaged in sounds and music in life and society'.

This study seeks to understand the shared musical collaboration between society and schools and aims to clarify what it means to support children's music activities through such collaborations. In order to explore this partnership, this study focuses on Suntory Hall's music education programs.

The hall is a famous private concert hall in Japan. It has been offering educational programs since its establishment and currently offers a number of programs under the umbrella of the 'Enjoy! Music Program'. One of these is a program that collaborates with public primary schools which was founded based on an idea by an internationally acclaimed conductor and was established by the hall, an education committee and a foundation in 2014. As part of this program, before children listen to a concert at the hall, a pre-activity related to the concert program is held at the school. It was challenging to develop a program involving so many people from various fields. When the program started, there were fewer participating schools, and there were cases where pre-activity held in classes other than music activity (e.g., art activity). Overcoming these problems, in 2019, for all schools to participate in pre-activities and concerts at Suntory Hall, and it was possible due to people who have been long involved in this program and have continued to contribute to its improvement. Through analyzing this program, the following perspectives emerged.

- 1) Emphasis on 'school music education'
- 2) Emphasis on placing children at the center of all music

The study was conducted by employing a qualitative research methodology that involved video recordings of the activities, field notes, analysis of lesson plans, and questionnaire results in the program.

POS-058

## **Progress of Young Children's Interactions with Musical Instruments through Free Play**

*Haruhi Otobe*  
*Teikyo Heisei University, Japan*

### **Abstract**

In recent years, it has been revealed that young children accumulate experiences that are essential for human development through play. Given this theory, development of musical expression with instruments could also be cultivated through children's spontaneous play. However, kindergarten teachers usually teach children how to play instruments through goal-directed skills acquisition activities. Young children's ability to accumulate experiences essential for the development of musical expression through free play with instruments has not been adequately documented. In this study, the progress of young children's interactions with musical instruments during free play was observed to determine any development of musical expression through the spontaneous use of instruments as a result of free play. This longitudinal study involved 3-year-old children in public kindergarten classes who were exposed to musical instruments for the first time. In total, 33 observations were conducted during May 2014–March 2015. In the corner of a classroom, we created a musical instrument section consisting of several types of percussion instruments that the children could freely play with: two djembes, two cajóns, and two bongos. Video recordings and field notes were organized chronologically for analysis. When the children first saw and tried to understand the features the instruments, their interactions were exploratory in nature. After understanding the construction and structure of each instrument, they explored the possible use of the instruments as play tools in interactions with friends. As their relationships with the instruments deepened over time, their interests shifted from object exploration to sound exploration. They associated images with sounds and acquired skills in controlling sound generation. Having examined every aspect of the instruments, tried out the instruments, and accustomed themselves to the instruments, the children's consciousness appeared to gravitate toward a world generated by instruments. They seemed interested in having others watch their performance or in performing with others, which led to further musical expression through the sounds of the instruments. The results showed that the children explored the instruments during free play, and by exploring sounds and testing skills, they came to express their musically generated images with friends. This suggests that young children fully interact with musical instruments during free play and accumulate various experiences essential for the development of musical expression. The findings of this study contribute to deepening understanding about the development of musical expression through the manipulation of instruments and to providing a new view to introducing musical instruments to kindergarten children.

POS-059

## **Exploring Teaching Strategies in Music Education for Autistic Students**

*Hang Su*

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### **Abstract**

#### **Background & Research Questions**

Under what circumstances, music teachers can relatively easily communicate with students from different angles and conduct teaching? In this qualitative study, the central question is that in what conditions, by using what strategies do the teachers could communicate with the students successfully, or make the students interact with the others. Three individual autistic students teaching and learning process and responses have been observed, recorded, interviewed and analyzed.

#### **Theoretical Framework**

From the perspective of the learning theory, Lev Vygotsky proposed the theory of zone proximal development under the umbrella of social constructivism philosophy to explore learners' development from what they know to what they don't know. Jerome Bruner specified this process through three main steps: aural, visual, and kinesthetic learning modes. All the learning and teaching behaviors in this study are analyzed in this framework.

#### **Findings**

- A. Teaching and Learning: In an inclusive group music lesson, all the examples and cases teacher gave are common in students' life (e.g. fruits, animals). The teacher spoke fast but never stopped asking questions to lead students' attention. All the requirements for the students were sung in a minor third interval or a tritonic rather than spoken by the teacher.
- B. Initiating Singing: All the music notes were weaved in a lyric based story with beautiful cartoon pictures shown by the teacher while telling the story. Once the music concepts (e.g. notes and intervals) shown up, it would be imitated or responded by the students either individually or together as the code to step into the next plot of the story. Three types of answers were expected from 1) exaggerated movement (kinesthetic) to 2) singing (aural) then finally to 3) Curwen hand signs (visual).
- C. Game Playing: Taking special sound (e.g. animals) or music notes as codes to interact with peers and the teacher to move to activate the next game step or story plots. All questions were encouraged to sing or imitated and all answers were encouraged to present either in singing or in Curwen signs.

#### **Summary**

Findings show that children's attention, the most important starting point, was attracted by beautiful sound, then moving forward to next step small enough to have chances to extend their joint attention and give response effectively. Repeating what the students have been learned for multiple times and helping them to recall to build evolving connections of prior knowledge may help to lower the risk of having tough moments. Reciprocal and appropriate language can help to chain all the things together. Additionally, colors, pictures, and stories help a lot to crystallize the learning goal and process.

POS-061

## **What Is the Role of the Music Department in the Connection Period?: To Smoothly Connect Early Childhood Education and Elementary School Education**

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### **Abstract**

In March 2017, the three laws and regulations related to early childhood education, including the National Curriculum Standard for Kindergarten, and the Elementary School Curriculum Guidelines were revised at the same time. The basic policy states the establishment of consistent learning and support for child development, which includes the connection between early childhood and elementary school educations.

The difference between early childhood and elementary school educations is that early childhood education is a directional goal, elementary school education is an achievement goal, and in contrast to the experience curriculum that emphasizes the life and experience of each individual in early childhood, elementary school is a subject curriculum that emphasizes the academic system. Each education has its own characteristics, and many first graders are confused by the differences and cause maladaptation. Therefore, from the viewpoint of smooth connection from early childhood education to elementary school, the curriculum at the beginning of the first grade was positioned as the Start Curriculum so children could be adapted to school life.

The aim of this study is to clarify the role of the music department in the connection period between early childhood and elementary school educations.

Method used is the examination and consideration of the Elementary School Curriculum Guidelines, and the Start Curriculum prepared by each local government.

In the music textbook used by the first graders, several songs sung in early childhood education are hidden on the spread page so that pupils can search while looking at the pictures. It is devised so that because those are the songs they know, pupils can feel and sing the songs with confidence throughout their bodies leading to smooth start of elementary school learning. The F prefecture's Start Curriculum takes advantage of lower grade characteristics such as the integration of thinking and expression to help pupils make new friends by cross-curricular approach, incorporating singing in activities and experiences in living environment studies, and playing with Japanese nursery rhymes. In other words, for children in the connection period, singing songs not only achieves the goals of the music department, but also has a function which leads to expressing feelings, and by uniting the voices together, uniting the heart with new friends.

The music department plays a role in stabilizing the minds of first grade pupils. Therefore, it can be said that it's important for teachers to be aware of this and teach especially during the connection period.

POS-062

## **Observable Flow Experience in Japanese Children's Interactions with the Violin and the Iconic Grid Instrument**

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*Yutaka Nakanishi*

*Shujitsu University, Japan*

*Shingo Okada*

*Shujitsu University, Japan*

### **Abstract**

When children are involved in challenging activities, and there is a match between an individual's perceived skill and the challenge to acquire new skills, they experience flow in a state of optimal enjoyment (Nakamura & Csikszentmihalyi, 2009). This study investigates observable flow experience in young children's interaction with the violin and the iconic grid instrument. The grid controller is a type of MIDI controller, also known as DJ controller. We connected Novation's Launchpad Pro and the device with a big button that when pressed would make a sound. The researchers constructed the device to include children with severe and multiple disabilities in musical activities (Nakanishi, Okada, Sutani and Akutsu, 2017). Although there is a vast amount of flow research in the realm of music education, there is no previous research focusing on children's interactions with both traditional and technological musical instruments. This study investigated the perceived challenges and observable flow experience in young children's interaction with the violin and the iconic grid instrument.

The method adopted a case study approach to capture young children's flow experience in depth. Participants of the study were 5 children ages from 2 to 7 including a child with severe and multiple disabilities. Children were observed in a total of 6 workshops and 4 trial playing the violin and the technological device from 2019 to 2020. The sessions were held monthly, and average in 60 minutes including free exploration of the instruments.

Custodero's Flow Indicators in Musical Activities (FIMA, Custodero, 1989 & 2005) were cited to capture children's flow experiences during workshop activities. Each session was videotaped by using four video cameras to capture events occurring during the children's instrumental playing. Certain portions of video data were selected for further review, and transcribed into verbal and written descriptions. Interpretations of video evidence by caregivers, teachers and practitioner-researchers provided contextual insight into children's flow experiences.

The present study revealed that playing the violin and iconic grid instruments offered different flow experience. The study found that the violin playing facilitated wider range of flow for children of all ages including the child with severe and multiple disabilities. In contrast, playing of the iconic grid instruments facilitated flow only in younger children in a limited manner. Findings also included interpretations of children's flow experiences to play both traditional and technological instruments, and critical examinations of children's musical play which may suggest implications for future practice.

POS-067

## **A Case Study on Humming Phonation**

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### **Abstract**

There are restrictions on singing songs with Corona. Humming is one of the vocalizations that is considered to have a low risk of infection. Since humming is uttered only by the sound without adding words, it is used as a vocal practice or in chorus aiming at a special effect. Humming vocalization has features such as confirming the sound of the voice, avoiding the strained power of the singing voice, and not burdening the throat. However, many humming instructions are subjective, and the mechanism and actual conditions are not well understood. This study examined what kind of acoustic features the humming with closed the mouth and various gestures have. Since a mask is required in singing with corona, this study investigated the case of using mask, mouth shields, and face shields.

The subject made three types of gestures by humming with the mouth closed (humming with a narrow mouth, humming with a wide mouth, and humming with a lowered throat). One female music teacher uttered humming three times at C4, G4, and C5. The recording was done in a music classroom. These three types of humming were uttered with four types: no mask, disposable non-woven mask, mouse shield, and face shield. These voices were taken into a personal computer and acoustic analysis was performed using Praat. A 0.5 sec of the stationary part where the voice was stable was extracted, and the acoustic analysis of that part was performed.

Of the three types of humming vocalizations, the sound intensity was lowest for humming with the oral cavity narrowed and highest for humming with the larynx lowered.

comparing non- woven masks, mouse shields, and face shields, the non- woven masks had the lowest sound intensity. The sound intensity of the face shield was also lower, but the volume of the mouse shield was higher than that without the mask. In humming with the larynx lowered, the 4<sup>th</sup> formant tended to be closer to the 3<sup>rd</sup> formant.

There was a difference in the sound depending on the humming gesture with the mouth closed and the pitch. Humming with the larynx lowered increased the sound and volume. This result is effective as one of the methods for obtaining the sound of the voice in humming with the mouth closed.

POS-073

## **Arrangement of Score for Ensemble Performance in Public Elementary School: Considerations in Arranging Commercially Available Score Focusing on Its Quality**

*Mika Araki*  
*Sasaki Music School, Japan*

### **Abstract**

The enhancement of collaborative learning is considered to be important issue on music tuition of public elementary school.

Music activities through collaboration with others include large-scale ensemble performances at school events, other than practice in ordinary class. When teaching ensemble skills for events, a commercially available score quite different from the learning content in textbooks is often used. For the scores on the market, arrangements such as 1) simplification of rhythm and 2) reduction of the number of key signatures have already been made. However, the following issues were pointed out about such a simplified score:

1. The song's attraction is lost.
2. Motivation for learning is decreased and feeling of accomplishment is spoiled.

Therefore, I considered it necessary to study on arrangement of music score used to teach ensemble skills to students, whose musical education varies, of public elementary school.

### **Purpose**

The purpose of my study is to clarify points for teachers to consider in arranging score, especially focusing on its quality, when using a commercially available score as teaching material in music tuition.

### **Methods**

Methods: I arranged a commercially available score based on the real ability of students and taught them how to perform the instrumental piece.

Schedule: From September to November 2019 (a total of fifteen hours)

Target persons: Students of public elementary school that I work at (between the ages 9 and 10)

### **Results and consideration**

As a result of this study, I could prepare an appropriate material to encourage students to learn while maintaining its quality by arranging a score. It has become clear that teacher's ability to arrange music is particularly significant for assigning a music to play in concert.

### **Suggestion for music education**

This study shows that the ability to arrange music allows for teachers to assign a piece of music for which students are eager to learn. In the future, we need to enhance education for teachers at the stage of training.

POS-082

**The Modern Face of Tradition: On the Concept and Practice of the Development of Chinese Dance Education from the Perspective of Cross Culture**

*Cao Lulu*

*South China Normal University, China*

*Tong Yan*

*South China Normal University, China*

**Abstract**

Apart from the differences in language and culture, art can always cross national boundaries and become a "silent" medium of communication; it is a bridge to communicate the soul, eliminate misunderstandings and lead to a "community of shared destiny for mankind". One of the best ways to promote the development of "cross-cultural dialogue" in China is to use the theory of dance globalization. Taking dance education with disciplinary characteristics in art education as an example, this paper, from a cross-cultural perspective and under the macro background of the development of China's art education, summarizes the "changes", "faces" and "values" of contemporary dance education, Furthermore, in the cross-cultural context, Chinese dance education should actively promote the integration of "self" and "other", and correctly handle the relationship between "unity" and "diversity", so as to open up a sustainable development space for further study of Chinese art education.

POS-087

## **Musical Discrimination and Styles Task: A New Possibility for Assessment of Music Aptitude in Elementary Music Students**

*Dawn R. Mitchell White*  
*University of South Florida, United States of America*

### **Abstract**

The purpose of this quantitative pilot study was to describe and explain the relations to other variables (validity) and reliability of a new, developmentally appropriate musical discrimination and styles aptitude instrument for elementary music students, entitled the Musical Discrimination and Styles Task (MDAST). This framework was influenced by the cognitive theory of Jean Piaget and theoretical models of music discrimination and audiation proposed by Edwin Gordon. The design of the instrument assessed the ability to determine comparisons of musical discrimination, musical contours, composers, musical styles, and musical eras in a same, different, or "I don't know" response format. The sample consisted of elementary students in Grades K to 5, ages 5 - 11 (N=7). A panel of five experts with graduate degrees in music evaluated and verified the measure's content validity (trustworthiness). The Kuder-Richardson Formula 20 was utilized to establish internal consistency and reliability. Inter-item analysis in the KR20 indicated highly statistically significant consistency in the .80s for all items after fine adjustments were made. Bivariate correlational analysis revealed a highly significant relationship between the second and third subtests at .788,  $p = .035$ . However, these sections of the test evaluate completely different subject matter, so the researcher decided to keep both sections of the test. Due to the number of items that had to be excluded from analysis from lack of variance (due to the small sample size), the Musical Discrimination and Styles Task had limited internal reliability at that time. A second pilot study with a significantly higher sample size is currently under way to determine the true reliability of this instrument. If the instrument maintains the tendency toward high content validity and reliability values found in the first pilot study, then the implications for music education could extend into longitudinal studies, norm-referenced studies, and eventually classroom assessment.

POS-090

## **An Exploratory Study on the Cultural Capital of Homeschoolers and Their Perceptions of World Music**

*Veronica Elise N. Eugenio*  
*University of the Philippines, Philippines*

### **Abstract**

This Exploratory study analyzes the perceptions of homeschoolers towards creating selected arrangements of World Music from Africa and Asia, while using the cultural capital background of each student to inform the implementation of the study.

The study has three stages:  
June 2020-September 2020

1) Analysis of themes of the cultural capital of homeschoolers in the study through an online survey given at the start of the study which explored the musical background, experiences, and engagement of the participants in different musical cultural activities.

2) Implementation: the series of workshops geared towards Cultural Capital (Listening, Performance, Practice of an Instrument, and Arranging).

3) The Culminating Activity (The analysis of cultural capital activities chosen for the research).

Participants created their own group arrangements of a selected song and used improvised instruments to create rhythmic samples which were presented as an online culminating activity (March 2021). Participants then analyzed their arrangements and how they created their presentations through focus-group discussions.

Themes that emerged from the first stage of the study were common musical activities in which Homeschoolers engaged in, namely: Church choir and Self-Taught Music (60%), followed by Private Instrument lessons and Musical theater (56.7%).

Focus group discussion themes which were present are feelings of community and camaraderie, techniques on learning and using new technology, and overcoming "online" barriers.

The sample was limited to participants of Middle school to Highschool age (10-18 years old), with most of the participants coming from the middle to upper classes social classes of the Philippines. Participants and the teacher also had internet access as a requirement. Activities were implemented through asynchronous and synchronous methods. An adjustment of deadlines for participants was also given to accommodate personal grievances such as family members contracting Covid-19, increase of domestic responsibilities, and environmental factors.

Implications of the study are that selected homeschoolers are generally self-taught in music and have mostly informal instruction. The participants responded in a positive manner towards working with more peers, and performing new music, however they encountered difficulties with online communication for the group work requirement.

Keywords: Homeschoolers, Cultural Capital, Improvisation and Arrangements.

POS-096

## **Effect of a Music Workshop on Children in Japan with Diverse Cultural/Lingual Backgrounds**

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*Chisaki Ogata*  
*Hiroshima University, Japan*

*Hiroki Sakata*  
*Kurayoshi Municipal Kume Junior High School, Japan*

*Ami Watanabe*  
*Mihara Municipal Kui Junior High School, Japan*

*Fumito Higuchi*  
*Hiroshima Prefectural Kamokita High School, Japan*

### **Abstract**

**Pedagogical Background:** Recently, there has been an increase in children with diverse cultural/lingual backgrounds in Japan. The primary emphasis is devoted to their linguistic education to adapt them to school life. However, equally important is for the students to maintain stable emotions and to strengthen their sense of self-esteem through the arts, including music.

**Purpose:** The purpose of this study is to analyze the effects of music activities on foreign children living in Japan.

**Approach:** In August 2019, researchers held a workshop consisting of rhythm/harmony/physical activity. Nine children, ages four to eight, participated. The participants were from Indonesia, Sri Lanka, Cambodia, Nepal, Pakistan, and Egypt and all attended after-school Japanese language classes. A questionnaire, based on Mood Check List – Short form.2 (MCL-S.2) developed by Hashimoto & Murakami (2011), was conducted before and after the workshop. In addition, questions regarding how much they enjoyed the workshop and how much they want to try it again were added to the questionnaire.

**Result:** The results showed that a positive mood state (pleasantness, relaxation) tended to decrease slightly and a negative mood state (anxiety) tended to increase, despite eight out of nine children answering “I really enjoyed myself.” On individual examination, one of the children had both an increase in positive mood state and a decrease in negative mood state. Six children registered a mood change; three either increased in positive or decreased in negative mood and three kept the highest score in positive or the lowest score in negative mood. Two children had no productive change; the first, was less motivated to join the work because the instructor told he/she not to handle the instruments roughly, and the second got cranky because of hunger. It appears that most of the children had some positive change after the workshop.

**Conclusions and Implications:** In conclusion, the current results suggest that a music workshop could get children to try new things, leading to a positive effect on their emotions. For further practice, the following should be considered: (a) building a cooperative relationship between children to support music activities; (b) stressing formative assessment with a focus on their musicality and motivation; (c) simpler content and shorter activity times suited for

children; and (d) developing assessment measures needed for foreign children who lack Japanese language skills.

POS-103

## **Improvising Melody Creation for Children with Physical Disabilities Using Various Hand Movements**

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*Special Needs Education School for the Physically Challenged, University of  
Tsukuba, Japan*

*Kazuhiko Kinoshita*

*Shukutoku University, Japan*

### **Abstract**

The study aims to examine activities that foster creativity for children with physical disabilities by melody making using hand movement.

Currently, case studies that examine the manner in which physically handicapped children without intellectual disability create music are scarce. In this regard, hand movement may be a teaching intervention. When these children play the piano, they employ several hand movements, such as clustering, using one finger, and holding fingers flat on the keys. By exploring the possibilities of creative expression for children with physical disabilities, the study conducts improvisational piano performances using various approaches and analyzes the form of hand movements observed in their improvisations.

The study uses two methods. First, a teacher and three students with special needs jointly improvise a piano performance. The teacher accompanies the students using a repetitive chord pattern. Afterward, the students improvise a pentatonic (do-re-mi-sol-la) scale using only the black keys without specific instructions on how to play. In this manner, the students are free to produce music using personal methods. Second, the hand movements of the students are analyzed based on the recorded session.

The results indicate that student A played using only the left hand. Although slight tension was noted in the index finger, all fingers independently moved. Student B used two hands to play and alternately used the index and middle fingers. Student C played using the right index finger throughout the performance. All notes were played with the dotted half note rhythm from the first beat.

In summary, the students explored all hand movements possible to improvise and express music by developing their techniques and playing specific rhythmic patterns to the melody. The results suggested that music creation activities for children with physical disabilities can lead to learning that fosters creativity by enabling them to explore and maximize body movement.

POS-104

## Dance Freed from the Influence by Another Manifestation of Group

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*Hirosaki University, Japan*

### Abstract

The term dance was produced to indicate “dance” itself as a human behavior. Prior to being named and valued by words, “dance” itself merely existed as an empty thing or matter. Dance, however, is influenced by another manifestation of group.

The group guarantees the position of the members. At the same time, the group influenced the members. The influence of the group appears in the form of group expectations for the members. Group expectations dominate the behavior of the members (e.g, Bauman 1990). Those who don't meet expectations is excluded from the group. We often refuse to be excluded from the group that guarantee our position. As a result, sometimes we are influenced by another manifestation of group too much. My specific research question, therefore, was: How had superficial dance activities been developed among junior and senior high schools' students in Japanese physical education? -To clarify this question, semi-structured interviews with 10 people (age: 19-22, Male: 2, Female: 8) was undertaken. The followings are the questions:

- Did you do the dance in physical education classes during for junior and senior high schools?
- If the answer is yes, what was it like? What music you used? Did you dance with groups or individual? How to choreograph? etc.

As a result, the following three problems were found:

- 1) Choreographies by professionals are more important than students' choreography.
- 2) Using pre-existed choreographies, students' creativity and originality are forgotten.
- 3) Fictitious audience is always expected.

The most significant finding in this research was: Many students have a tendency to copy directly from pre-existed PVs because of the existence of another. This dance activity can be considered as singing in Karaoke Box, for example. Referring to Bauman's *Thinking Sociologically*, this paper concluded that improvisation would be the key to solve the problems above since students can possibly create their own individual choreographies without being influenced by another manifestation of group.

Keywords: Dance; Choreography; Group; Body

POS-106

## **The Pentatonic Scale Gives Everyone a Chance to Create Music: Creating, Sharing, and Developing Music with Participants from Young Children to the Elderly to Special Needs Students.**

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*Yuki Nanjo*  
*Violinist/Workshop Designer, Japan*

*Yukiko Tsubonou*  
*Kaichi International University, Japan*

### **Abstract**

When we are involved in the activity of creating music, we can enjoy music even if we do not have the skills to read music or play instruments. We can use all the sounds around us as materials, and the elements included in all musical styles. In other words, the idea “no one left behind”, which the SDGs advocate, is exactly what creating music has been aiming at. For instance, one of the authors of this paper, Tsubonou, who has conducted many workshops on creating music, usually gives them the title “Everyone can Create Music”. This research focuses on the pentatonic scale consisting of “do re mi sol la”, which is easy to play and to improvise on even for young children. Besides, it is possible to ensemble with others without making dissonance using this scale. Therefore, we call it an “error-free scale”.

The purpose of this study is to clarify how the participants “create”, “share”, and “develop” music by using this pentatonic scale. We recorded and analyzed both the processes of the workshop and the pieces created by the students. The targets of this study are diverse. Although we suppose participants to include those from young children to elderly people to special needs students, we would like to show here the case of secondary school students who were not necessarily good at music or had never experienced creating music. It should be noted however, some can play instruments, like the cello or piano. The workshop was conducted by one of the authors of this study and supported by three musicians. At first, the musicians (a pianist, violinist and bassist) gave them short examples of “Do re mi sol la” pentatonic music, including folk songs from Asian and Western cultures, classical music, and Japanese pop music. After listening them, the students improvised with the musicians using various instruments, then created short pieces with their friends and the musicians using the pentatonic scale.

The workshop was characterized not only by the pentatonic scale, but also by the musician’s support, and thus the following three points became clear.

- 1 All the participants included willingly joined the activity and created music.
- 2 Beginners, the experienced, as well as musicians listened to each other and shared each other's individual sounds.
- 3 Taking what they had acquired in each of the activities, they developed their music at each stage.

POS-110

## **Factors Influencing the Formation of Learning Motivation of Doctoral Students in Music Education at a Research University in the U.S.**

*Qi Liang*

*The Art Faculty of North University of China, China*

### **Abstract**

The pursuit of a doctoral degree in music education is a major life commitment. Through looking into the influential factors of the formation of learning motivation of doctoral students, we can identify dynamic factors of the developmental trends in music education, as well as the contributing factors of music education to students' motivation development. This study aims to explore factors that influence the formation of learning motivation of doctoral students in music education at a research university in the US. Nine doctoral students (four international students and five US-born students) were selected for the study. Qualitative data were collected through interviews and participant observation. Nvivo was used to code the transcripts of audio recordings, from free nodes and tree nodes. The coverage rate and the correlation between coded word frequencies based on audio recordings were analyzed so as to line up the rank order of influential factors. Then a relationship model of influencing factors of doctoral learning motivations, based on time, space and content, was constructed. Results indicated that 1. Doctoral students have a strong sense of self-identity and value the knowledge, skills, and opportunities that a doctorate carries. 2. In terms of intrinsic motivation, doctoral students think that they have a natural and inseparable relationship with music education. In terms of instrumental motivation, both international students and US-born students tended to aspire for a career as a university professor. 3. Childhood experience has a great influence on their persistence in their studies. Some people have a strong motivation for making up their once lost learning opportunities in past. 4. They all hope to help more people through music education. Taken together, the conclusion is that instrumental motivation, achievement motivation, and self-actualization are vital influencing factors for doctoral students' learning motivation. Implications for teachers include 1. Teachers should pay attention to pluralism, have a multicultural perspective, engage all kinds of motivation of different students. 2. The pursuit of creativity is an effective way to guide students to increase their intrinsic and external motivation. 3. Because of the long-term influence of childhood on their adult, teachers sow the seeds of interest in students' hearts in order to reignite their motivation throughout their musical development. 4. Teachers should design activities that facilitate students to help each other, cooperate, share, and complete the activity goals successfully.

**Keywords:** learning motivation, doctoral students, music education, influencing factors, relationship model

POS-116

## **Musicking in Early Childhood Education for Nurturing Self-Awareness within a Collective Culture**

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*Heisei College of Music, Japan*

### **Abstract**

Relationships between Japanese people are often characterized by a strong element of collectivism. Japanese people tend to follow others and feel safe when they are in a group. As it is a cultural habit, it is not a matter judging it as good or bad. However, in the age of globalism it may be desirable to change this habit in order to develop inclusion and diversity. Music which occurs in a sphere of freedom and equity would promote this change. So, adopting a new music program influenced by Musicking in early childhood education may be a positive step forward.

Musicking is a term created by Christopher Small (1927-2011), which highlights the performative aspect of music. He said that music is not a thing but an activity that people do, including performing, listening, composing, rehearsing or participating, preparing for concerts, dancing, etc. It happens in relationships between individuals, between individuals and society, and between humanity and the natural world, with no concern for evaluating performance.

In collective cultures music is often considered as a 'thing', which should be 'taught' by teachers and children are expected to 'learn' or 'imitate' the teachers' models. Although this way of teaching music may have some good effects for school-age children, for younger children it may decrease the opportunity to draw out their potential and to nurture their self-motivation.

To set such a Musicking program in early childhood education will enable children to act freely and independently in musical environments, without rules and valuations. It can nurture their self-awareness and independence. At the same time, it can encourage a deeper awareness of others, as Musicking requires listening and watching other people. Children can feel that they are both unique and part of a group. Teachers may also feel freer and easier in that program to find children's hidden potentials. Music therapy, especially the Nordoff-Robbins Music Therapy approach will help us to design the program.

As cultural issues are complicated and have profound implications, to introduce new ideas from other countries may need careful consideration. However, we should explore new ways to help us nurture future generations.

POS-117

## **The Current Status, Problems and Strategies for Cultivating Chinese Traditional Music and Cultural Identity in Middle School Students**

*Jiangxia Liu*  
*Soochow University, China*

### **Abstract**

As an important way to cultivate students' cultural identity, music teaching has an irreplaceable value and role in transmitting excellent traditional music culture. Through a survey of the current situation of cultural identity in Chinese traditional music teaching in middle schools in province J, it was found that middle school students have a low level of identification with Chinese traditional music culture. However, the lack of a native musical cultural identity and the reliance on traditional music teaching in schools as a means of forming a constructive musical cultural identity are the main forms of traditional musical identity. There are urban-rural variations in the traditional music cultural identity of middle school students, as well as correlations between students' traditional music cultural identity and their musical preferences, teachers' teaching methods and willingness to pass on their culture. Based on this, it is proposed that the process of teaching music in junior secondary schools should be enriched with traditional music cultural contexts to stimulate students' cultural commitment to traditional music. By focusing on the experience of the original music culture in music teaching to enhance students' cultural integration, and focusing on the subcultural characteristics of middle school students to guide them to form a cultural belonging to traditional music, students' identification with traditional music culture can be better promoted.

POS-118

## **Notes Map: The Design, Research and Development of a Music Board Game**

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*Hung-Pai Chen*

*Department of Music, National University of Tainan, Taiwan*

### **Abstract**

This project is the design and development of a music board game as a tool to help students learning music, precisely focuses on student's sight reading ability. The researcher, an elementary school music teacher, knows from her teaching that using the music board game as an inducer in music classes could help to improve students motivation and learning, and expects that this project would enhance the learning atmosphere and result.

The researcher finds that, the ability to understand and 'grasp' the music score is an important part of music curriculum, thus the design of the game mainly coordinate with the learning of sight-reading ability. The game is for fifth- and sixth- graders; the participants and trial game players includes 50 student teachers, 25 music department graduates, six elementary school teachers, and fifth- and sixth- students of twenty classes; they offer their feedback on game rule setting and game flow path; and the game has been revised three times before its manuscript was finalized.

There are two ways to play this board game and players would be in small groups. The first way is 'Notes Slapjack'. The purpose is for students to be familiar with the positioning of notes on music sheet. Using a set of c1~b2 pitch cards, the game play are similar to the card game 'Slapjack'. When students' card matches the syllable names he read, all players have to instantly 'slap' the collected bunch of earlier cards, thus, again and again, through game playing, students learn, read and gradually identify notes of sheet music.

The second way could be called as ' Music Rock' and expects that students would memorize the *Kodaly Hand Signs*. Students cooperate with a music tempo, such as *We Will Rock You* (Queen/EMI), and display the matching signs of the pitch cards and the connection which would coordinate the syllable names and hand signs. It suggests from the student teachers and other participants feedback that both ways of the board game playing would help the interaction, friendship among students, as well as improve music learning result.

The researcher wishes that the development of this board game would offer students to use and practice, and overall would enhance students enthusiasm, and students would spontaneously learn and even master their skill and knowledge. In addition, playing the game in small groups could encourage students to interact and communicate which would provide a warmer environment of learning.

POS-136

## **A Case Study of Mobile Devices Applied in Elementary School Music Curriculum Development and Students' Learning Engagement**

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### **Abstract**

The purpose of this research aims to discuss the relationship between the development of music curriculum and students' learning engagement in an elementary school. It uses case study to explore how a music teacher utilizes mobile devices into teaching and enhances students' learning engagement. Research instruments include interviews, classroom observation records, audio-visual recording equipment, documents, questionnaires, and so on.

The conclusions of this study are as follows:

1. The case teacher integrates mobile devices into the curriculum development for sixth-grade music teaching in an elementary school.

The case teacher integrates iPad with the rhythm app to guide students composing new rhythms for the songs in the music textbook, moreover composing rap for disaster prevention as an inter-discipline exercise.

2. The case teacher uses the new syllabus as the core concept of integrating mobile devices into the curriculum design.

The case teacher designed the music curriculum based on "Twelve-Year Basic Education Curriculum Guidelines." The new curriculum emphasizes composing music, and the teacher leads students to compose by iPad.

3. The case teacher believes that integrating mobile devices into teaching can extend the previous teaching contents.

The case teacher lets students know that musical instruments are not the only choice for composing music, but mobile devices can do as well. The knowledge of music theory learned in the class and recorder repertoire can be arranged through iPad app.

4. Mobile devices integrated in teaching design enhances students' learning engagement in classroom activities.

Researcher collects students' responses by questionnaires. There are seven dimensions in the questionnaire, including participating in classroom activities, answering questions, dialogues or clarifying questions, practicing skills, participating in cooperative activities, writing homework or tests, managing, and transition activities. The results show that "Participating in class activities" ranks the highest while all dimensions score fairly high. In other words, it demonstrates that students highly agree with the integration of iPad into music classes.

Finally, this study provides recommendations to elementary music teachers and future researches.

**Keywords:** Music teaching, iPad, Case Study, Mobile devices, Learning engagement.

POS-146

## **Field Survey Report on Media Artists' Works and Their Educational Methods**

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*Shinichi Watabe*

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### **Abstract**

Traditionally, listening has been the gateway to all forms of musical expression. However, with the development of information technology, the way we experience music has entered a period of great change. Artists who have emerged in recent years, known as media artists, use technology to create previously unimaginable ways of expressing music and opportunities for musical experiences without the use of instruments or voices. The work and methods of these media artists can also be applied to music education. The traditional form of learning through imitation of sound between teacher and learner can be supplanted by media artists' methods of expression and learning through the transmission of sound using technology.

The goal of this research is to develop a new method of music education, using media artists' sound expression methods and information technology. In music education, it is essential to enrich sensibility to various elements of music. To enhance the consciousness towards tones and musical verse that form music is highly important for nurturing learners' musical expression capabilities. Media artists have, through their own unique ideas, succeeded in creating methods to learn these musical elements that cannot be expressed by voice or musical instruments.

To explore new media-based methods of music education, we visited Junya Oikawa, who is a specialist in the representation of sound and a guest artist at the Media Arts Center ZKM in Karlsruhe, Germany, in February 2020. We carried out field research to experience his work, "Growing Verse1."

Growing Verse1 is a new means of communication that utilizes music and gestures. The program responds to bodily movements through motion detection, creating specific pitches and syllables through simple repetitions of moving and stopping. By allowing the learner to perceive the sound produced in real time while moving at the right moment, they can learn how music is made. Through this experience, participants can get to know the various elements of music without the use of voice or instruments.

The traditional process of music education is based on the acquisition of musical expression using songs and instruments. However, in today's information-driven society, the possibilities of sound expression have become infinitely wider. In the future, new sound experiences created by media artists are expected to become innovative methods of music education.

POS-148

## **Synchronizing and Maintaining Tempo: The Effects of Musical Training Among Older Adults**

*Haruka Kitamura*  
*Meiji Gakuin University, Japan*

*Hiromichi Mito*  
*Meiji Gakuin University, Japan*

### **Abstract**

#### **Theoretical Background**

In musical activities, two types of tempo skills are required: synchronizing and maintaining tempo. Studies on tempo skills have revealed that musical training and age are important factors that determine the level of these skills. However, it is still unclear whether the effects of musical training are maintained in old age. This study aimed to clarify the effect of musical training on synchronizing and maintaining tempo in old age.

#### **Method**

Twenty participants over the age of sixty participated in this study. Half of them are musicians who had received 7–31 years of training for their major musical instrument (piano—4, violin—3, cello—2, trombone). The other half were non-musicians who had 2–14 years of training in an instrument. The tempo tasks were synchronization and continuation. First, the participants listened to a sequence of 10 tones at a particular tempo and were asked to tap along with them (synchronization task). Next, they were instructed to reproduce the tempo they had just heard and continue tapping 10 times (continuation task). Ten different tempi were used (250, 350, 450, 550, 650, 800, 1000, 1400, 1800 and 2200ms), which were presented in random order. Each tempo was repeated three times.

#### **Results**

In the synchronization task, the accuracy of tempo synchronization was analyzed through two aspects: the consistency of the tapping interval and the gap between the tapping point of tone sequence and those tapped by the participants. In the continuation task, the accuracy of maintaining the tempo was analyzed through the consistency of the tapping interval and the difference between the tempo displayed in synchronization task and those tapped by the participants. In the synchronization task, musicians could synchronize more accurately than non-musicians at the tempi of 250ms, 1400ms, and 2200ms. In the continuation task, musicians could maintain the tempo displayed in the synchronization task more accurately than non-musicians at the tempo of 2200ms and 1800ms. However, there were no differences between musicians and non-musicians in the tempi ranging from 450ms to 1000ms in the synchronization task and from 550ms to 1400ms in the continuation task.

#### **Conclusion**

The results of this study indicate that musical training influence the skills of synchronizing and maintaining tempo even in older age. However, these skills are only evident for particular tempi such as fast and slow tempos.

POS-153

## **Research on the Problems and Causes of Chinese Traditional Music Teaching in Primary and Secondary Schools: A Grounded Theory Analysis of 4224 Teachers' Survey Results**

*XiaoJu Li*

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### **Abstract**

After the 18th National Congress of the CPC, with the awakening of the subject consciousness of traditional culture, Chinese traditional music is gradually attached attention and strengthen. It happened not only from the central government to rural areas, but also from the professional scholars to frontline teachers. Recently, the issues of traditional music teaching has become an important topic in the field of music education in China. The traditional music teaching and learning in class is an important way of transmitting and developing the national music culture. But from a practical perspective, its teaching efficiency still can not meet the requirements of the national culture strategy and the demand of transmission and development nowadays.

Based on the above considerations, this study mainly explored the real problems, causes and corresponding recommendations of Chinese traditional music teaching. Through the unstructured questionnaire of 4224 music teachers from Chinese 26 provinces/municipalities to collect the data, this paper analyzed the existing problems and causes in the present classroom teaching by using the analytical path of grounded theory. A total of 86 three-level codes (5746 reference points), 16 two-level codes and 5 one-level codes were generated through the open coding, axial coding and selective coding of grounded theory.

The main conclusions of this study are as follows:

- (a) A "multi-level ring structure" model consisting of 16 two-level nodes and 5 one-level nodes is established. The model revealed the hierarchical structure of problems and causes in teaching.
- (b) This study revealed the structural relationship between the internal factors (teachers and students) and external factors (teaching conditions, subject contents, organize strategies), and logical relationship between the core factors (as the direct element of teaching-teachers, students, contents, strategies) and the supporting factors (guarantee conditions) of teaching.
- (c) The suggestions of traditional music classroom teaching in China are proposed from macro, meso and micro perspectives.

This study analyzed the current issues and causes in terms of teaching and learning of Chinese traditional music, and proposed the suggestions, which will provide insights for future research on Chinese traditional music teaching in primary and secondary schools.

POS-156

## **An Analysis of VAKT for Music Conservation Enhancement**

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### **Abstract**

The purpose of this study is to analyze VAKT (visual- auditory –kinesthetic -tactile) for music conservation enhancement, including teaching strategies and contents.

According to literature review, most studies of music conservation are regarding students' ability to conserve music. However, only few studies investigate strategies and contents used for strengthening one's music conservation ability (Botvin, 1974; Foley, 1975; Pembroke, 1987; Serafine, 1979; Zimmerman & Sechrest, 1968). Although music conservation enhancement still remains unknown, more and more studies prove music conservation enhancement successful (Botvin, 1974; Foley, 1975; Pembroke, 1987; Zimmerman & Sechrest, 1968). Consequently, this study discusses teaching methods and teaching contents to enhance one's music conservation ability.

Fernald (1943) develops the VAKT method. VAKT is a multi-sensory method that comprises visual, auditory, kinesthetic, and tactile (Fernald, 1943). Students use forementioned ways to gain information. Mercer and Mercer (1993) indicate that students learn through different ways can achieve better. Although VAKT is initially designed for students with special needs, it benefits for all students. Therefore, this study utilizes VAKT for music conservation enhancement. As for specific methods, researcher develops activities in the study including singing games, Dalcroze Eurhythmics, music paintings, and so on.

The research instruments adopt literature analysis and in-depth interview to collect data. First, researcher reviews the literature to comprehend the background of music conservation enhancement and VAKT. Second, researcher sorts out information from literature to develop teaching contents as well as interview three university teachers to ensure the quality of the study. This study can provide teachers a way to improve one's music ability in the future, and suggest future researchers a direction of music conservation enhancement.

The expected results of this study are as follows:

1. Possible teaching contents of music conservation enhancement.
2. Researcher-developed music conservation teaching could strengthen student's music conservation.
3. Researcher-developed music conservation teaching could enhance student's music learning interests.

**Keywords: Music conservation, Aural discrimination, VAKT**

POS-176

## **Meta-Analysis on Music Teaching Methods to Creative Thinking of Young Children**

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### **Abstract**

Einstein once said, "The world is the product of our creative thinking." In order to survive, any social system must have an adaptive function to predict changes in the environment and seek adaptation. This predictive and adaptive function is creation (Katz & Kahn, 1978; Li, 1986). Facing diverse challenges in the world, the only constant law is "change." People in the modern society should have creativity to adapt to the changing world, in order to overcome or even create the environment. As mentioned above, we can see the importance of "creative thinking" and better teach the next generation to acquire the competence.

According to the philosophy of music teaching methods, creativity plays an important role in the goals. The Arts Domain has the uniqueness to develop multiple possibilities. Children can develop creativity, cultivate creative thinking, combine different elements, and create new possibilities through music learning. Therefore, researcher aims to study music teaching methods as well as the influences of music teaching and creative thinking. What are the research results of music teaching in academic? What are values of music teaching in cultivating creative thinking? What are the differences from traditional music teaching? What are the suggestions and strategies for cultivating creative thinking through music teaching?

The purposes of this research are as follows:

1. Collecting dissertations and theses related to "Music Teaching Method" and "Creative Thinking."
2. Analyzing the educational significance of music teaching methods for creative thinking.
3. Extracting teaching suggestions and strategies for cultivating creative thinking through meta-analysis.
4. Providing recommendations for future research and teaching.

This study adopts meta-analysis method. Systematic statistical techniques are utilized to explore the empirical research literature and calculates the effect value to analyze the extent to which these research results can be explained and inferred. At present, there are about 10 papers related to music teaching in Taiwan, and about 140 papers related to creative thinking and teaching.

The expected results of this study are as follows:

1. By extensively collecting relevant information, researcher will compile a research report on the cultivation of creative thinking in music teaching. Researcher will put forward the unique educational value of music teaching in cultivating creative thinking, and enhance the public's recognition of the significance of music education.
2. Systematic teaching methods and strategies will be identified, and the results will provide music educators a solid foundation for teaching.

Keywords: music teaching method, creative thinking, meta-analysis

POS-182

## **A Study on Self-Efficacy of Non-Music Teachers in a Music-Oriented School in China**

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### **Abstract**

Music is an important entity in compulsive education in China and included in the curriculum from elementary to secondary school level. Music education has a long history back to the time of Confucius. A school in Shandong province, hometown of Confucius, decides to build their education based on music. The school is comprised of both elementary and secondary levels, and it requires every student to learn an instrument as extra-curriculum. The school principal believes that music could cultivate the school culture and benefit students' learning, thus not only students but all the teachers study music after school as well. As mentioned above, it is known as music-oriented education or so-called musicalized education in China. No matter music or non-music teachers learned an instrument or played in an ensemble, moreover, school principal invited a music education professor to give music teaching workshops every month while Dalcroze, Kodaly, and Orff teaching methods were introduced to all teachers. At the first place, non-music teachers wondered why they needed to learn music teaching methods, but their attitudes toward attending workshops became positive later on.

A self-efficacy survey was taken place after two years implementation of learning music teaching methods for non-music teachers. The survey contained 45 questions in teaching attitude, curriculum design, self-assessment, and self-improvement. Researchers conducted a survey study in 2018 and collected 127 valid responses. Respondents included 19 secondary school teachers and 108 elementary school teachers, and were 12 male and 115 female teachers demographically.

Among those teachers, 94 teachers have attended the music teaching workshops while 33 of them have not. For those who have attended workshops, they demonstrated significantly higher self-assessment than those who have not ( $t = -2.937$ ,  $p = .004$ ). Specifying the hours of workshop attended, teachers showed significant differences in the dimension of self-assessment ( $F = 4.476$ ,  $p = .005$ ). In the post hoc test, teachers who have attended more than 38 hours of the workshops ( $n = 57$ ) scored significantly higher in this dimension than those who never attend workshop ( $p = .007$ ).

Gender, age, degree, profession, teaching experiences, and level of teaching had no significant effect on either total score or any dimension.

Keywords: music education, music teaching method, non-music teachers, self-efficacy

POS-187

## **Influences from Educational Music TV Program “Minna-no-uta” on School Music Education in Postwar Japan**

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### **Abstract**

The purpose of this study is to analyze the influences that the Japanese educational music TV program "Minna-no-uta," which began broadcasting in April 1961 and continues to be broadcast to this day, has had on school music education in postwar Japan.

This TV program was launched by the Japan Broadcasting Corporation (NHK), a public broadcaster, targeting upper elementary school students to junior high school students. The purpose of starting this TV program was "to bring healthy and beautiful songs to children". This objective was clearly the opposite of the school music education of the pre-war period, which aimed to imperial assimilation policy.

It can be said that many of the songs broadcast on this program played an important role in the formation of school music culture in postwar Japan. For example, many songs such as "Okina-furudokei: *Big old clock*", "Senro-wa-tsudukuyo: *The line goes on and on*", "Obake-nante-naisa: *There's no ghosts*", "Kitte-no-nai-okurimono: *Stampless departures*", "Clarinet-kowashiyatta: *I broke my clarinet*", etc. became major music as teaching materials for kindergarten and elementary school after they were broadcast on this TV program "Minna-no-uta".

In the current "Minna-no-Uta", only original songs for this TV program are broadcasted. However, in the 1960s and 1970s, the program featured many existing Japanese nursery rhymes such as "Natsu-wa-kinu: *Summer is not coming*" and songs translated from foreign songs such as "*Big old clock*" and "*I broke my clarinet*". In other words, there is a transition from covers to originals in the development process of this TV program. This is similar to the development process of school music education in prewar Japan.

In this study, I would like to examine (1) the background of this TV program, and (2) its influence on school music education in postwar Japan, including comparisons with the prewar period. This research was supported by Grants-in-Aid for Scientific Research from Japan Society for the Promotion of Science.

POS-195

## **Four-Handed Piano Tasks: The Importance of Enjoying Musical Performance in Order to Increase Internal Motivation**

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*Masami Yoshimura*  
*Doho Univeristy, Japan*

### **Abstract**

#### Background of the paper

Piano performance skills are compulsory for nursery teachers to establish their careers in Japan. Therefore, university students' motivation to practice piano alone is very strong, but often, in their desire to improve, they neglect their enjoyment of music making, and their performances can become too studied and serious. However, it is also important for nursery teachers to show their enjoyment in playing music, in order to encourage the participation of young children.

Previous researches revealed that four-handed piano tasks were effective in several ways during nursery teacher training courses, permitting students to recognize the nice sound of music and to start enjoying their performances.

Therefore, we set a task to motivate university students in finding enjoyment in playing the piano spontaneously and creatively, and playing with another person, sharing their music, thus increasing internal motivation.

#### Aim

The aim of this study is to investigate the outcome of the four-handed piano tasks on nursery teacher training courses.

#### Method

Two surveys were conducted, one year apart. The purpose of the surveys was to discover how much the students enjoyed the four-handed piano tasks, and to ascertain for how long they maintained their enjoyment in practice afterwards. Text mining and m-GTA analysis were applied for the purpose of analysis.

#### Results

In the first survey, conducted straight after the four-handed piano performance, students reported a high level of satisfaction and nervousness. However, in the second survey a year later, students reported a lower level of the enjoyment in their piano performance. Even though there were particular words that showed their positivity in practice, such as, singing and playing the piano at the same time, practice in front of other people, and performance.

#### Conclusions and implications for music education

The external motivation to establish their careers was stronger than their internal motivation to enjoy music, even though the four-handed piano performance appeared initially successful. To increase internal motivation, competence and self-determination are effective, therefore, it is important to encourage students in selecting their own music program, deciding practice methods, and planning their schedules by themselves.

And also, musical consciousness is the key to increasing internal motivation. To do so, teachers' direct intervention is required at certain times. And additionally, students must be

made aware of the musical effect they are making while performing, so allowing them to better adapt their performances and musical expression for different situations.

POS-200

## **Efforts Toward Qualifying Music Therapy as a National Qualification in Japan**

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### **Abstract**

#### Theoretical Background

There have been episodes of the therapeutic use of music in ancient Japan, mainly in the form of religious rituals. Music therapy in the modern sense began to be practiced and studied in the late 1960s and 1970s. Private certification was issued in Japan in 1997, and there has been a movement toward recognizing it as a national qualification since then. At that time, the movement was frustrated, but once again, the movement toward the realization of national qualification has begun through evidence-based practical research.

#### Aim

The purpose of this presentation is to chronologically introduce and evaluate attempts to qualify music therapy as a recognized national qualification. This study reveals the background behind the abandonment of previous efforts to qualify music therapists and indicates what has been learned to help make the qualification of music therapy successful.

#### Method

- 1) Survey of music therapy-related organizations and their roles from the 1970s to the 1990s.
- 2) Investigation of how those organizations were integrated into a unified domestic organization.
- 3) Examine how a music therapy national qualification was encouraged and canceled.
- 4) Indicate how a music therapy national qualification was reconsidered in the 2010s.

#### Results

In the 1990s, many music therapy-related organizations were formed. One of the reasons why so many organizations existed was the difference in the philosophies behind each form of music therapy. However, in order to request the national qualification of music therapists, it was necessary for each group to unite, thus eliminating the differences in their approaches. One of the reasons why national qualification efforts stopped at that time was that it was difficult to obtain a unified view of what level of national qualifications to aim for. The reason for reconsidering the national qualification of music therapy was that the World Music Therapy Association congress was held in Japan and the need for music therapy is increasing.

#### Conclusions

If the therapeutic use of music is nationally supported, further practice and research will be promoted in special needs music education. Considering the difference between education and clinical practice, the application of music therapy to special needs education is expected more than ever.

POS-204

## Musical Characteristics of Improvised Songs of 1-2 Years Old Infant

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### Abstract

The purpose of this study is to clarify the musical characteristics of improvised songs of 1-2 years old infant. It provides suggestions for clarifying aspects of music development in 1-2 years old infant.

I obtained video data of a typical developing girl (1 year 11 months to 2 years 6 months) from parents, and obtained samples of 4 songs (Sample1 to Sample4). In addition, I obtained samples of 4 songs (Sample5 to Sample8) of a typical developing girl (1 year 10 months to 1 year 11 months) whose video is distributed by the Chuo Hoki in "Musical Expressions of Infants". A total of samples of 8 songs were obtained from two girls, and by transcribing them, musical characteristics were extracted from the Melody, Language, and Rhythm categories.

Table 1 shows a list of extracted musical characteristics, their real numbers and percentage. For example, the characteristic of Atonality is found in 4 songs in all samples, and the percentage of the total sample to 8 songs is 50%.

Table1 Musical characteristics of improved songs , their real numbers and percentages

	Melody			Language			Rhythm	
	Atonality	Tonality	Uncertain pitch	Mixture of song and word	Lyrics that are not word	Onomatope	No beat	2 or 4 beats
Sample1		○	○		○		○	○
Sample2	○				○	○		○
Sample3	○				○			○
Sample4		○			○	○		○
Sample5	○			○	○	○	○	
Sample6			○	○		○		○
Sample7	○		○	○	○		○	
Sample8		○		○		○	○	
(Real number)	4	3	3	4	6	5	4	6
(Percentage)	50%	38%	38%	50%	75%	63%	50%	75%

As a result, the following three points were shown: (1) In the Melody, it is showed a mixture of Atonality, Tonality, and Uncertain pitch. This is considered to indicate the early stage of music development, (2) In the Language, Mixture of song and word, Lyrics that are not word, and Onomatope were mixed. This is considered to be a characteristic of the early stage of development in which language and music are undifferentiated, and the language acquisition period. In addition, individual differences in the language development of the target infants are also appearing, (3) In the Rhythm, No beat, 2 or 4 beats are mixed. This is also considered to indicate the early state of music development.

From these facts, it is considered that improvised songs of 1- 2 years old infant tend to have musical characteristics peculiar to the early stage of development and the language acquisition period. And it is considered to give suggestions for clarifying the process of music development of 1- 2 years old infant.

POS-216

## **The Becoming of Sounds in The Earth-Sky World: Against Tim Ingold's "Four Objections to the Concept of Soundscape"**

*Kento Takahashi*  
*Hirosaki University, Japan*

### **Abstract**

In recent years, the British social anthropologist Tim Ingold has given a great influence to wide range of fields such as philosophy, aesthetics, social psychology and so on. He criticized European concept of art. According to Aristoteles, for example, to make a work of art was considered as imposing forms internal to the mind upon external world. Ingold observes that both materials and humans are always immersed in the flow of air, therefore art is process of correspondence that grows while materials and humans are intertwined, in the flow of air. The concept of soundscape advocated by the Canadian composer R. M. Schafer (2005), who points out that music has been isolated from contact with other subjects such as the other arts and the environment, was criticized by Ingold. Ingold (2011) points out: 1) The landscape is not tied to any specific sensory register. In ordinary perceptual practice those registers cooperate so closely, and with such overlap of function; 2) We should not fall into the thinking that the power of hearing is inherent in the recordings, following the false idea of studies in visual culture that the power of sight is inherent in the images; 3) Sound and light are not the objects but the medium of our perception, we see in light and hear in sound; 4) sound and light are infusions of the medium in which we find our being and through which we move. In order to clarify Schafer's contribution towards music education, this paper attempted to consider whether these objections are valid by corresponds to the original ideas of Schafer. An intensive literature research was undertaken as a method in order to elucidate Schafer's perception of the environment and sound education. *The Tuning of the World, The Thinking Ear* and *A Little Sound Education* by Schafer was examined. The findings were: Schafer attaches great importance to phenomenon such as rain and wind caused by air flow as the source of hearing and music making, and he was aiming for integrated art education to sharpen total sensorial acuity, without separating the functions of each sensory register. In conclusion, the author argued that Ingold's objections are not valid. On the contrary, the concept of soundscape is compatible with Ingold's ideas. Sound education by Schafer has a potential that evolves into integrated art education that allows us to learn to correspond with materials in the flow of air with total senses. Both visual arts and music educators should apply sound education to integrated art education. It contributes to the interdisciplinary nature of music education.

POS-224

## **Concert Lecture as a New Approach of Community Music Education**

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### **Abstract**

The modern methods of music education are becoming increasingly diversified. As traditional music education programs available in school struggle to meet the society's heightened aesthetic expectation, there has been calling for innovative, attractive and high-quality music education activities.

Concert lecture is an emerging community music education activity combining professional performances with academic lectures. A concert lecture is often held in a concert hall, a theatre or other public places, and includes live performances by professional musicians accompanied with explanation of related music knowledge such as composer background, work style, musical characteristics and performance techniques. Concert lecture as a tool for music education is not primarily concerned with audience' music training. Instead, it emphasizes on art appreciation and encourages people to connect with music and the aesthetic cultural value underneath.

During the past few decades, a number of renowned professional orchestras across the globe have participated in similar cooperative and innovative educational programs. However, there has been few systematic studies and professional assessments for concert lectures with regards to the audience's reception, especially in China. It is vague whether these concert lectures have either achieved the educational goals or met the requirements from attendants, and there is an urgent need for more systematic and accurate assessment in concert lectures.

This study will contain two phases: Phase I is a documentary analysis and a total of 10 most distinctive and representative video clips of Young People's Concert from New York Philharmonic Orchestra conducted by Leonard Bernstein will become the document for content analysis which will focus on the educational characteristics of concert lectures. Phase II will be a multiple case study which contains a quantitative questionnaire survey and qualitative interviews for two concert lectures held in China to answer the research questions presented above.

The significance of this study lies on the characterization of effects and influence of concert lectures in music education. Through investigating this music education program, a more engaging and accurate assessment can be provided, and such assessment may lead to improved educational efficiency and audience reception of similar community music education programs.

**Keyword:** Community Music Education, Orchestra Education, Concert Lecture, Motivation.

POS-229

## **Exploring the Relationship between Music and Language: The Concept of Image by Gaston Bachelard and Ethnomethodology**

*Soma Takeo*  
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### **Abstract**

The term “image” is highly ambiguous and can be interpreted by various meanings in our common conversation. In music education, the term image has been also used in a variety of scenes. There are many practical studies, which aim to take advantage of image in Japan. However, the question of what is image has no definite answer and few qualitative studies about image has been undertaken (Tange and Doi, 1981). Referring to the concept of image proposed by the French philosopher Gaston Bachelard, this research firstly revealed the nature of musical image in order to identify the problem of transforming image intendedly. And then I interviewed (semi-structured interview on one-to-one) a senior student at Hirosaki University in an ethnomethodological approach. The interviewee freely talked about his musical image. Our conversation was recorded and analyzed. On this research, it was revealed that image was ambiguous and the degree how the interviewee could comfortably talk about image depended on the context including the relationship between interviewer and interviewee as well as interviewee’s musical preferences and so on. As a result, the following point of view came into being: Image is essentially changeable, amorphous and ambiguous, and has no particular meanings, therefore, it is dangerous to translate image of music into composers’ thoughts and messages, for example. Since we cannot describe the image of music precisely and strictly by words, music teachers should be more sensitive in terms of the use of the term image. In order to associate with music more musically, we music teachers should pay more attention to the relationship between music and language. My research attempted to enter that discourse. Prospects for my future research will be to attempt developing the methods, which can possibly handle the relationship between music and image (or presumably language), based on an ethnomethodological approach.

POS-238

## **An Investigation of the Effectiveness of Pitch Matching Assessment: A Case Study in Shenzhen Futian High School, China**

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### **Abstract**

The 2011 Chinese music curriculum standards issued by Ministry of Education has clearly suggested teachers to pay more attention on the in-class music practice. Research from China illustrates that singing is the most common practical activity that can be functioned as an intervention to improve students' other musical skills. Also, the quality and impression of singing depends on how well they can sing in tune. To this end, in 2016, 295 students within six classes participated in an individual singing interventional assessment across two weeks of music lessons. The interventional process was as followed: (1) Students found the international musical standard note pitch (A) with a tuning fork and listen. (2) The teacher used the piano to produce two notes in which the students recognize the standard note pitch. (3) The students matched the pitch in their voice. This assessment eventually was rated by six levels: one can sing independently as A, need teachers' reminders on concentration as B, need teachers' vocal demonstration as C, need teachers to sing the whole scale as demonstration as D, and need to use multiple strategies to suggest as E, still not finished repairing as F. At the end, 96 students reached A level. Except for six students who were remaining F level, all the other 193 people could sing that standard pitch independently after the singing intervention.

The author conducted the same assessment again in 2017 and 2018. There were 6 students got F level in 2017 and there were 13 students got F in 2018. As verified by the teaching service, the enrollment of 2018 for was 10 points lower than in 2017, so the increase in the number of students to be repaired is likely to be related to a decline in the overall quality of students. Even so, the assessment results show that pitch matching can be improved by intervention.

This interventional assessment was designed regarding the principle of small steps mentioned by Skinner in *The Theory of Program Teaching*, which can make students achieve their goals through layering the instruction which is difficult to achieve.

The results of this study can be used as a reference for music classroom teaching in basic education in China. Also, it reveals that even though there are different learning conditions between China and the West, but the cognitive law is the same.

POS-242

## **Analyzing the Role of IT in Music Education Based on the Concept of Media by McLuhan**

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### **Abstract**

In the whirlpool of Covid-19, various music activities utilizing IT are being attempted. However, most of them have never escaped from an established system in music so far. Many music activities have been premised on other people. Thus, any music has been produced, developed, consumed and appreciated based on the socio-cultural settings. Because of the COVID-19 pandemic, we have an opportunity to rethink on what "music" is through IT. According to the Canadian philosopher and media specialist Marshall McLuhan (1964), media refers to everything that extends the human body and sensations (or the nervous system that underlies them) beyond their reach. McLuhan talks about how the medium affects human social life: He devised the laws of media based on four items: extension; obsolescence; retrieval; and reversal. A certain media goes through the simultaneous action of extension, obsolescence and retrieval, and then, its new potential is realized. While at the same time, reversal to another form as a new media is occurred. In this paper, the author clarified the effects of IT on music activities by applying it to the laws of the media in order to propose a brand-new music education curriculum based the use of IT. Literature research based on the concept of media proposed by McLuhan was undertaken as a method. The findings of this paper are:

- 1) IT extends musical activities. This extension process reconstructs the relationship between the sound and the body.
- 2) This process can also be as a shift from synchronicity to diachronicity.
- 3) IT plays an important role to regain the gestures and facial expressions, which was lost due to non-face-to-face or wearing a mask to the visual space.
- 4) IT, at the same time, diminishes the relationship between the sound and the body: we cannot expect a real human touch form virtual communication by tablet, for example,

In conclusion, the author pointed out that IT works to strengthen its diachronic aspect. It cannot be considered as a supplementation of musical activities, that is to say, no reversal by McLuhan has yet happened. Taking advantage of IT, we music educators, therefore, should attempt to create a more creative and productive "reversal" for children in music education.

POS-247

## **Research Regarding the Utilization of Online Lessons at Teacher Training Colleges**

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*Lisa Tokie*  
*Doctoral Student at Kunitachi College of Music, Japan*

### **Abstract**

A full academic school year has passed since the teachers' training college to which the author belongs was forced to switch to online classes due to the COVID-19 coronavirus pandemic. Starting in April of 2019, the author conducted a class for more than 100 students using "Goocus," a specialized learning app for Smartphones, and conducted smaller group lessons using "Zoom".

Since September, many educators at the author's university began using a hybrid of offline and online lessons. This has prompted our faculty to rethink how to separate and utilize the benefits of online versus in-person classes.

Teachers and students involved in teacher training at K University received a questionnaire. The objective of the survey was to determine the benefits of online, offline and hybrid education training classes designed for students at teacher training colleges. A second survey asked students what type of lessons they prefer.

Based on the results, the authors aim to clarify how teachers and students perceive the advantages and disadvantages of online and offline lessons. Further, the authors will present evidence regarding the effectiveness of combining online and offline lessons and incorporating a new perspective regarding how lessons can or should be taught in the future.

The authors discovered that what may be proper or achievable during in-person classroom settings, may not be replicable online. However, through trial and error, online lessons allow for teacher-student improvisations that, likewise, may not be replicable in traditional educational environments. For example, a faculty member at K University created a music lesson that took advantage of the time lag that occurs during individual student performances over Zoom to create a unique online sound experience. However, issues regarding how to learn synchronized performances still remain.

Further, the survey made clear that a majority of students preferred face-to-face lessons. Among the reasons given were that online classes made it impossible to experience live student performances or to share a communal student-centred atmosphere.

However, because of various factors, the authors believe that some universities may want to continue using online-based learning even after the pandemic emergency is in the past. Therefore, the authors would like to propose suggestions on how to change the perspectives of both educators and learners regarding traditional music activities in order to utilize online or hybrid learning sessions in a more productive way that satisfies student expectations.

POS-248

**Ought to Be and Being of the Curriculum Provision in Music Education Major in the Background of *Measures for the Implementation of Teacher's Professional Certification in Normal Universities: A Case Study***

*Yi Zhou*  
*Hainan Normal University, China*

**Abstract**

In 2017, The Ministry of Education of the People's Republic of China (MOE) published a document named *Measures for the Implementation of Teacher's professional certification in normal universities*. In the context of this document, the paper focus on the curriculum provision in music education major of normal university including two aspects, ought to be and being.

This case study examined the cultivation plan of H normal university. Through the text study and the qualitative study of 11 graduates and 3 senior music teachers in employers, we found three problems existing in teaching today. (a) Student lack two kinds of abilities——sing and play at the same time and impromptu accompaniment;(b) Lack of deep understanding of music teaching in primary and secondary schools;(c) Lack of practical ability. But according to the document, the curriculum provision in education major of normal university ought to be diversity, situational and practical.

Findings illustrate that we should (a) integrate course content; (b) improve students' metacognitive ability;(c) advocate practice actively.

Key words: teacher certification; music education; curriculum

POS-252

## **Meeting Child's Needs through Music: A Music Therapy Case Study of a Girl with Binge Eating Disorder**

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### **Abstract**

#### **Background**

Binge eating disorder (BED) used to be categorized under eating disorder not otherwise specified, EDNOS, formerly called atypical eating disorder by the Diagnostic and Statistical Manual of Mental Disorder (DSM) Version 4 so far. Therefore, BED had been only listed in Appendix B in the DSM-4, but the DSM-5 added it as a separate diagnosis.

Although there might have been certain people who suffered from BED, the information and the features of BED are still unclear at the moment, as the diagnostic criteria have not been established and people with BED have been treated as a part of atypical case. Therefore, each case study of BED should be precisely described, which enables us to gather the detailed data and the prognosis.

The number of people who are treated as BED properly has been unknown, but the specific treatment for BED, not as one of the clinical features of EDNOS, is expected as soon as possible.

#### **Aim**

The purpose of this study is to provide a case report on music therapy with a girl who appears to be suffering from BED but has been treated as another disorder. This study will introduce the process that the girl, who has been mistaken for autism due to jargon, violent behaviour, lack of communication and so on, expresses her difficult feelings through music and musical activities. It will also be reported how she expressed through music the real reason why she had to keep eating badly.

#### **Case material and method**

The child was one of the fraternal twins. The diagnosis of this client had not been BED in her involved clinic, as it is operated on the basis of the former diagnostic systems. Her initial diagnosis was borderline and was changed to mental retardation. Subsequently, she was diagnosed as Autism and Mental retardation. She was referred to music therapy at 35 months of age.

The frequency of the music therapy was initially once a week and shifted to twice a month. After the referral and assessment sessions, music therapy started in an individual setting.

#### **Result**

The fact that the client was suffered from BED and the causation was found throughout 122 music therapy sessions conducted during 7 years. At the initial examination or at the beginning of the therapy, the BED aspect of this client was entirely unknown. However, in the course of the time, the suspicion of BED was getting clear. Furthermore, the client started to play and comment on how she feels about her handicapped situation through music and finally gained the sound weight control.

#### **Discussion**

Thus, not only pointing out the weight and nutrition problem in a physical way but meeting child's needs should be significant. It is clinically evidenced that music helped her to recognize and understand what she really needs.

POS-255

## **The Combination of Chinese Traditional Opera "Tea Picking" and Contemporary Music Lesson**

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*Universiti Sains Malaysia, China*

*Pravina Manoharan*

*Universiti Sains Malaysia, Malaysia*

### **Abstract**

This paper will discuss how to introduce "tea-picking opera" into music lesson according to its artistic characteristics. By summarizing the artistic characteristics and cultural connotation of tea-picking, this paper discusses how to build a modern local music course with local characteristics that not only retains the traditional artistic characteristics but also conforms to the aesthetic appreciation of current students.

POS-257

## **From Either/Or, Toward Yin and Yang: A Case Study of a Music Education Philosophy International Classroom Partnership**

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*Patrick W. Horton,*

*Northwestern University, United States of America*

### **Abstract**

The purpose of this descriptive, intrinsic case study was to document and evaluate the impact of an international educational collaboration between graduate level music education programs at universities in the United States and Singapore. The nine-week “Music Education Philosophy International Classroom Partnership” (ICP) brought together graduate students in the United States (n=9) and Singapore (n=7) to engage in weekly dialogue about music education philosophy. During Week 1, students introduced themselves in the Flipgrid<sup>1</sup> platform and connected individually via email with assigned peer partners. During Weeks 2, 4, 6, and 8, students met synchronously via Zoom for one-hour Discussion Groups. Faculty Facilitators assigned common readings before each meeting and provided prompts to stimulate full-group, peer-partner, and small-group discussion. During Weeks 3, 5, and 7, students engaged asynchronously via the Padlet<sup>2</sup> Discussion Board platform, responding to faculty-designed prompts. During Week 9, students posted written reflections on their experience of the ICP activities.

In an effort to evaluate the impact of the ICP, the Faculty Facilitators and a graduate assistant compiled data, including 48 Discussion Board posts, 16 reflective writings, Faculty Facilitator email correspondence relating to ICP design and implementation, and personal notes taken throughout the project. The Faculty Facilitators and graduate assistant also met for a “post-mortem debrief” at the end of the project to discuss perceived outcomes. This meeting was recorded, transcribed, and included as data. The full data set was systematically analysed through open and closed coding to identify emergent themes. In order to increase trustworthiness, researchers developed a rich description of the ICP experience, engaged in triangulation by making comparisons among data sources, and accomplished member checking by sending emerging assertions to the ICP community for feedback. Preliminary findings suggest that the ICP experience inspired a heightened awareness of global approaches to music education philosophy, fostered international collegial networks among students and faculty, and encouraged the inclusion of more diverse, global perspectives in the philosophical thinking and writing of participants. This poster will provide an overview of this unique virtual collaboration undertaken during the global pandemic and offer evidence highlighting its impact. The International Classroom Partnership may serve as a model for

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<sup>1</sup> Flipgrid is an online educational platform that allows users to create short videos displayed in a gallery.  
<https://info.flipgrid.com/>

<sup>2</sup> Padlet is an online education platform that features creative, web-accessible discussion boards.  
<https://padlet.com/about>

encouraging virtual international collaboration and for inspiring more global approaches to music education scholarship.

W-006

## Encouraging Improvisation in Collegiate Group Piano Settings

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### Abstract

With intent to improve pedagogy in collegiate group piano settings, the purpose of this workshop is to encourage improvisation. More specifically, aural approach will be emphasized in demonstrating how group piano students can effectively learn and benefit from improvisation. This workshop will include: (1) teaching demonstrations of improvisation in collegiate group piano settings; and (2) research results and interpretations of overall music achievement in collegiate group piano students.

Many music educators suggest that an aural approach to instrumental music instruction will improve student achievement (Azzara, 2002; Bluestine, 2000; Campbell, 2005; Curwen, 1901). Nevertheless, traditional approaches of instruction starting with notation still prevail in much beginning piano pedagogy. Without the musical context of tonality, meter, and style, students focus on individual notes that often result in a lack of musicianship skills. Music instruction that focuses on developing students' aural comprehension is much needed because a lack of students' understanding of tonality, meter, style, and harmonic progression will interrupt the natural transfer to piano performances (Azzara, 2002). Aural approaches incorporating improvisation have received increased attention in recent years, but are not prevalent in collegiate piano settings. Most adult private and group piano curricula focus on technical advancement in lieu of creative music making and aural skills development. Perhaps due to the nature of the instrument, piano students may simply press keys on the keyboard without comprehending what they are playing.

Participants' stabilized music aptitude was measured prior to the 14 weeks of instruction. Each student participated in two classes each week for a period of 14 weeks. This study was integrated into the pre-existing, school-wide, semester-long curriculum. Each student completed both quantitative and qualitative assessments. Quantitative results affirmed that an aural approach to improvisation in beginning collegiate group piano may have led to improved music achievement. Qualitative results revealed that an aural approach to improvisation enhanced participants' perspectives of music curricula.

W-022

## **Interdisciplinary Curriculum of Music, Art and Literature**

*SeungYun Sharon Suh*

*World Piano Teachers Association France, South Korea*

### **Abstract**

This project is designed to provide students an interdisciplinary curriculum to enhance understanding of basic elements of music with interdisciplinary approach of music, art and literature. It is to offer students with an interdisciplinary approach to understanding the various art disciplines for a creative and insightful mind to become a creative individual as well as a problem-solver. Today, we are facing many crises such as inequality, racism, violence, and discrimination in the society and the world thus we have to be a creative thinker to be a great problem-solver. In order to be creative and insightful, we need to know how to integrate diverse views or subjects to create a practical solution. Therefore, we have to implement a transdisciplinary curriculum for students to approach the issues and the world in a holistic way. Hence, this project is to offer students a foundational creative mind and understanding with core subjects of music, art and literature to build a mature and insightful mind to acquire great thinking and problem-solving skills. The motivation for such project is drawn based on a personal teaching experience with interdisciplinary approach of music and art and its effective and positive outcome. The targeted group for such approach was students with minimal or no background knowledge of music. It was very difficult for students to even grasp the concept of basic elements of music therefore my primary challenge was to offer a practical approach to understanding. Hence, as I was focusing on the basic elements of music, I used visual arts as an aid which synchronized well with the music examples to create an awakening moment of understanding and appreciation. As a result, an interdisciplinary approach of music and art as well as poetry not only enhanced the understanding, it stimulated an imagination which led to a creative expression. Thus, I am confident that an interdisciplinary curriculum will greatly contribute to arts education and it will be one of key approaches to enhance the creativity as well as cognizance. I am ambitious to expand interdisciplinary curriculum to other disciplines particularly humanity subjects with arts subjects as core foundational subjects. I strongly believe that the power of music and integrating it with other disciplines will offer a promising path of music education as well as general education for all learners.

W-063

## **Musicking to Embody *Kyosei* in the Framework of the Musical Theme and Variation**

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*Richard K. Gordon*  
*California State University, USA*

*Taichi Akutsu*  
*Okayama Prefectural University, Japan*

*Kiyoshi Kurihara*  
*Gakushuin University, Japan*

*Yutaka Nakanishi*  
*Shujitsu University, Japan*

*Shingo Okada*  
*Shujitsu University, Japan*

*Kensho Takeshi*  
*Tokyo Gakugei University, Japan*

*Miho Yamada*  
*Shujitsu University, Japan*

### **Abstract**

This workshop/ presentation demonstrates the process of *kyosei* construction in a musicking practice within the framework of the musical theme and variation. *Kyosei* is a philosophical term means harmonious and synergetic interaction (Gordon, 2019). *Kyosei* practice reflect cooperation between and among individuals and communities working together in a variety of environments (Miyazawa, 2017; Kaku, 1997).

We specifically present that musicking has universal validity to build a musical community by engaging individuals with different musical skills and interests. Such a view is echoed by Small (1998) that music is an act for everyone to participate in any capacity of musical lives, which is defined by singing, listening, playing, practicing, composing, dancing and any other methods of participation.

In the workshop, the *shakuhachi*, violin, voices, physical movement and the authors-designed visual programming language tool, Touch Designer, were combined alongside the visual images in creating a uniquely original variation of the *Twinkle Twinkle Little Star*. With Touch Designer, children with severe and multiple disabilities can manage both sound and visual images by either pressing large buttons or moving their body or eyes to control sound and visual images.

Prior to engaging with participants, researchers open up a session on the application of *kyosei* during music teaching and learning. Next, teachers, musicians, researchers and a dance therapist introduce the different instruments and the art forms to participants for their

selection. Participants are allotted 30 minutes to design and orchestrate their original interpretations of Twinkle variations. After the practice, by applying the methodology of Tobin, Hsueh & Karasawa's video-cued multivocal ethnography (2009), we reflect a series of voices all talking about the same practice and experience.

A musical community is built without exclusion of different voices as might be expected given the population under consideration. Teachers can imagine the benefits of applying *kyosei* in developing rich and sincere relationships among students in musicking practice. At the end, we also draw practical applications and process how the teachers could apply musicking in classroom practice and reach out to the communities outside the school.

W-075

## **Samulnori in Schools: Teaching Traditional Korean Percussion in a Western-Style Classroom**

*Karissa Van Liew*  
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### **Abstract**

*Samulnori* is a genre of Korean percussion that was created in 1978 in order to maintain the sounds of traditional farmers' music. As a performer of *samulnori*, a middle school music teacher, and researcher of *samulnori* education, I hope to bring the sound and techniques of *samulnori* into classrooms outside of Korea. *Samulnori* is an effective way to teach students about diverse meters, complex rhythms, musical phrasing, and enables them to explore improvisation and composition. *Samulnori* promotes hand coordination, aural development, feeling the pulse through the body, and offers differentiation due to the various instrumental roles within the ensemble and varying levels of repertoire. The purpose of this *samulnori* workshop is to raise awareness about Korean *samulnori* and the accessibility it offers for classrooms. Participants will also learn to play basic *samulnori* rhythms, learn about the methodology to teach *samulnori*, attain access to notation and pedagogical resources, and understand how to transfer this genre into their own classrooms.

The workshop will introduce participants to the sound, instruments, and history of *samulnori* through active listening exercises, which equip participants to internalize rhythms and reproduce them physically. Participants will be led to perform the basic rhythms of *samulnori* by utilizing spoken rhythms, body percussion, and transferring rhythms on to instruments. Instruction regarding the rationale, legitimacy, and logistics of teaching in a western-style classroom, such as modifying pieces and adapting instruments will be included. Participants will learn the fundamentals of selected *samulnori* repertoire and perform it on available instruments provided by the university (tubanos, congas, bongos, cowbells, suspended cymbals, gongs, etc.). Ideally, the university will have enough percussion for each participant.

With this hands-on experience, educators will be able to transfer the workshop instruction to their own classrooms, enriching students with engaged world music pedagogy. Researchers can continue studying the implications of performing world music in an adapted setting. Those wishing to pursue further knowledge and skills in *samulnori* will be better equipped to make use of those few published and online resources that are available in English. This hands-on approach will provide educators with the understanding, skill, and confidence to teach *samulnori* and spread the sound and spirit of the genre around the world.

W-084

## Vocal Health Education for Pre- and In-Service Music Teachers

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### Abstract

The daily requirements of teaching music can place great demands on one's voice. The nature of music teaching typically requires prolonged talking, speaking above the ambient noise in the classroom environment, communicating with students over instruments or singing voices, and consistently switching back and forth between singing and speaking. Using the voice in this manner creates physical stress that may lead to a variety of health problems, which can impact teachers' careers and overall life quality (Barunkan, 2017; Hackworth, 2009; Schmidt & Morrow, 2016). For decades, voice researchers have been concerned about these risks that teachers face (Gaskill, O'Brien & Tinter, 2012; Hunter & Banks, 2017; Lee, Kim & Lee, 2018; Titze, 1997). Yet, music teachers may not be aware of the steps they can take to protect their vocal mechanism. Although there is a growing body of research on vocal health, guidelines designed to be accessible and easily understood by music teachers are lacking.

This workshop aims to provide helpful strategies and procedures that pre- and in-service music teachers can use to protect not only their speaking voices, but also their singing voices. In this presentation, I will introduce an overview of vocal health education and several research-based practices derived from analysing and synthesizing research related to vocal health. Literature on anatomical structure, physiology of voice, voice functions, singing and speaking psychology, pathology, and strategies for protecting the voices of teachers and students alike were examined. While 20 years ago, hydration was recommended as the primary way to keep the voice healthy, recent studies have found additional strategies that music teachers can easily learn and use to benefit themselves and their students. These include Semi-Occluded Vocal Tract Posture (SOVT), Flow Phonation, Lessac Madsen Resonant Exercise (LMRVT), laryngeal massage, and base of tongue massage. Pre- and in-service music teachers need to understand how adhering to these practices can reduce the potential risk of damaging their own voices and the voices of their students in their music classroom.

*Keywords:* voice, vocal health, vocal hygiene, singing, speaking

W-098

## **Creating Improvisational Pentatonic Music: Open to Everyone, Connect to the World**

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*Akihiko Nakamura*  
*Odawara Junior College, Japan*

*Yuki Nanjo*  
*Violinist/Workshop Designer, Japan*

*Yukiko Tsubonou*  
*Kaichi International University, Japan*

### **Abstract**

Our research explores the variety of possibilities that develop from using pentatonic scales together with participants from different cultural backgrounds. The pentatonic scale is one of several commonalities in world music. Pentatonic scales consist of simple five notes, and those notes can be combined in many ways. Pentatonic scales appear in music such as classical music, jazz, pop music (including J-POP and K-POP) , and traditional music in many region.

Pentatonic scales differ in terms of melodic movement and rhythm depending on the region and style. Thus, creating music using the pentatonic scale has the potential to broaden and connect musical experience from a global perspective, in addition to providing an opportunity to learn about the uniqueness of different musical cultures. The aim of the workshop is to practice improvisational musical creation using the pentatonic scale and exchange musical ideas through music with participants worldwide. These activities will allow a rethinking of the musical culture of one's own region and exposure to the connections and differences of musical cultures of other regions.

In this workshop, we first play a medley of different pieces using the pentatonic scale (Do, Re, Mi, Sol, and La) on various instruments and share the musical features with the participants. Later, participants improvise melodies in the pentatonic scale based on repeated accompaniment by marimba, koto, and tone chimes, among other musical instruments (including ICT tools). Participants are allowed to improvise by combining five notes of the pentatonic scale freely. Through this pattern, participants can try and explore the music they want to create in a relaxed atmosphere. This workshop corresponds to the fourth United Nations Sustainable Development Goal. Teachers worldwide, irrespective of their country or region, have the chance to create music with the pentatonic scale found in the music of one's own country or region.

W-177

## **Solfy: An AI Tool for Promoting Singing and Music Literacy**

*Morel Koren*

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Commusicator LTD, Israel, co-founder*

*Adoram Erell*

*DSPG Hertzlya, Israel,  
Commusicator LTD, Israel, co-founder*

### **Abstract**

Singing is part of music curricula in all countries and can lead to excellent benefits for emotional, cognitive, physical, and social health, bringing joy to singers and audience. Practicing Solfege can open the door to music literacy for the majority of students who do not play a music instrument. Learning solfege is (almost) equivalent to learning a new language: in our case, the (*intimate*) language of (*Western*) music. For learners from cultures that are not using this music system notation, learning it gives access to the existing *Western music literature*. It can inspire them to try transcribing their local music, preserve, analyse, acknowledge consciously and transmit it visually – in addition to audible recordings.

Solfy is an interactive learning software that makes Solfege easy and fun to learn without needing a private tutor. It walks the student through a series of exercises, where in each exercise, Solfy presents to the student a digital score, sings a reference Solfege from the score, prompts the student to record himself performing, and gives him colourful and easy to understand feedback on his performance.

The software includes levels of difficulty, each level containing 26-28 progressive lessons. Game-like elements and fun musical accompaniments are integrated in the drilling procedure. It supports class-based learning by keeping records of all the exercises. A teacher assigns drills for home-practice and can then monitor his students' progress by listening to their drills and viewing the feedback they had received. In addition, Solfy is a self-learning tool, suitable also for the very collaborative parents.

Solfy incorporates high quality singing synthesis for playing the *reference* Solfege, and innovative *artificial intelligence* for analysing the student recording and providing him with visual (and aural) *feedback*.

A pilot with 30 teachers and 800 students has been running this year in several public schools. We plan to extend the pilot and to evaluate Solfy's contribution to music education by comparing the success of students who have been using Solfy to those who have not.

W-246

## Scaffolding Strategies for the Teaching of Music Composition

*Houw Ping Lau*

### Abstract

This workshop aims to share a series of scaffolding strategies in the teaching of music composition to upper secondary school students (13 to 16-year-olds) in Singapore, and will discuss how each strategy could be designed with and without the use of notation (e.g. midi stems; graphic materials) to enable teachers to apply differentiated strategies in the classroom and prescribe tasks based on the music literacy standards and preferences of individual students.

While the design of the strategies would depend on considerations such as the objective(s) of the lesson, as well as students' interests, areas for development and abilities, the goals of these strategies, which are bite-sized in design, generally aim to:

- address students' lack of confidence in beginning and developing a composition using one to two musical ideas
- allow students to master techniques in an "atomistic" way (Lupton & Bruce, 2010) and focus on handling each music element one at a time so that they could learn to control and appreciate its expressive possibilities to its fullest extent
- allow students to comprehend larger principles of composition (e.g. change, continuity, contrast and musical direction) in localised contexts, such as phrases and a section of music
- allow students to experience small successes before they attempt larger-scale writing

After a presentation of tasks designed using strategies (a) – (c) outlined below, participants would have the opportunity to design a task using one of the strategies based on a score provided at the workshop:

- a. "Guided scores" are scores that have *some* given musical and non-musical (e.g. guidance in the form of text) materials. Some suggested parameters of design, reflected in the order of allowing most to least student autonomy, include:
  - Provision of a layer (e.g. chord progressions) but removal of another layer (e.g. melody) for students' creative inputs
  - "Fill-in-the-blanks" where students could imitate and adapt given materials
  - Guided instructions to suggest possible creative directions and decisions students could take
  - Provide options (e.g. chord substitutions) for students to try out for themselves and select
- b. Error correction: to correct inaccuracies related to notation, note and chord spellings, voice-leading, chord choices and others.
- c. Flexible instrumentation: adapting an instrumental phrase or section for another instrument to understand the capabilities of musical instruments adapted for.

The strategies shared are meant to be non-tradition/genre specific, so that students could apply these strategies in a variety of styles that they may choose to write for.

SYM-119

## Training Music Teachers in the Information Age

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*Zhoukou University, China*

### Abstract

The rapid development of the information age is profoundly changing the lives of human beings. With the increasing application of information technology in the field of education, human learning methods and educational forms are also undergoing revolutionary changes. Thus, the questions are that 1) does the field of music education also confront with the impact of information technology? And 2) what are the basic abilities the music educators need in the information age? The relevant topics relating to these questions are broad, including core abilities of music educators, creative models of music teacher training programs, and the multiples roles that music educators played to support students to create their own music lives in the information age.

Although the concept of "Core Competencies" proposed by the Organization for Economic Co-operation and Development and the idea of "New Liberal arts" proposed by the Hiram College in the United States have given useful suggestions for students literacy and curriculum integration, the directions and methods of training music educators in the information age need to be discussed by music educators themselves.

Scholars from Mainland China, Hong Kong, Macao, Taiwan, and the United States will share with you the experience, achievements, problems, and solutions relating to training information-based music teachers from these countries and regions, and discuss the requirements for music teacher in the information age.

Discussion topics

1. The basic literacy of music teachers in the information age: information, innovation, interdisciplinary and research literacy.
2. Curriculum model of music teachers in the information age: flipped classroom, integrated classroom etc..
3. The basic role of a music teacher in the information age: instructor and creator of music life.

4. The impact of information science on research data sharing in music education studies.
5. Curriculum development and evaluation of informatization of music education.
6. Problems of On-line Teaching Faced by Music Faculties during the National Lockdown due to Coronavirus in China.

Keywords: information age; music teacher quality; curriculum model; multiple roles;

Directions, methods, problems, and solutions of training music teachers in the information age are the topics needing to be discussed.

SYM-133

## **The 21<sup>st</sup> Century Classroom and Beyond: Student-Centered Learning and High-Tech in the Music Classroom**

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*Curiel, Cecilia*

*Liaoyuan Bilingual School, China*

### **Abstract**

Innovation in the education has accelerated in the past couple of decades with significant impacts on classroom structure and tools. In particular a transition from teacher-centered to student-centered learning environments and the integration of student choice. These teaching theories have been celebrated by popular teaching models such as the International Baccalaureate and demonstrate high efficacy in student learning. These strategies are also notorious for the demands they put on educator's time and resources. New education technologies have shown their ability to relieve some of this strain on educators particularly in the field of music education and inquiry-based learning. However, it is important to understand the role of these technologies in classroom as tools and aids in the education process meant to supplement and not replace the part of a teacher. This paper is intended to evaluate the role of these technologies as aides in the new teaching landscape of student-centered and inquiry-based learning in order to provide insight into the classrooms of the future. In particular this paper will evaluate them in the context of International Baccalaureate (IB) framework. IB was chosen as the framing for this paper as it utilizes and encourages these teaching theories as well as being one of the most commonly used international education frameworks.

This paper has been developed as a literature review. Papers used to compile the analysis of digital tools were selected for relevancy to search terms and published within the last 15 years in order to create a current and comprehensive review of the technologies available to enhance instruction in the context music education. The results of this analysis suggest that though these digital tools may aid in developing students' knowledge, understanding, and skills within music and do provide a resource for the inquiry process integral to IB and many other student-centered approaches to learning these tools do not substitute for the interactive and guiding roles played by the physical presence of a teacher in the context of music education. Students still rely on instructors to structure the process and direct them toward useful and appropriate tools for conducting their inquiry.

SYM-164

## **Possibilities and Alternatives in the Pandemic: Music Education in Hong Kong, Japan, Korea, and Taiwan**

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*Tadahiko Imada*  
*Hirosaki University, Japan*

*Pan-Hang Tang*  
*The Education University of Hong Kong, Hong Kong*

*Joo Hyun Kang*  
*Korean National University of Education, the Republic of Korea*

### **Abstract**

This Panel discussion is focused on the change of music education during the pandemic of COVID-19 in various Asian regions. The content refers to the “*Exploring Possibilities and Alternatives in a Changing Future*”, the theme of 2021 APSMER symposium”. Researchers from Hong Kong, Japan, Korea, and Taiwan would illustrate how music educators react to this challenge in their regions during the pandemic. As well, the panellists would discuss the possibility, challenge, and other new issues in music instruction.

In Hong Kong, the COVID-19 disease was first found in late January 2020. All schools were closed in mid-February until May. Since then, schools have adopted online teaching alternatively with face-to-face lessons. For music teachers, online teaching is totally new. Practical and ensemble training, which are very important to students’ musical development, are very difficult to go online. Public practical examinations, including the Hong Kong Diploma for Secondary Education Music Examination, are forced to cease.

In Japan, this COVID-19 crisis has exerted a great influence on music education in Japan due to the occupation of such activities as singing and playing instruments at the elementary and secondary music classrooms. This unprecedented situation, however, would doubtless force some teachers to rethink their predilection for music composed by professionals assuming imaginary audience and stage; the commodification of music by the entertainment industry and so on, and help them to see some alternative activities based on creative music making.

In the Republic of Korea, music educators have taught music in-person or via online depending on the social distancing levels. They had to re-organize or change learning content and music activities, and provide individual and collaborative music activities in a different way than before. It was very difficult to make music together at the same time in online music classes. While this pandemic situation continues, music educators have been making various attempts for more effective music teaching and learning in this new normal era.

In Taiwan, the pandemic has not been as serious as in other countries and schools still conduct conventional face-to-face classes, yet based on the idea of “preemptive preparation”, teachers in all levels of schooling are asked to practice and be familiar with various on-line teaching platforms. Although the pandemic seems to be possibly an accelerator of on-line

teaching and learning, several music learning activities such as group music making and ensemble, face their limitations of practicing in the on-line environment.

SYM-181

## **Different Perspectives on the Future of Inclusive Music-Making in the Asian Pacific Region:**

*Hoi Ying Stephanie Chan*  
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*Chi Ying Lam*  
*Royal College of Music, London, United Kingdom*

*Ang Mei Foong*  
*Department of Music, Faculty of Human Ecology, Universiti Putra Malaysia*

*Graham Sattler*  
*Independent researcher, Australia*

*Phil Mullen*  
*Independent researcher, United Kingdom*

### **The Hong Kong Perspective**

#### **Abstract**

In Hong Kong, inclusive education is concerned with educating all students, primarily to cater to students who have special educational needs [SEN] in a comprehensive manner. Studies have reported success in raising teachers' awareness of inclusive education principles. However, the commitment of individual teachers to the implementation of inclusive practices in their own classrooms varies. There is a lack of support and continuous training for educators and facilitators. In this round table session, we aim to provide an overview of the current policy, practices and problems concerning inclusive education in the music classroom setting. Recommendations to improve the current practice of educational policies based on problems raised will also be discussed.

### **Musical Inclusion for the People with Parkinson's Disease During the Lockdown Caused by COVID-19: a Malaysian's Perspective.**

#### **Abstract**

One of the consequences of the Covid-19 pandemic was the country's lockdown with the new normal "social-distancing" being mandated. This might have worsened the management of some chronic diseases such as Parkinson's Disease (PD). PD is a chronic neurodegenerative disease in which the symptoms of the disease worsen over time. Apart from the prominent motor problems, studies also noted that the quality of life (QoL) of the People with Parkinson's Disease (PwP) deteriorates significantly with increasing disease severity. The impairment in the QoL often causes PwP to social withdrawal and social isolation, leading to higher possibilities for PwP to develop neuropsychiatric disorders such as anxiety and depression, as well as causing caregivers' distress. A tele-based music programme was designed for the PwP aiming to encourage social engagement and to instil

positive living. This presentation reports the preliminary findings of the reception of a trial tele-based music programme on psychosocial wellbeing in people with PwP.

Keywords: Parkinson's Disease, Psychosocial Wellbeing, Tele-based Music Programme

## **Access and Equity to Inclusive Group Music-Making in Non-Metropolitan Australia**

### **Abstract**

It is increasingly acknowledged that an individual's engagement in participatory arts activity contributes to their cognitive, social, and personal capability - with qualities of self-regulation, identity and resilience frequently apparent. Music is the art-form in which every child and adult can engage, regardless of age, mobility, physical stature, language, cultural background, geographical location, physical, psychological or mental capacity. Every child and adult deserves the right to make and experience music, and to be guided and facilitated in doing so. Effective, meaningful group music participation requires no pre-existing skill or experience; however it does require effective leadership that includes experience and skill in inclusive pedagogy, performance practice, communication, and entrepreneurship. Metropolitan Australians have greater, supported access to participatory music activity than those living in non-metropolitan settings and this research focuses on locating, identifying and celebrating opportunities for equitable access to quality group music making activities for a diverse range of children and adults living outside the resource-rich metropolitan centres in Australia.

## **The Asian Pacific Community Music Network (APCMN)**

### **Abstract**

The APCMN was set up in Beijing in 2010, as an off-shoot of the ISME commission for community music activity (ISME CMA). It was set up by the late Steve Dillon, Professor Kari Veblen and Professor Brydie Leigh-Bartleet with the intention of foregrounding discussion of what community music could mean in the region, bringing people together and developing future programmes of community music activity. Since its inception there have been 4 seminars, Brisbane in 2013, Tokyo 2015, Auckland 2017 and Hong Kong 2020. These have featured presenters and delegates from more than 10 countries across the region. In addition there has been a publication, *Community Music in Oceania: Many Voices, One Horizon*, published in 2018 by the University of Hawai'i press. In this round table presentation I will build on interviews with three of the seminars chair to look at the impact, reach and future of the network.

Keywords Community Music, Musical inclusion.

SYM-258

## **Student Agency in Collaborative Composing**

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### **Abstract**

The term “student agency” continues to be at the forefront of educational discourse around the world. In music, personal agency and musical agency are central issues for all music learners. Student agency refers to an individual’s feelings of self-determination in a particular context—how much control an individual feels over his or her own circumstances and ability to act. Wiggins et al. (2006) emphasize that learners must know “their ideas are valued and central to their learning process” (p. 90). Learning music is an interactive, meaning-making process through which learners construct their own meaning through the lens of their prior experiences. In music learning, Kondo & Wiggins (2015) noted the presence of agency amongst young learners through collaborative problem solving in the form of (a) kinesthetic movements, (b) ways of playing instruments, (c) musical communication with peers, parents, and teacher, and (d) in their performances. These forms of musical agency in young learners insinuate the vital connection between learning music and musical agency.

In this panel discussion, 3 current elementary music teachers will present their first-hand encounters of musical agency within their classrooms. They will discuss these findings in the context of the theoretical framework explained above and will provide a teacher-researcher’s perspective relevant to agency in the music learning process.

Each teacher has developed an original lesson plan around the composition “The Clock Orchestra”, which is a 1-min. composition following the hands of an analog clock.

Presenter 1

Elementary school music teacher (6th grade)

Collaborative composition by using Japanese instruments “Toki no Ohayashi”

Presenter 2

Elementary school music teacher (5th grade)

Collaborative composition by using I-IV-V-I (C-F-G-C) chords

Presenter 3

Elementary school music teacher (5th grade)  
Collaborative composition by using “Togaton” (Filipino instrument)

Presenter 4&5  
Agency and Self-determination

Discussion  
How can teacher nurture student agency?

Conclusion



## ***Full Papers***



## **The Values of Integrating Project-Based and Collaborative Learning in Professional Training**

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### **Abstract**

The concept of Collaborative learning and School as Learning Community can be integrated to make professional training culturally meaningful especially in 21<sup>st</sup> century. These concepts cultivate professional training to provide rich and meaningful experience to music education students. Collaborative Music Community Project was developed to provide experience for music education students to apply theories into practice effectively. This study was aimed to find how Collaborative Music Community Project could 1) infuse collaborative learning virtues among 32 undergraduate and ten graduate music education students and 2) enrich sense and meaning of sharing to the music learning community in the area. Using Design Thinking Process including Empathize, Define, Ideate, Prototype, and Test, college students conducted panel discussions, specified needs, designed six 45-minutes rotating sessions, created lesson plans and teaching tools, rehearsed in microteaching sessions before launched the sessions with school graders. College students with diverse instrumental and music teaching background collaborated in peer sharing along with advisor's co-mentoring guidance in order to ensure that they were ready to give clinic sessions to school graders, who will perform in a concert at the end of rotating sessions. The qualitative data by means of personal response and reflection were gathered by individual and group interviews whereas collaborative behaviors were observed and documented. Quantitative data collected by questionnaires showed school graders' appreciation toward the project. Interview records showed that both undergraduate and graduate students actively participated in a collaborative learning environment throughout the process. Sense of responsibility to music community was introduced in a real-life situation making the emotional attachment and positive memory. Findings implied that the project was an effective approach to merge undergraduate and graduate music education students to collaborative learning. Undergraduate students learn practical and management skills from graduate students while graduate students needed hand on support from undergrad students. College students grasped the meaning of how to teach and how they can contribute to the class and community. Primary and secondary students were inspired and motivated by the project. School directors and music teachers appreciated the process of cooperative workshop sessions as well as the final open-house concert product. Implications to professional music teacher training includes applicable collaborative action plan and responses and suggestions from participants.

*Keywords:* project based learning, collaborative learning community, music education, professional training.

### **Introduction**

To prepare young music student teachers for 21<sup>st</sup> century schools, music education curriculum in higher education's courses and activities had to be planned, designed, and implemented to balance well between education theoretical knowledge and competency practice. According to Thailand National Qualification framework (TQF), music education undergraduate program

in year 2020 was a five-year program of study: four years for course work and one year for the practicum or pre-service teaching. While the credit hour of the course works varied from one university to the others which ranging from 156 -169 credit hours, the practicum teaching had to be no less than 24 credits. The practicum was usually designed and organized to be at the last year of the program, where students completed all of the courses. There are three groups of universities in Thailand that offered degree in music education namely: Teacher colleges Rajapat University, Research Universities, and universities under ministry of culture. The characteristics and the aim, vision, objectives are slightly different. Teacher colleges had a priority in educate as many student teachers who are competent in teaching all schools. Research universities focused on the academic ability in research and innovative teaching. Universities under ministry of culture concerned on preserving national and traditional heritage. Not only the proportion of class lecture and field practice, but also the instructional strategies among the three groups of universities depended upon their curriculum objective.

For Chulalongkorn University, which is one of the research universities in Thailand, the fifth year undergraduate students had to complete two full semesters of practicum teaching in two different schools to gain variety of teaching experiences after four years of lectures and instrumental lessons. Field experiences were sparingly sprinkled throughout the semester hoping that students would make connection between what they had learned and what is happening in actual school setting. Although teaching aids hours allowed students to become acquainted to school environments with school teachers as mentors, the real setting barely provided specific music instructional challenges or problems for them to solve or manage. A well-designed teaching activity, with both school teachers and college professors' mentor would help novice teachers exceed well and overcome their fear as well as better balance school students' value of music activities (Udtaisuk, 2016).

### *Project-Based Learning*

It is crucial for students to be knowledgeable and be confident in their teaching competency when approaching their practicum semesters, therefore hands-on activities were combined in the program of study as either extra-curricular or curricular activities. These activities ranged from microteaching in pedagogical classes to teaching aids hours in school setting. When teaching requires many skills such as communication skills, thinking skills, presentation skills and problem-solving skills, project-based learning approach can be applied to foster and practice students' teaching competencies in many areas. The strong aspects of project-based learning is learning by doing in actual music classroom setting and integrating knowledge from all areas to create a real contribution to the public. In this study students were learning along the process of conducting a music community project, while university teacher was fully engaged by facilitating and mentoring in a scaffolding manner during the pre-arranged learning activities.

### *Collaborative Learning Community*

The essence of creating public product in project based learning aligned well with school as learning community concept, where sense of responsibility to music community was introduced in music curriculum activity. Along with sense of responsibility, sense of sharing, caring, and helping people in the community is crucial to music education professional training of music teaching. Collaborative learning was also integrated in the pre-designed task project. Collaborative learning was shown to benefit students from primary, secondary, to higher education level. (Barkley, Cross, & Major, 2014; Chad, Culver & Teniell, 2018; Johnson,

Johnson, & Smith, 1991). The concept of Collaborative learning and School as Learning Community were then integrated to make professional training culturally meaningful especially in 21<sup>st</sup> century. These concepts cultivate professional training to provide rich and meaningful experience to music education students.

Collaborative Music Community Project was developed to provide experience for music education students to apply theories into practice effectively. This study was aimed to find how Collaborative Music Community Project could

- 1) infuse collaborative learning virtues among 32 undergraduate and ten graduate music education students and
- 2) enrich sense and meaning of sharing to the music learning community in the area.

## Methodology

This study used qualitative research strategies where qualitative data arrived from multiple sources both primary and secondary, verbal and non-verbal, written and non-written. The aim of this study was to inspect how project-based learning can effect undergraduate and graduate students' collaborative virtues, attributes, and behaviors. Inductive reasoning played role in analysis where the researcher tried to discover how project-based music activities can nurture students' collaborative behavior. Case study was this research design where rich data within and across the case allow the researcher to have insight understanding of how a case functions within the real life context (Creswell, 2013; Yin, 2009)

The case study design provides researchers with insights and understandings of how a case functions within an authentic and real- life context with detailed description (Creswell, 2013) Community participatory approaches to research rely on contextual constructs of meaning, case study methods reveals complexity and particularly of phenomenon and offer accounts of context-specific knowledge that is needed to further professional knowledge and expertise. Case study involved with how a case function within authentic and real life and it offers context-specific knowledge to further professional knowledge and expertise.

Intrinsic value is to develop theoretical knowledge for other settings (Stake 1994, Tellis 1997). Although the study's result must be interpreted within the context, the findings can be applied into related environment where diversity can perfecting the achievement of shared goal.

In this study a sequence of five weeks were carefully designed to compress the application of field experiences of a 16-week lecture course for fourth year undergraduate students in music education. The course is a compulsory course in music education's professional development, in the title of analysis of curriculum. This course aimed to provide knowledge and applications about how to analyze and create any music curriculum in different possibilities. The instructor planned to combine class lecture and a meaningful field experience to connect tacit knowledge of instructional and educational theories with its application in semi-structured real life teaching situation. Throughout the entire project-based called *Big Brothers Big Sisters Collaborative Community Project*, and undergraduate students were given a task to provide series of six short music learning opportunity for year 4 to year 9 children in an international school, so that they have meaningful experience and appreciation toward Thai music. Six clinic sessions needed to occur simultaneously in a 45- minute time frame, followed by a quick rehearsal, then a final midday concert at the school.

In order to be both content-based and competency-based in the same course effectively and efficiently, concept of *Design Thinking* was implemented throughout the six-week project. Five design thinking steps specified each week's major tasks accordingly, starting from *Empathize, Ideate, Create, Prototype, and Test*. During week 1: Empathize, both undergraduate and graduate students conducted panel discussions where pre-service teachers from the school were invited in Question and Answer session. This was to specified needs, and conduct need

assessment before designing six 45-minutes simultaneous sessions. During week 2: Ideate, undergraduate students were assigned to brainstorm lesson plans and teaching tools, while graduate students were assigned to plan all of the operational tasks. This is the time where students in both levels split up to six groups of preference or area of musical expertise. During week 3: Create, undergraduate students finalized the curriculum, teaching plan and instructional tools while graduate students finalized their operational tasks in a seminar session. During week 4: Prototype, students in both levels collaborated in microteaching sessions while graduate students played role as a facilitator, undergraduate students played role as a teacher. Academic professor provided constructive guidance in a co-mentoring style in order to ensure that they were ready to give clinic sessions to school graders, who will perform in a concert at the end of rotating sessions. Week 5: Test, on the day of the project, big brothers and big sisters gave six clinic sessions to school graders, who will perform in a concert at the end of rotating sessions. Week 6: Feedback and evaluation, video clips, pictures and exist survey result were shown to allow students to self-assess in a constructive manner. Both graduate and undergraduate students she showed levels of gratitude appreciation both formally and informally. Collaborative support harmonized between the school and the university presented in multi levels and in multi-directional as illustrated in figure 1, where school director and music education director played supervisor role. Classroom teachers and music teachers, along with university professor mentor the preparation and the process. During the clinic session, both teaching aid personnel and graduate students facilitated undergraduate teachers.

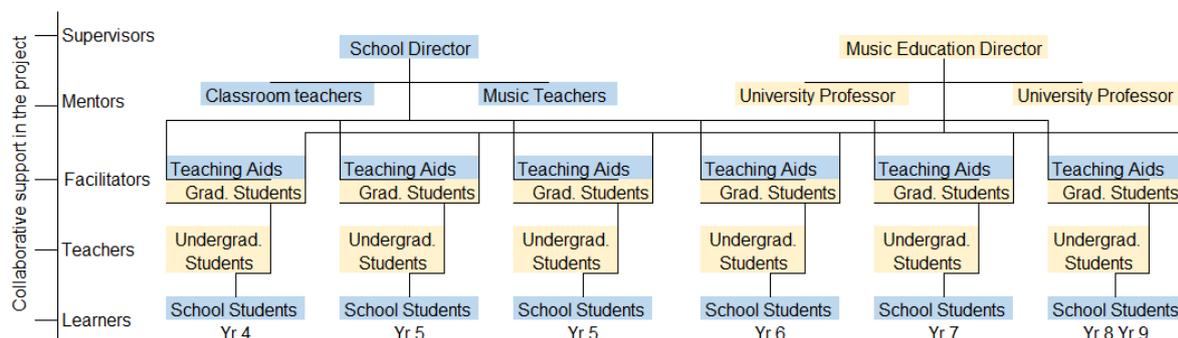


Figure 1. Collaboration between school in community and professional training university

### Data Collection and Analysis Procedure

The researcher used participatory observation during the entire project of six weeks. Observation note collected physical and observational evidences directly in the field, while reflection papers from the students served as another primary source. Thick description of data with supportive details was documented. Semi-structured interviews were informally conducted during the project time. The researcher examine physical trace of evidences to get the complete meaning of the collaborative quality ranging from photographs and video recordings that reflected and recorded students' behaviors directly as well as artifacts such as lesson plans, teaching tools, exist survey results showing the result of collaborative effort. These multiple data sources increased the validity by paralleling with method of triangulation (Creswell, 2013).

Data analysis in qualitative approach refers to how researcher makes sense of the interaction and engagement of the music activities project in collaborative virtues. Data from

observation notes and interpretation from the picture and video taken, combined with interview records were collected to analyze how both undergraduate and graduate students actively participated in a collaborative learning environment throughout the process. During the process of content analysis, details from multiple sources were then organized, analyzed, and classified using coding system. Open coding and axial coding were the tools used to inductively analyze and specify the theme of the data. Coded data revealed three major themes of collaborative quality that each individual hold while project based learning approach was carried. The main three themes were collaborative quality within in each individual, along with peer, and among the group.

## Result

Findings implied that the project was an effective approach to merge undergraduate and graduate music education students to collaborative learning as well as giving sense and meaning and sharing to the music learning community.

### Value of Project-based learning in Collaborative Learning Virtues

The integration of project-based and collaborative learning community in music education professional training contributed to positive quality in both graduate and undergraduate students. Data analysis via coding system also revealed that the project infuse collaborative learning attributes among students in three themes as followed: attributes about self, attributes to peers, and attributes to group as shown in table1. Multiple data sources were from response of teacher observation note (T), undergraduate student responses (U), and graduate student responses (G).

Table 1. Alignment of the 3 themes and criterion with description from sources

Theme 1: Attribute about Self	Theme 2: Attributes to Peers	Theme 3: Attributes to Group
<b>1. Positive Attitude</b>	<b>1. Respect</b>	<b>1. Sense of Unity</b>
growth mindset and happy with challenge (T)	Sense of respect to others (T)	bonding of behavior by modeling positive behav (T)
Teacher understands/ willing to face obstacle (G)	careful communication with points and polit (G)	unity and selflessness (U)
Everyone had a chance to fall and get up (G)	wait to listen to others (G)	Aim for the best of all and group achievement (U)
No high expectation for the concert to be perfect (T)	<b>2. Responsibility</b>	Community centered/ social mindedness (U)
<b>2. Positive Emotion</b>	careful communication with points and polit (G)	Bonding between undergrad and grad student: (U)
Fun to join the group activities (U)	responsible for Individual and group (G)	collab in lesson plan checking (G)
eye-opening experience (U)	submit work with quality (T)	Everyone share the same goal (G)
Love the school and the response from the stu (U)	<b>3. Helping &amp; Caring</b>	Learning by doing together (G)
Good experience at a real school (U)	support for other (U)	<b>2. Active Team Player</b>
experiences from grad students help (U)	listen and flexible openminded (U)	put my best effort into the work (T)
<b>3. Autonomous</b>	when have control then not controll freak (G)	be patience and tolerance (T)
Independence from norms & build uniqueness individu (U)	<b>4. Empathy</b>	all learner are activated (T)
free to lead and follow (U)	No need to assign but all are for all (U)	active thinker and doer (T)
<b>4. Self Esteem</b>	with full awareness of other (G)	Care for equality in social contribution : Positio (U)
real affection of self esteem by small social ac (T)	<b>5. Sympathy</b>	United and teamwork (U)
Gain sense of accomplishment (G)	mindful to help and care in all tasks (G)	make my best effort in making tools and props (G)
<b>5. Proud Pride</b>	<b>6. Devotion</b>	<b>3. the work or project</b>
get a specific work, proud of myself and my gr (U)	Devotion to tasks both individual and group (T)	sense of shared ownership of the project (T)
challenging task of 6 lesson plan (U)	<b>7. Trust</b>	proud of myself and my group (U)
Everyone feel proud when the project is completed (U)	Good to have older students sharing sessio (U)	work hard to get real result (G)
Small task is proud and taking the responsibility serio (U)	Appreciation of help from grad students (U)	
<b>6. Engagement</b>	Feel secure from teacher's support (U)	
secure meaning and task (T)	challenge in an explanation part (G)	
constant full alert/ be ready to take charge (U)	Freedom with onsite support (G)	
Willing to give a hand in every small steps (G)	<b>8. Sense of belonging</b>	
<b>7. Perseverance</b>	less stress and willing to go together (U)	
make several revision to perfecting the teachii (U)	Feel ok to ask for help (G)	
be ready to face the obstacles (G)		

Regarding attributes about self, seven qualities were found: 1) positive attitude 2) positive emotion 3) sense of autonomous 4) sense of self-esteem 5) sense of pride 6) engagement, and 6) perseverance. In terms of attributes to peers, eight qualities were found: 1) sense of respect 2) responsibility 3) helping and caring 4) empathy 5) sympathy 6) devotion 7) trust 8) sense of belonging. Attributes to group covered 1) sense of unity 2) active team player 3) sense of ownership. Some of these attributes are aligned with Seligman's positive psychology PERMA (Seligman, 2011).

### Sense and Meaning of Sharing to the Music Learning Community

There are multiple dimensions of sharing and meaning throughout the course of the project, starting from the preparation, the process, to the evaluation. The sharing within the college students major in music education both undergraduate students and graduate students and the college professor. In order to create a positive teaching experience that will offer meaning to novice teachers, according to Seligman's PERMA theory (2011), the meaning of the experience comes from serving a cause bigger than ourselves. Meaning also plays an important role in expressing the purpose of life. In this case, helping young music learners in the community fulfill the meaning of teaching, caring, and sharing.

The objective of the project itself is to serve music to the community. The project was also designed to help young professional observe, learn, and practice serving others in many dimensions. At the beginning, not only the institutional collaboration between the school and the university laid as good foundation, but also the personal cooperation between the school music teachers and music education professor played an important part in planning and foreseeing the possibilities of an effective collaborative project. Details regarding number of students in each grade, students' music knowledge and skills of each level, instruments and facilities allow both school teacher and college teacher to find the most efficient way to conduct the project. While two college teachers arranged the scope of the plan with school music teacher, the undergraduate students studied details of the school and students by asking questions from the senior students who completed their practicum at the very same school. This allowed them to self-directed their learning through discovery. After acquired enough information, undergraduate students brainstormed to shape the meaning and the style of the project. They compared their competency with what content they needed to teach and through which music skills to carry the music. Accordingly, they divided themselves into six groups of three Thai music groups and three western music groups to fit along with clinic sessions of school students. During the entire project undergraduate students and graduate students had opportunities to practice good social skills and social attributes in a constructive environment. The interactions were collaborative and meaningful because everyone played important role in helping school graders to be succeed in the final public performance. Sharing has meaningful value because it is in a real setting with real school graders or with real undergraduate students. Although sharing and helping occurred in many directions, the bonding and sharing between the older to the younger ones and from the younger ones to the school graders directly contributed to the healthy cycle of professional training.

### Graduate Students Share to Undergrad Student (Input of the positive energy)

Teacher assigned one or two graduate students to each clinic session group to play a role as facilitator and helper. Graduate students were assigned to cover all of the operational and managerial tasks of the project such as time keeper, class attendant keeper, or classroom technical management. As a result, the less experienced teachers learned practical, management, and problem solving skills from observing the more experienced, while the more

experienced acquired hands-on support from the young ones. Comments, advise, suggestion, solutions were given from mentor, graduate students, and friends with positive psychology.

### Undergrad Students Share to School Students (Output of the positive energy)

Undergraduate students were assigned to cover all teaching tasks. With consulting sessions for each clinic sessions, undergraduates had to apply knowledge from courses to create lesson plans. School graders were not only learning music actively, but they were inspired and motivated by the clinic session led by their big brothers and big sisters. Undergraduate students, acted as clinic session teachers appreciated the positive process in the teaching sessions as well as the final open-house concert product. Multiple sources of information includes children performance, facial expression, body language, verbal and non-verbal language, children music illustrated positive outcomes that affected novice teachers in a meaningful way.

### Discussion and Conclusion

It is also important to consider the role of professional trainer and how to mentor in the process. Effective project-based that fostered collaborative qualities in college students may include following teaching techniques 1) constant mentoring to help solving the problem 2) open opportunities and freedom in creativity 3) always give specific task to overachiever 4) brainstorm goals and objective clearly accepted to set true meaning of the project 5) deliberate task tailored to each individual by freedom of choice 6) praise and positive or constructive comments 7) summarize accomplishment using growth mindset perspective.

Collaborative Music Community Project was developed to provide experience for music education students in both undergraduate and graduate levels to apply theories into practice effectively. This study found how Collaborative Music Community Project infuse collaborative learning virtues among 32 undergraduate and ten graduate music education students. Coding system collected and organized collaborative learning attributes into three themes, namely attributes about self, attributes to peers, and attributes to group. Furthermore sense and meaning of sharing to the music learning community in the area was found to be in multi-levels and multi-dimension. Experiences of sharing had meaningful value because it is in a real setting with real school graders or with real undergraduate students. Although sharing and helping occurred in many directions, the bonding and sharing between the older to the younger ones prolonged to weeks and years after the project. This also confirmed the value of integrating project-based and collaborative learning into professional training

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## **A Comparative Study of Piano Programs at University-Level Institutions in China and the United States**

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### **Abstract**

There is a growing trend of Chinese piano students choosing to pursue their higher education in the United States. Elite music institutions in the U.S. are also seeking and recruiting a large number of Chinese pianists. Considering that the increasing Chinese pianists pursuing higher education in the U.S., it is important for enhancing the understanding of what are the similarities and differences in these two countries' post-secondly piano education. This study aims to promote a greater understanding of university-level piano programs in both countries through examining their piano-related degree offerings, audition requirements, curriculum requirements, and core course offerings. A total of 20 university-level institutions (N = 20) were selected in the U.S. (n = 10) and China (n = 10) as the sample institutions. Results indicated that although institutions in both countries have similar audition requirements, the institutions in the U.S. have a broader review process for admission. While all the institutions had a similar structure in their curricula, the balance of required credits in each area was noticeably different. Overall, institutions in the U.S. focus more on the major area than Chinese institutions in both undergraduate and graduate programs. In addition, the structure of the core course offerings is also very similar. Findings explain the following possible motives for Chinese pianists to move to the U.S. to pursue their higher education: 1) seeking a terminal degree, 2) being able to complete the master's degree in a shorter time, 3) receiving greater focus on the major area coursework.

*Keywords:* piano performance programs, higher education, piano students, international study

### **Introduction**

As we work and study in our increasingly globalized society, there is a growing number of international students who choose to pursue higher education in the United States. Researchers have found that 30-50% of the student population at leading music institutions in the United States are Asian or of Asian descent (Choi 2013; Wang 2009). As an essential program in music schools across the United States, piano programs continue to attract numerous Asian students pursuing their education (Brand 2001; Williams 2002). Among these Asian music students, there are many Chinese pianists, who often begin their training at a very young age and are successful on the concert stage in their homeland. These individuals still choose to further their musical training in the United States (Lin 2016; Yang 2009). Wakin (2007, para.14) claimed in *The New York Times* that "The talented Chinese have become a bonanza for music schools, where they are raising the technical bar and joining the already robust ranks of Koreans, Japanese and Taiwanese".

There have been a number of researchers who have compared the pre-collegiate piano education between China and the U.S. and outlined the differences and similarities from three different angles: (1) teaching materials (Peng 2016; Yang 2015), (2) music reading (Peng 2016), and (3) teaching behaviors and learning styles (Benson and Fung 2005; Comeau, Huta and Liu 2015; Lin 2016; Mahamuti 2013; Shen 2016). While researchers have compared Chinese and U.S. piano education at the pre-collegiate level, the literature regarding the piano study in China and the U.S. at the post-secondary level is scant. The scant research on music performance programs may be attributed to the artistic nature of musical performance, which

has different points of departure from other academic disciplines (Tomasi & Vanmaele, 2007). Exploring this topic may help us understand the growing trend of Chinese pianists move to the U.S. for their higher education.

Having received the bachelor's degree in China and furthered studied in the U.S. to get the master's and doctoral degree in piano pedagogy, the author eventually accepted a piano faculty position in a Chinese university. With the first-hand experiences of studying and teaching in the university-level piano programs in both China and the U.S., the author has a unique perspective and develops suppositions regarding these two countries' post-secondary piano programs. Considering that the increasing Chinese pianists pursuing higher education in the U.S., it is important for enhancing the understanding of what are the similarities and differences in these two countries' post-secondly piano education.

Therefore, the purpose of this study was to investigate and compare the piano programs at university-level institutions in China and the United States. Five specific questions were developed: (a) What types of piano-related programs are offered at the bachelor, masters and doctoral levels in both countries? (b) What are the admission and audition requirements for the piano performance degrees in both countries? (c) What are the similarities and differences of the curriculum requirements for the piano performance degrees between the two countries? (d) What are the core course offerings and how many semesters of these core courses do the students take within the piano performance programs? (e) What are the possible factors that influence Chinese piano students to study abroad in the U.S. for their higher education?

## **Methodology**

### *Participants*

For the purpose of this study, the target university-level institutions in the U.S. and China were accredited by the National Association of School of Music and the Ministry of Education of the People's Republic of China respectively. They have established piano departments and currently offer both undergraduate and graduate piano degree programs. As a result, 28 institutions in the U.S. and 19 institutions in China were found that were meet these criteria. In order to select the more comprehensive and reputable piano performance programs among the 28 target institutions in the U.S. and 19 target institutions in China as the sample institutions for this study, three experts in the field of piano performance from each country were asked to rate the targeted institutions on a scale from 1 to 10 (1 = least reputable, 10 = most reputable) according to the following criteria: 1) This institution has a high reputation in piano performance and offers comprehensive piano performance programs. 2) The piano performance programs attract and recruit high quality piano students. The average of the three experts' ratings was calculated and the top 10 target institutions in each country were determined to be the sample institutions in this study.

### *Dependent Measure*

The researcher created a data collection sheet to gather information from each sample institution. The data collection sheet contained four sections that directly address the research questions. The first section summarized information regarding piano degree offerings at the bachelor, masters and doctoral levels. The second section listed the audition requirements for the piano performance degrees at the undergraduate and graduate levels in each country. The specific repertoire and testing requirements of each individual program were indicated and the generalized information between the two countries were compared. The third section collected data regarding the curriculum requirements of each piano degree program, including

the credit hours of the total degree programs, major area, supportive music courses, general education, recitals/research project and other. The last section of the data collection sheet listed all core courses that were offered in the piano performance programs. This section of the data collection sheet collected the number of semesters required for each core course from each sample institution. Additionally, the summarizing table was used to present the comparison of the range, the Mean (M) and Standard Deviations (SD) of each core course out of the sample institutions between the two countries.

### *Procedures*

The data for this current study was collected from a variety of sources, which included the university websites, handbooks for undergraduate and graduate students, as well as informal telephone calls and email exchanges with university personnel. It was collected and categorized according to the research questions in the data collection sheet. The categorized data was presented descriptively and was analysed to determine the similarities and differences in piano performance programs in post-secondary institutions between China and the United States.

## **Result**

### *Piano-related degree programs offering*

The piano-related degree programs offered in higher education have various tracks and emphases, which may include but are not limited to performance, pedagogy, and collaborative piano. Within the sample institutions (N = 20), all the institutions in the U.S. (n = 10) offer piano performance degree programs from the bachelor's up to the doctoral level. The vast majority of the institutions (90%) offer collaborative piano programs at the master's and doctoral levels. Some of the institutions offer piano pedagogy degree programs at the bachelor's (10%), master's (60%), and doctoral (40%) levels. In contrast, although all the institutions in China (n = 10) offer piano performance programs at the bachelor's and master's levels, only one institution—Central Conservatory of Music—offers a piano performance doctoral program. No institution offers piano pedagogy or a collaborative piano program at the doctoral level. More than half of the selected institutions (60%) offer piano pedagogy and collaborative piano programs at the master's level.

### *Admission and audition requirements for the piano performance degrees*

The admission and audition requirements of ten universities from each country were reviewed and analysed. In China, students are required to pass the annual national college/graduate school entrance exam conducted by the Ministry of Education as well as the live audition conducted by the music department of the specific institution. In the U.S., students are required to submit application materials including SAT/ACT scores, transcripts, recommendation letters, resume, pre-screening recordings etc., and finally complete the performance audition. In the U.S., the live audition is not required but highly encouraged in most institutions. In China, a live audition is mandatory. The audition may contain two to three rounds, taking a few days to complete. Prospective students must pass each round in order to move on to the next round of the audition.

Often in both countries, in order to fully assess the applicants' performance abilities, prospective students are required to prepare a recital program containing music with contrasting styles and from various historical periods. The institutions in China and the U.S.

have similar expectations for their prospective students regarding the audition requirements. These commonalities include requirements for students to have solo piano performing experiences and a mastery of skills for performing various piano works. The most obvious difference regarding the music styles was that Chinese institutions give students the options of choosing from Western music and Chinese piano music for auditions. Some institutions even require applications to select and prepare repertoire in the category of “Chinese solo piano work”. The emphasis of the musical styles/periods is slightly different in the audition instructions between the two countries. This is reflected by the percentage of the institutions that require the applicants to prepare certain musical styles/periods in their audition instructions.

### *Curriculum Requirements for the Piano Performance Degrees*

The researcher was able to collect and review the piano performance degree program curriculums, which included nine institutions in the U.S. and four institutions in China. The curriculum requirements of piano performance programs in both countries have a similar structure which comprise of courses in the five categories: main area, supportive music courses, general education, recitals/research project, and other. The length of study in the master’s degree program is different between the two countries. The total credit hours required for this degree in Chinese institutions is 50 to 56, which is higher than the institutions’ requirements in the U.S. (30-36). Therefore, while the piano students in China usually complete the master’s program in three years, most students in the U.S. complete their master’s programs in two years. Table 1 summarizes the curriculum information gathered from both countries’ piano performance degree programs. There are three sections in this table, which are divided according to the degree types—bachelor’s, master’s and doctoral degrees. In order to compare the curriculum requirements between countries, the Range, the Mean, Standard Deviation and Percentages (%) of required credit hours among the sample institutions within each country were calculated.

### *Core Course Offerings*

Within the 20 sampled institutions, the information of nine American institutions and four Chinese institutions were accessible at the time of the data collection for this study. Overall, the piano program core courses offerings are structured similarly between the two countries. All the sample institutions offer common core courses including applied piano lessons, keyboard/piano literature, piano pedagogy, piano accompanying, chamber music/ensemble, and recital(s) etc. However, Chinese institutions provide optional courses including “Chinese piano music” and “history of piano art” in the bachelor’s programs and they provide courses such as “piano performing styles,” “piano and orchestra,” and “Chinese piano music” in the master’s programs. Institutions in the U.S. provide different course options such as “functional piano” and “duo piano”. Table 2 displays the comparison of the core course offerings in piano performance programs between the two countries. The most obvious commonality is that “applied lessons” are the most crucial part in the curricula. “Piano literature” and “piano pedagogy” are the other two important core courses in both countries’ piano performance programs.

Table 1: The Comparison of Curricular Requirements for Piano Performance Degrees

		China (n = 4)				U.S. (n = 9)			
		<i>Range</i>	<i>M</i>	<i>SD</i>	<i>%</i>	<i>Range</i>	<i>M</i>	<i>SD</i>	<i>%</i>
<b>Bachelor</b>	Total	130 to 151	139.5	8.7	100.0	120 to 131	122.9	4.6	100.0
	Major area	27 to 38	31.2	4.1	22.4	40 to 64	52.3	7.7	42.6
	Supportive courses	24 to 58	42.8	15.6	30.6	25 to 45	35.2	6.9	28.6
	General education	42 to 64	50.5	9.8	36.2	24 to 42	33.1	6.9	26.9
	Others*	0 to 25	15.0	12.3	10.8	0 to 6	2.2	22.7	1.8
<b>Master</b>	Total	50 to 56	52.0	2.8	100.0	30 to 36	32.3	2.2	100.0
	Major area	12 to 30	20.5	7.6	39.4	12 to 24	16.7	3.7	51.7
	Supportive courses	10 to 16	13.0	2.6	25.0	6 to 18	10.4	4.4	32.2
	Recital(s)/Project(s)	-	-	-	-	1 to 6	3.8	2.1	11.7
	General education	4 to 12	6.2	3.8	12.0	-	-	-	-
	Others/Electives†	8 to 16	12.2	3.3	23.6	0 to 10	3.4	4.1	10.5
<b>Doctoral</b>	Total	-	-	-	-	52 to 66	59.4	6.6	100.0
	Major area	-	-	-	-	12 to 32	24.1	8.3	40.6
	Supportive courses	-	-	-	-	8 to 27	16.8	6.9	28.3
	Recitals/ Projects	-	-	-	-	6 to 24	12.2	7.6	20.5
	Others/Electives†	-	-	-	-	0 to 19	6.3	7.2	10.6

Note. an \* designates other courses such as professional practice, thesis, electives etc.; a – designates none listed as credit hour requirements in the curriculum guide; a † designates general education courses such as foreign languages, political science, practicums, elective courses etc.

Table 2: The Comparison of the Core Courses Offerings in Piano Performance Programs

Degrees	Core courses	China (n = 4)				U.S. (n = 9)			
		$\Sigma$	<i>Range</i>	<i>M</i>	<i>SD</i>	$\Sigma$	<i>Range</i>	<i>M</i>	<i>SD</i>
<b>Bachelor</b>	Applied lessons	4	8		0.0	9	6 - 8	7.8	0.7
	Piano Literature	4	1 - 3	2.0	0.8	7	1 - 3	2.0	0.6
	Piano Pedagogy	4	1 - 2	1.5	0.6	8	1 - 2	1.9	0.4
	Piano Accompanying	4	2	2.0	0.0	6	3 - 8	4.3	1.9
	History of Piano Art	1	1	1.0	0.0	-	-	-	-
	Ensemble/Chamber	2	2 - 4	3.0	1.4	8	2 - 8	5.8	2.7
	Keyboard skill/Functional	2	1 - 4	2.5	2.1	1	1	1.0	-
	Chinese Piano Music	1	1	1.0	0.0	-	-	-	-
	Number of recital(s)	4	1 - 2	1.3	0.5	7	1 - 2	1.7	0.5
<b>Masters</b>	Applied lessons	4	4 - 6	5.0	1.2	9	2 - 4	3.3	0.9
	Piano Literature	3	1 - 2	1.3	0.6	7	1 - 4	2.3	1.3
	Piano Pedagogy	2	1 - 4	2.5	2.1	4	1 - 2	1.6	0.5
	Piano Accompanying	2	4	4.0	0.0	5	1 - 2	1.6	0.5

	Number of Recital(s)	4	2 - 3	2.5	0.6	7	1 - 2	1.7	0.5
	Piano Performing Styles	1	1	1	0	-	-	-	-
	Piano and Orchestra	1	1	1	0	-	-	-	-
	Ensemble/Chamber music	1	2	2	0	6	1 - 4	2.0	1.1
	Chinese Piano Music	1	1	1	0	-	-	-	-
<b>Doctoral</b>	Applied lessons	-	-	-	-	9	2 - 6	4.2	1.5
	Piano Literature	-	-	-	-	4	1 - 4	2.8	1.5
	Number of Recitals	-	-	-	-	9	3 - 7	4.4	1.3
	Dissertation/Treatise	-	-	-	-	8	-	-	-

Notes: a  $\Sigma$  designates number of institutions; a – designates non listed in the curriculum guide or the data was not accessible

## Discussion

The results indicated that piano-related degree offerings seemed most comprehensive at the master's level in both China and the U.S., because the majority of the sample institutions offer performance, pedagogy, and collaborative piano master's degree programs. While only one institution in China offers a doctoral degree in piano performance, all the sample institutions in the U.S. offer doctoral degrees in piano performance and the vast majority of them offer doctoral degrees in collaborative piano. Therefore, seeking the most advanced degree in piano performance might be an important motivational factor for Chinese pianists to move to the U.S. Establishing and developing more comprehensive piano-related degree offerings is suggested for Chinese institutions. It will be interesting to see whether or how Chinese universities alter their offerings in the light of the resent upheavals regarding domestic and international study.

In general, the institutions in the U.S. have a broader review process for admission. Diverse factors based on the applicant's in-school and extracurricular experiences, academic achievements, and audition performance are all taken into consideration. On the other hand, the selected institutions in China have a narrower review process for admission, working toward a high score on a standardized test is much more important for applicants to Chinese institutions. This might make the admissions process more stressful for students taking the test, as a one-time test score dictates their future.

The results indicated that the institutions in China and the U.S. have similar audition requirements. Chinese institutions list their audition requirements with more specific categories. Institutions in the U.S. tend to list the audition requirements with more generalized instructions especially at the graduate level. In addition, Chinese institutions have greater emphasis on the virtuoso etudes than the institutions in the U.S. Although the researcher did not collect the information regarding the number of applicants, informal observation suggests that Chinese institutions may have stricter audition requirements because they have a larger pool of prospective students.

Furthermore, Chinese institutions require those applying to undergraduate programs to pass music theory, sight-singing, and ear-training entrance exams in order to be admitted. Additionally, prior to inviting students to campus for a live audition, they require those applying to graduate programs to pass political science, foreign language, music history, and music theory entrance exams. In contrast, the institutions in the U.S. require the applicants to submit a personal statement, recommendation letters, and pre-screening recordings for admission. As assessment in music performance can be subjective and challenging, the scores of the entrance exams are more objective compared to only auditioning students for piano solo

performances. These entrance exams not only help institutions to evaluate students' overall musicianship and recruit students with stronger qualities, but also help students to get relatively equal opportunities to be admitted in the piano performance programs. An admission system, which combines solo performance with entrance exams in music related subjects, is suggested by the researcher to be applied in institutions that are offering comprehensive programs that attract a large number of prospective students.

Although both the Chinese and the U.S. institutions had a similar structure in their curricula, the balance of required credits in each area was noticeably different. Overall, institutions in the U.S. focus more on the major area than Chinese institutions. Therefore, students who study in the U.S. may receive more professional training directly related to piano performance. The smaller proportion of credits in the main area in Chinese institutions may imply that these institutions focus on cultivating students' general and comprehensive knowledge rather than training their skills only related to piano performance. This finding contradicted Wang's study in 2001, which indicated that one of the problems for Chinese music institutions was the neglect of academic courses. This contradiction may be attributed to the reform of the curriculums in China during the last two decades. The prospect of receiving more professional training emphasized on piano performance may be another motivation for Chinese pianists moving to the U.S. for higher education.

The structure of the core course offerings is very similar between the institutions in both countries. Applied lessons, piano literature, piano pedagogy, accompanying, and recitals are the core courses that commonly appear on the institutions' curriculums in both countries. In general, the arrangement of core course offering in the U.S. institutions' curriculums is more fluid and accommodating, since students have more options to design their own study plan according to their personal situation. In contrast, the Chinese institutions have a more rigid arrangement in the core courses requirement especially for the applied lessons. Students have to follow a certain arrangement to complete their study in the degree program. When students study in a university-level institution with a rigid, standard curriculum, they must complete the degree within a certain amount of time. On one hand, it is encouraging as the institutions can make efficient use of their educational resources to meet the needs of as many students as possible. On the other hand, students may be unable to fully digest the knowledge, master the skills, and become independent musicians.

The present study investigated the characteristics of piano programs from 20 representative sample institutions in China and the U.S. These institutions have top ten most comprehensive and reputable piano programs among the 28 target institutions in the U. S. and 19 target institutions in China. Similarities and differences were identified, compared, and contrasted. However, only four Chinese institutions' piano performance program curriculums and core course offerings were accessible at the time of the data collection for this study. On one hand, it showed that some of the Chinese institutions' official websites were not established well or updated regularly, results in the researcher were unable to access this information. On the other hand, although the researcher contacted current students and faculty members in the sample Chinese institutions to request the information regarding their piano programs, this information was still inaccessible. Because this information was unpublished or still was under revision.

Findings explain possible motives for Chinese pianists to move to the U.S. to pursue their higher music education. Reasons may include: (1) seeking a terminal degree—doctoral

degree—in piano performance; (2) being able to obtain the master’s degree in a shorter time; (3) receiving greater focus on the major area coursework.

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## **Inclusion for Students with Visual Impairments in the Music Classroom of Mainstream School in China**

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### **Abstract**

Driven by China's Learning in Regular Class(LRC) inclusive education policy, more and more visually impaired (VI) students choose to study in mainstream schools. Under this premise, music education at mainstream schools will also become in demand as the proportion of VI students attending regular classes increases. Of course, quality improvements will also be required. Therefore, the purpose of this research is to use this essay to further explore the possibility of improving the quality of music education for VI students in mainstream schools. Finally, this research drew the following research conclusions from a comprehensive analysis of literature: The Chinese government is the guarantee for mainstream schools to implement the LRC. This includes increasing educational funding and labor remuneration for mainstream schools and teachers with special educational needs. Mainstream schools are the key to improving the quality of music education for VI students. They should develop a mechanism for on-the-job training of music teachers and establish a long-term effective incentive mechanism, and they should also actively implement the resource classroom or itinerant teacher model in accordance with the status quo. However, although the government and mainstream schools both play a vital role, they are not the essence of effectively promoting teachers' music teaching practices and achieving positive teaching results. What really improves the quality of music teaching for VI students is the quality of interaction between teachers and students. That is, music teachers must be clear about the differences in learning needs and teaching methods between VI students and sighted peers, and increase the participation of VI students in music courses, music activities, and music-making in mainstream schools through continuous music practices, so as to promote their social inclusion on a broader level. Overall, music teachers are an essential and core component to improving the quality of music teaching for VI students in mainstream schools, but schools and governments should support them vigorously and continue to make corresponding policies and adjustments. Thus, as far as the Chinese government, mainstream schools, and music teachers are concerned, the three parties should continue to reflect and implement more positive changes.

*Keywords:* visually impaired students, learning in regular class, mainstream schools, music education

## **Introduction**

In China, special schools and mainstream schools are two important forms of special education for visually impaired (VI) students. The difference between the two is that special schools are segregated education, while mainstream schools are inclusive education, which means that VI students become part of regular classes for able-bodied children and adolescents. But which learning environments are better suited for VI students to receive music education? There are no standard answers. According to the research of Baker and Green (2017, 2016), VI musicians have no obvious preference based on their past learning experience because they believe that these two learning environments have their own advantages and disadvantages. For example, some VI musicians have said that they have more opportunities for music participation and social opportunities in mainstream schools, but they are still a minority there, so there is still a certain degree of social isolation; similarly, others have said that they have more adequate music learning and teacher resources in special schools, but they also lack more extensive music participation opportunities and social experiences there, which in turn also causes a certain degree of social isolation. In short, no choice is an absolute advantage, and usually the outcome of the choice depends on individual circumstances.

When it comes to inclusive education, there is already a trend of education reforms around the world in response to the inequality in the education system, and it advocates that schools should reduce their injustice and inequality, and provide everyone with appropriate educational resources (Booth & Ainscow, 1998). Indeed, the same is true in China. Since the mid-1980s, China has applied the concept of inclusive education to special education, and has begun to promote the inclusive education model of Learning in Regular Classrooms (LRC) that meets the needs of localization (Deng & Poon-McBrayer, 2004); on the one hand, this model is an important way for disabled children and adolescents to receive compulsory education and guarantee their educational rights; on the other hand, it is also conducive to the country's promotion of equity in education and promotes the better integration of disabled children and adolescents into social life. For this reason, China has clearly stated in the latest revised regulations that although general and special schools exist at the same time, when the physical or sensory conditions of disabled students are mild to moderate and have certain learning capabilities, local governments should give priority to general schools [LRC] (State Council, 2017).

In short, driven by LRC policy in China, more and more disabled students (including VI students) choose to enter mainstream schools for learning. According to data released by the Ministry of Education (MOE) (2020b, 2015), the number of disabled students enrolled in regular classes from 2014 to 2019 has increased annually from 209,100 in 2014 to 390,500 people in 2019. Under this premise, music education at mainstream schools has also become in demand with the increase in the proportion of VI students attending regular classes. Of course, quality improvements will also be required. Therefore, this essay aims to further explore the possibility of improving the quality of music education for VI students in mainstream schools.

## **Promotion of LRC's inclusive education policy in China**

At first, LRC's inclusive education model in China was designed to provide government-supported policy arrangements for children with special educational needs, so that they can receive education in neighboring schools with their able-bodied peers (Deng & Poon-McBrayer, 2004). Specifically, regarding the initial formulation of the LRC policy, it combined the concepts of "mainstreaming" and "inclusion" in Western countries, and it was also based on the educational needs of a large number of disabled children in China (Deng & Poon-McBrayer, 2012); that is to say, compared to the provision of free and appropriate education for children with special needs advocated by Western countries, the LRC policy formulated by the Chinese government in the mid and late 1980s was based on large numbers of disabled

people and lack of special schools leading to the low enrolment rate of disabled children; meanwhile, the Chinese government also had great practical difficulties in establishing special schools and special education resources. Thus, in order to solve the problem of disabled children's right to education, the Chinese government has formulated an LRC policy that meets the needs of localization.

Although, as Piao (2004) said, the emergence of this educational model is a comprehensive pragmatic solution, more factors need to be considered in order to truly develop and improve. China has promoted LRC's policy for more than 30 years now, and this model has become one of the main entrances for VI students. To further promote this policy, the MOE (2020c) has constructed specific information on recent documents, such as improving the resource support system for LRC, implementing special care for teaching, and enhancing teachers' special education professional abilities. This also means that (i) localities must continue to implement government requirements; and (ii) the next step is to further improve the management level and the quality of education associated with LRC (MOE, 2020a). Overall, the increasing number of disabled students entering mainstream schools also shows the importance of the government continuing to promote fair and quality inclusive education, which will promote the better integration of disabled children and adolescents into our society.

### **Problems in music education for VI students in mainstream schools**

The Chinese government has formulated laws and policies in recent years to ensure that disabled children and adolescents have the same right to education as able-bodied peers. However, whether the actual teaching field of mainstream schools can achieve the initial goal set needs to be observed and considered. Baker and Green (2017, p. 56) stated that "whilst policy was well-intentioned, it was often not implemented in practice". Similarly, MOE (2020a) also pointed out that due to the LRC model being still in the developmental stage, the overall level of work is not high and the problem of insufficient development is also more prominent. Based on this, a comprehensive literature analysis of this essay found that low quality teaching is the main problem currently existing, and teachers are a key factor in affecting LRC's quality.

The MOE (2020a) clearly pointed out in the latest guidance that the low professional level of teachers is one of the main problems regarding LRC at this stage. Similarly, it can be found in literature that the low quality of music teaching in mainstream schools leads to the lack of social inclusion for VI students to a certain extent compared with special schools, which is the most frequently mentioned aspect in this research field; and the main reason for the low quality of music teaching in mainstream schools is that music teachers lack the knowledge and skills for music teaching for VI students (Baker & Green, 2017, 2016); for example, teachers' lack of music teaching experience for VI students has led to the lack of Braille music teaching in mainstream schools; this is very important for them because a certain degree of musical literacy allows them to work with sighted peers in music-making, and it is also conducive to their future career development and social inclusion.

Additionally, insufficient special care for disabled students regarding LRC is also one of the main problems (MOE, 2020a); it is mainly manifested in that teachers ignore the physical and mental characteristics and special learning needs of disabled students, and the teaching strategies and assessment methods for them are also lacking in pertinence, which in turn leads to lower quality of learning. Regarding visual impairment, it can range from complete blindness to blurred vision, and people may also be born blind or their visual conditions continue to degenerate (Mason & McCall, 2013). Although the Chinese government emphasized that VI students entering mainstream schools should have mild to moderate vision and have certain learning capabilities, "developing a 'toolkit' or all-encompassing 'theory' for teaching VI students was [also] an unlikely proposition" (Baker & Green, 2017, p. 63), because the transmission medium used by VI students with different vision conditions and the accessible format and response time for formal exams are different, such as using

large-print and modified stave notation (visual), Braille music (tactile), or ear playing (auditory); and music teaching for VI students also needs to consider the use of artificial light, language and other sensory systems such as tactile and hearing compared to sighted peers (Baker & Green, 2016; Stakes & Hornby, 2012). Thus, when music teachers ignore the sensory and learning differences between VI students and sighted peers, they may also have problems in formulating teaching strategies and assessment methods, and then hinder VI students' music learning and participation in activities in regular classes.

In short, teachers are the most important participants and guides and are one of the keys to the success or failure of the curriculum. When the teacher lacks the knowledge and skills to teach VI students, and ignores their sensory characteristics to cause problems in the teaching and assessment methods, which will lead to a certain degree of obstacles to VI students' participation in music courses, music activities, and music-making in mainstream schools, then the problems discussed by Baker and Green (2017) will also arise, namely, VI students have problems in self-confidence, identity, music curriculum accessibility, and social inclusion, making them marginalized or segregated in mainstream schools.

### **Suggestions for improving the quality of music education for VI students in mainstream schools**

From the discussion in the previous section, we can find that "equality" does not mean "sameness" in education (Florian, 2008; Baker & Green, 2017). Although China is working hard to protect citizens' equal right to education, the specific teaching methods of VI students and sighted peers differ in implementation, even among VI students. Meanwhile, while teachers are the main cause of this gap, the factors that affect teachers also include mainstream schools and the government. Hence, when discussing ways to improve the quality of music education for VI students in mainstream schools, we must engage in a holistic discussion of music teachers, schools, and the government, and each of them should make the corresponding strategies and adjustments.

#### **Music teachers**

Regarding the improvement of the professional abilities of music teachers in mainstream schools, Deng (2019) stated that the teacher training mechanism should be improved, and compulsory and optional courses related to special education professionals should be opened in the teacher training courses of higher Normal Schools. However, music teachers in mainstream schools have limited time and energy when it comes to professional development, and not everyone can simultaneously learn general and special music education professionally. Additionally, there are also differences in teaching methods between the various VI students. Even if music teachers receive special education professional training, when they face VI students with different vision conditions, their knowledge and teaching experience are still insufficient. Thus, it is necessary for music teachers in mainstream schools to conduct on-the-job training related to VI students' music education. Furthermore, Deng (2019) also mentioned the pre-service and post-service teacher education of Normal Schools and teacher training institutions should systematically incorporate the knowledge of special education into the training of general teachers and the assessment of teacher qualifications. However, not all mainstream schools have VI students, and not all music teachers in mainstream schools need to have music knowledge and skills related to VI students. Therefore, music teachers in mainstream schools may strengthen on-the-job training related to VI students' music education when necessary.

In addition, when dealing with the differences between the VI students and their sighted peers, music teachers at mainstream schools should maintain a positive attitude about learning and growing with their students, and then develop effective teaching strategies and assessment methods on the basis of understanding differences. Indeed, teachers are lifelong learners, so they need to maintain a positive attitude, and constantly reflect and adjust their teaching

content and methods to meet students with different learning needs. However, even if music teachers maintain a positive attitude towards VI students, they still face the tremendous pressure brought about by the above-mentioned "extra" work content (completely different teaching strategy and assessment from teaching sighted peers), thereby having to deal with it in a negative way. So, how do we maintain the enthusiasm of music teachers and guarantee the quality of music learning for VI students within their limited time and energy? Perhaps this will require greater policy help and support from the school and the government.

### **Mainstream schools**

Mainstream schools should develop a mechanism for on-the-job training of music teachers and establish a long-term and effective incentive mechanism. For most music teachers, teaching VI students in mainstream schools is their first teaching experience, so it is unrealistic to require them to have the same level of knowledge and experience as special education experts or teachers (Davis, 2003). Thus, it is important, as mentioned earlier, to strengthen on-the-job training when needed. Under this premise, mainstream schools should establish an on-the-job training mechanism that is suitable for the development of music teachers' special education professional abilities, but they require to consider time and funding. For example, schools can establish cooperative relationships with universities or special schools in local or neighboring cities, and regularly invite special education experts or teachers to give lectures, or regularly plan short-term group training courses for teachers, so as to achieve the maximum benefit within the effective time and funding range. Meanwhile, in order to stimulate the enthusiasm of music teachers to participate in LRC, schools can convert the hours of music teachers' participation in lectures and group training courses into the credits of in-service teachers in Normal Schools for special education courses, and the academic performance and personal development of VI students in mainstream school classes can be linked to the professional title evaluation and bonus allowances of music teachers.

In addition, mainstream schools should also actively implement the resource classroom model or itinerant teacher model associated with LRC, promoted by the Chinese government based on the status quo, so as to alleviate the pressure on music teachers and to ensure quality of learning for VI students. Specifically, although music teachers can gradually master teaching strategies related to VI students through on-the-job training, they cannot withstand such heavy and complicated teaching work in the real environment in terms of time and energy. Therefore, schools should hire special education experts or teachers to assist music teachers in performing relevant teaching tasks. According to the two models currently promoted by the Chinese government, (i) establish resource classrooms in mainstream schools with more disabled students, and allocate full-time resource teachers to assist teachers in providing additional guidance to disabled students, such as learning Braille; (ii) government special education experts or teachers in special schools act as itinerant teachers to guide LRC's work (Li, 2019), mainstream schools should actively implement one of two models based on the status quo. In this way, music teachers have more time and energy to care for VI students, and continuously discover and solve problems through communication, interaction and collaborative teaching with special education experts or teachers, thereby improving the quality of music teaching

### **Government**

The maintenance of the enthusiasm of music teachers in mainstream schools to participate in LRC cannot simply rely on the individual to maintain a positive attitude or rely solely on the incentive mechanism established by mainstream schools. Governments in various parts of China should also favor mainstream schools and teachers that participate in the LRC in terms of education funds and labor remuneration. As mentioned by Wang (2017), the key to truly improving the enthusiasm of teachers to participate in LRC lies in the government's need to improve system guarantees and the economic benefits or social status of participating teachers. Taking Shijiazhuang City, Hebei Province, China as an example, the government has implemented relevant financial support and guarantee policies to promote the

development of inclusive education; with regard to special funding investment, starting from 2016, the Municipal Finance Bureau has increased the municipal special education subsidy from 500,000 RMB to 1.5 million RMB per year; regarding the salary subsidy for teachers, the government has also clearly stated that schools are required to pay special education subsidies based on 15% and special education grants based on 25% of the sum of teacher positions and salary grades (MOE, 2021).

## Conclusion

In China, the government, schools, and music teachers all need to formulate specific and feasible methods to improve the quality of music education for VI students in mainstream schools. Specifically, the Chinese government is the guarantee for mainstream schools to implement the LRC. This includes increasing educational funding and labor remuneration for mainstream schools and teachers with special educational needs. Mainstream schools are the key to improving the quality of music education for VI students. They should develop a mechanism for on-the-job training of music teachers and establish a long-term effective incentive mechanism, and they should also actively implement the resource classroom or itinerant teacher model in accordance with the status quo. However, although the government and mainstream schools both play a vital role, they are not the essence of effectively promoting teachers' music teaching practices and achieving positive teaching results. What really improves the quality of music teaching for VI students is the quality of interaction between teachers and students. That is, music teachers must be clear about the differences in learning needs and teaching methods between VI students and sighted peers, and increase the participation of VI students in music courses, activities, and music-making in mainstream schools through continuous music practices, so as to promote their social inclusion on a broader level.

Overall, music teachers are an essential and core component to improving the quality of music teaching for VI students in mainstream schools, but schools and governments should support them vigorously and continue to make corresponding policies and adjustments. Thus, as far as the Chinese government, mainstream schools, and music teachers are concerned, the three parties should continue to reflect and implement more positive changes.

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## The Development Status of the Credit System in China's Professional Music Education

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### Abstract

Credit system acts as a teaching system in institution of higher education. It was born in the late 19th century in America. Experience 100 years of gradual improvement in practice, it has become the main system and mode in higher education management. In the early 20th century higher professional music institutions in China conducted credit system and in mid-20th century it drew academic year system from the former Soviet Union. In the 80's of 20th century, in order to meet the diverse needs of community's cultural talents, each institution conducted reform on teaching management system and embarked on the road of credit conversion. Professional music education has its special significant which is different from normal higher education, the credit system has its own advantages and specific requirements. Credit system reform in higher professional music education must strive to make the two aspects' advantages and characteristics reach ideal state.

To combine with the particularity of professional music education, it makes analysis on the necessity and feasibility for Chinese senior music institutions to carry out credit reform, on how to overcome barriers of the credit reform of senior professional institutions, it puts forward views and thinking on credit system. Base on analysis on national conditions, it learns from reform essence of western educational system and generates perfect credit system for professional music education to help train more outstanding musicians.

*Keywords:* credit system, professional music education, Shanghai Conservatory of Music

The features of the credit system are to strengthen the purpose, dilute the process, put people first, develop individuality, and adapt to the different characters of students to the greatest extent with a flexible management system. With the popularization of higher education in Mainland China, credit system management has become the mainstream of higher education management systems. The implementation of the credit system in colleges and universities, and the accumulation and conversion of credits, have positive significance in mobilizing teachers and students' enthusiasm, improving students' comprehensive qualities, and cultivating professional talents, etc. (Yan 2015). Founded in 1927, Shanghai Conservatory of Music is the first professional music education institution in Mainland China. Its school system was basically modeled on European music schools at the beginning of its establishment. Faced with the above development trends, its reforms in the teaching system, compared with ordinary comprehensive colleges and universities, was lagging behind, and development entered a certain bottleneck period, which is related to the particularity of professional music education and teaching management.

This joint training model opens up a shortcut for professional music schools to integrate into international higher education. At present, a single professional music performing arts talent is increasingly unable to meet social needs in Mainland China. Cultivating composite performing arts talents who have both artistic performance capabilities and can transform their performance capabilities into theoretical research results through theoretical research will certainly be able to better meet the needs of future society.

Professional music education is different from general higher education, and the credit system also has its own specific requirements. The implementation of the credit system in higher professional music education in the Mainland needs to strive to achieve the ideal combination

of the two characteristics. This article takes the Shanghai Conservatory of Music as an example to discuss the credit system and its macro significance for the credit system teaching management system and the quality assurance of professional music education, and put forward suggestions on the implementation of the teaching system reform of professional music schools in the Mainland.

### **The Development of Credit System Teaching Management in Shanghai Conservatory of Music**

At the end of the Qing Dynasty and the beginning of the Republic of China, China's higher education was in its infancy. About May 4th Movement, a group of educators absorbed western higher education ideas from Japan, Europe and America and applied them to the construction of teaching system. In 1917, the Ministry of Education of the national government issued an order to abolish the university grade system and adopt the elective system (Qu & Tang 1991). In 1918, Mr. Cai Yuanpei took the lead in implementing the system of selecting subjects in Peking University. In 1922, the national government promulgated the New Learning System, which mainly imitated Germany and Japan at that time and stipulated that universities and colleges should adopt credit system.

At that time, almost all art schools / majors implemented the credit system based on the subject elective system. During this period, European and American universities carried out the elective system and credit system actively and most of the founders of these art colleges were early professionals studying abroad, so almost all the modes of running schools were Europeanized. Mr. Cai Yuanpei also started the credit system when he founded the music institute of Peking University. Since there was no standard constitution of the credit system ordinance at that time, the system in this period could actually be regarded as "quasi credit system". In 1931, the Ministry of Education issued the Revised Regulations of Specialized Colleges, which stipulated that "the credit system should be adopted in the courses of specialized colleges, but the credits that students take every semester should be limited and they should not graduate early." (Zhang & Zhang 1997) Further, the credit system was determined as a means of teaching management at the policy level.

Established in 1927, National Conservatory of Music (NCM), the predecessor of today's Shanghai Conservatory of Music, the very first state-run higher educational institute specialized in music in modern China. At the beginning of its establishment, Mr. Cai Yuanpei served as the president and Dr. Xiao Youmei (a German-educated music educator) as the dean of academic affairs. Soon, Dr. Xiao became the president and concurrently the dean of academic affairs. Dr. Xiao was the first generation of professional talents who went abroad to study music. At the beginning of the establishment of the college, he put forward the school tenet of "introducing western music while promoting national music, so as to achieve the goal of connecting the East and the West"(Chen 2007).

At the beginning of the establishment of the National Conservatory, although the scale of running the school was small, the formal organizational regulations, namely, the Overview of National Conservatory of Music (Chen 2007), have been formulated. According to the regulations, the Conservatory was the "the highest-ranking public music education institute directly under the jurisdiction of the Ministry of Education." The administrative structure of the Conservatory basically reflected the educational system equivalent to that of European single subject higher professional conservatory, and the credit system adopted was also roughly similar to that of European conservatory.

In 1929, the National Conservatory of Music was renamed the National College of Music. At this time, the school has formed a relatively stable and reasonable mode of administration, teaching and academic administration management. Dean, Dr. Xiao Youmei strived to build the school into a school with qualified education standard, a school that could cultivate batches

of high-quality musical professionals, and a school that could create achievements to affect the social production.

According to the Overview of National Conservatory of Music published in 1929, the school has repeatedly revised the school system, major settings and teaching system to form a more complete and feasible "National Conservatory of Music General Survey", which determined "to teach music theory and technique, for the purpose of developing music professionals"(Chen 2007), set up a preparatory course, an undergraduate course, and set up a normal course and elective course. Preparatory courses were for undergraduates. Undergraduate program provides advanced theory and techniques, aiming to cultivate music professionals. Its setting was the same as today 's department, with four groups of theoretical composition, piano, violin and voice opera (Chinese national music in 1930). Freshmen enter the first year of major without groups. The normal course was designed to train music teachers, and the elective was for people who have studied music and intended to continue to specialize in one. The courses of each subject were divided into compulsory and elective subjects. Courses were counted in credits. Preparatory students must complete 60 credits, and undergraduate and normal students must complete 100 credits before graduation. The duration of the preparatory course was at least two years, and the undergraduate and normal courses were at least three years. The first semester after admission of a freshman was the trial period. If the director believed that the student was not suitable for the relevant major during this period, the student could transfer to another group, another subject or other school. Table 1 shows courses for the preparatory, undergraduate, and normal and the respective credits in 1929.

Table 1: In 1929, the Preparatory, Undergraduate and Normal Courses and the Credits Allocation of the National Specialized Conservatory of Music

		Preparatory Credit	Undergraduate Credit	Normal Credit
Common Compulsory Subjects	1. Party Spirit	0.5		0.5
	2.Chinese Language and Poetry	2.5	3.5	4
	3. Chinese Music	0.5		0.5
	4.First Foreign Language (English or French)	6	8	9
	5. General Music	2		2
	6. Harmony	4		4
	7.Preliminary Composition Method	1		1
	8. Chorus	1.5	0.5	1.5
	9. Sight Seeing	1		1
	10.Music Appreciation Method	1		1
	11.Introduction to Music History	2		2
	12.Education			1.5
	13.Teaching Method			1
	14.Orchestra Conduction			1
	15.Main Subjects	20	40	40
	16.Minor Subjects	12	30	20
	17.Elective Subjects	6	18	10
Total		60	100	100

Formal students must choose a main subject (such as theoretical composition, voice opera, piano, cello, violin, etc.), and students who choose theoretical composition, voice opera, or violin as the main subject must take piano as an auxiliary subject. In the "List of Major Subject Credits and Subjects" listed in the "List of Teaching" (1929), the total scores of the six subject groups of the theoretical composition group were all 60 respectively, the credit allocation was determined by the corresponding subject teaching and research division according to the teaching plan. For example, the credits of main subjects of theoretical composition were divided into 13 courses (see Table 2). Other performance subjects (piano, vocal, violin, etc.) were divided into three courses according to the level, each accounting for 20 credits. For the latter, the time required to complete each course depended on the student's own ability. After completing each stage of the course, you must pass the concert exam before you could enter the next stage of study. Undergraduate and normal students needed to get at least two credits of the course to graduate. If students were committed to becoming specialized professionals in their majors, they needed to complete the third stage of the course. In 1930, the three-stage curriculum was more clearly divided into high-level, middle-level, and low-level courses, of which the main subject scores were the most, accounting for 40% of the total, which ensured the compulsory main subjects and their continuity in the number of credits.

Table 2: Theoretical Composition Courses and Credit Allocation

Subject	Credit	Subject	Credit
1.Advanced Harmony	2	2.Musicalform	2
3.Harmony Practice on the Keyboard	2	4.Harmony and Music Anatomy	3
5.Ear Training and Dictation	2	6.Fugue Composition	6
7.Simple Counterpoint	2	8.Research on Masterpieces	4
9.Compound Counterpoint	4	10.Internship of Band Conductor	1
11.Orchestration and Practice	8	12.Free Composition	20
13.Chinese Music Creation	4	Total:	60

Overall, the organizational structure and credit system of the National Conservatory of Music in the 1920s and 1930s reflected the following characteristics:

1. With the continuous growth of the faculty, the curriculum of foundation courses, undergraduate courses, normal courses and elective courses was becoming more and more complete.
2. Clear regulations for the level, breadth and depth of each subject and major were set. This is both the credit rules and the teaching plan, and the two are inseparable.
3. The system combined the particularity of professional music education, and was flexibly implemented according to the different situations set by each major.
4. The full-time teachers (professors) of various disciplines and specialties guided the teaching content and grasp the teaching progress according to the level of the instructor, the student's foundation and learning status when achieving different levels of teaching goals.
5. The teaching management model implemented had a certain degree of flexibility, to a greater extent, to ensure that students chose their majors independently and mastered more skills.

In October 1931, the revised program of organization states, "The school shall establish a baccalaureate program, a postgraduate program, an attached high school, a teacher education high school program, and various electives; the baccalaureate program comprises seven specialties - theory and composition, piano, violin, cello, voice opera, Chinese music, and teacher education." (NCM Office. 1931) The above-mentioned credit system was formed after practical inspection and certification, which could not only meet international standards but also adapted to the actual situation of the society at that time. During the period from 1930 to 1949, the National Conservatory of Music experienced name changes, branch establishments, mergers, and the curriculum settings also changed accordingly. However, the relevant system was still the foundation of the school's teaching system, and only minor adjustments have been made. This did not relate to the "seeking personality development" emphasized by professional music education, and the school was also able to cultivate a large number of "generalists" under the difficult school-running conditions because of the guarantee of the teaching system. Although there were still many deficiencies in the relevant system, many of these practices still have reference significance today.

With the changes of the times, after the founding of New China, the domestic education system was influenced by the scholastic year system of the former Soviet Union, and the teaching system of various higher education institutions followed the scholastic year system of the former Soviet Union. This pattern remained until the Reform and Opening-up in 1978, after the college entrance examination system was restored. At the end of the 1990s, the national education authority repeatedly proposed the idea of deepening the reform of the teaching system and gradually implementing the credit system. After entering the new century, "The National Medium and Long-term Education Reform and Development Outline" (2010 ~ 2020)" proposed to deepen teaching reform, promote and improve the credit system, implement a flexible academic system, and promote the integration of arts and sciences. Nine higher professional music colleges in Mainland China have therefore made corresponding explorations in order to seek a credit management model suitable for the development of their respective college courses.

Each school basically maintained the framework of the scholastic year credit system, sets a scholastic limit for undergraduates (four or five years), and provided a certain number of general and professional elective courses for students to choose from. The scores of elective courses basically accounted for 10 ~ 25%. Professional music colleges began to use the credit system of educational administration to improve the efficiency of educational administration, facilitate students to select subjects online, check points, and keep abreast of their learning. Although professional music colleges were not able to take a quicker step in the reform of the credit system than comprehensive universities or universities of science and technology due to their special characteristics, they had credit system management methods that could reflect their own characteristics.

On the basis of 40 ~ 50 public elective courses were provided to its own students every year, Shanghai Conservatory of Music officially joined the "Shanghai Southwestern University Alliance" in 2003. The Alliance was established in 1994, the members are 19 universities including Shanghai Jiaotong University, East China Normal University, East China University of Political Science and Law, and Shanghai Theater Academy. It optimizes the allocation and full use of existing educational resources through the mutual employment of teachers, interschool choosing the major or second major, the interdisciplinary course, and the sharing of experimental equipment among the member schools in order to achieve reciprocity and mutual benefit, promote the common improvement of teaching quality, school scale and school efficiency.

For students of Shanghai Conservatory of Music with relatively single disciplines, they can choose courses other than professional music education in Joint Institution, which is of great

help to the improvement of students' comprehensive ability and the construction of a compound knowledge system. In practical operation, students electing courses in other schools must abide by the relevant rules and regulations stipulated by various institutions for cross-school elective courses. The credits obtained can be converted into the total points of the elective courses of the affiliated institutions, and the tuition fees are settled independently. Among the joint courses, such as the "acupuncture and moxibustion application" of Shanghai University of Traditional Chinese Medicine, the "broadcasting host" and "radio and television literary director" of Shanghai Theater Academy are widely welcomed by students of Shanghai Conservatory of Music. When the students can guarantee the completion of the professional courses and basic courses of the college, the completion of the second major, the second degree, etc. are fully achievable. This not only reflects the desire of Shanghai Conservatory of Music students to broaden their knowledge structure, but also relatively compensates for the lack of a single type of courses offered by professional music colleges. In contrast, because professional music education has certain requirements on the basis of music, the number of professional music courses taken by foreign students is almost zero, and the Shanghai Conservatory of Music outputs more easy-to-enter courses such as music history and music appreciation.

### **Construct a Professional Music Education Quality Assurance System**

In western thinking, credit system is a systematic way of learning. However, in Mainland China, due to differences in evaluation methods, standards and objectives, without the quality assurance system, credit accumulation system in a conservatory model of music education can't mean effective learning to the students. The quality assurance system is a powerful guarantee for the internationalization of professional music education. Chinese ministry of education has been improving the quality of higher education these years. Through various quality assessments, the quality of higher education has been guaranteed and improved. However, after several rounds of teaching quality assessment, the defects of the national quality assurance system have undoubtedly been exposed. Under the current system, whether it is professional setting or teaching evaluation, it is government-led, government-implemented, and government-approved. This single, top-down, centralized system can no longer adapt to the reform and development of national higher professional music education. Due to different national political systems, the quality assurance system model of European professional music schools is worthy of reference. In order to avoid students just want to accumulate enough credits to graduate and neglect the learning in a scaffolding way, it is imperative to establish a top-down external assurance system and a bottom-up internal assurance system that allow different stakeholders of the institution (such as evaluation agencies, experts, teachers, enterprises, students, etc.) to participate actively.

In short, professional music education needs a flexible credit system to ensure the quality of teaching, and the advantages of the credit system will certainly be more reflected in professional music education. However, the specialty of professional music education requires that the implementation of the credit system cannot only be done the work of setting up courses and selecting courses. By contrast, it needs to ensure the continuity of skill training, the different nature of the different course categories (basic courses and pioneering courses), and the different treatment of teaching and art practice (systematic), etc. problem. According to the different needs of students, drawing on the setting and operation mode of ECTS, this will eventually make substantial achievements in the reform of the teaching system of professional music education in Mainland China.

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## The Significance of “Shigin” in Japanese American Communities: Examining Nikkei Shigin Practitioners’ Traditional Japanese Roots

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### Abstract

#### Background

In today’s global society, an increasing number of people are traveling between countries. The musical and cultural identities of these global citizens have been a growing subject of attention in the music education community. As Japan and other countries become super-aging societies, understanding the rich, lifelong relationship that some people have with music will provide inspiration for the future direction of music education.

#### Prior Work

This is not the first time that researchers have focused their attention on the musical experiences of immigrants. Sean Ichiro Manes (2009) wrote about how a Japanese American Shamisen instructor translated Japanese musical notation into English along with other challenges of teaching Shamisen in the U.S. Jane Southcott & Dawn Joseph (2015) conducted semi-structured interviews with the members of an Italian women’s choir community in Australia during which they discussed the importance of combatting isolation through communal music-making.

#### Objective

The objective of this research is to clearly show what *shigin* musical activities mean to Japanese American communities. The art of *shigin* involves reciting Chinese poetry (or Japanese poetry written in Chinese) called *kanshi*; though this genre of traditional Japanese vocal music originally began in the 19<sup>th</sup> century, *shigin* continues to have many devotees across Japan to this day. This research will focus on the viewpoints of Japanese American participants who are active members of *shigin* poetry groups to determine what meaning people find in *shigin* recitals.

#### Method

We attended several meetings of *shigin* poetry groups in Seattle and Los Angeles between 2017 and 2019; after each meeting and performance, we conducted written surveys (65 people in total) and semi-structured interviews with the participants to determine what *shigin* meant to them.

#### Conclusion

We found that most of the Japanese Americans who practice *shigin* found it to be important and enjoyable in one or more of the following three ways: as a mean of networking through *shigin* performances, as an academic exercise of learning *Kanshi* poems, and as a way of maintaining a healthy lifestyle through vocalization. We also considered how *shigin*’s particular appeal is related to other musical activities.

*Keywords:* *Shigin*, Traditional Japanese roots, and Japanese American Communities.

### Introduction

This paper focuses on the practice of *shigin* that was taken up by members of the Japanese-American community while under confinement in the Manzanar Relocation Center during WWII. This paper has the object of clearly elucidating the characteristics of the musical culture of those Nikkei *shigin* practitioners that took up singing *shigin* as a traditional culture activity and started *shigin* communities that continues to be active today. As the experiences of people

referred to as Japanese Americans is diverse, their respective cultural practices are also diverse. If there is a common thread running through the cultural practices of Japanese American communities, it is likely the circumstance that the cultural practices of the respective Japanese-American communities could not possibly be the exactly same as those practiced in Japan. That is due to the diverse range of factors, such as the relationship the immigrants had with their native country, the experiences of the immigrants in their destination country, etc., contributing to the formation of unique cultural practices within each community. Accordingly, in order to understand the *shigin* musical culture practiced in Japanese-American communities, first, it is necessary to examine the ways in which it *shigin* practices in those communities differs from the way *shigin* is practiced in Japan, and then to explore what factors may have contributed to the generation of such different practices. This paper will primarily focus on three factors: the way people network and form friendships in the community, health, and the study of poems written in the Chinese style of *kanshi*.

## Methodology

The participants in this study were each interviewed for about 30 minutes to an hour during September 29<sup>th</sup> and 30<sup>th</sup> in 2018. The interviews were conducted in the lobby of the event hall in Los Angeles where the *shigin* recital (“*Nichi-Bei shigin taikai*”) was held. The interviews were carried out in a face-to-face format, with two researchers interviewing each participant in the study, and the audio of the interviews recorded on tape. Our methodology involved asking each of the master practitioners who participated in our study to tell us the story of how they came to pursue the practice and mastery of *shigin*, in their own words. However, we also asked specific questions, such as:

- 1) What were the circumstances that presented you the opportunity to start studying *shigin*?
- 2) What do you find appealing and enjoyable about singing *shigin*.
- 3) In your experience, what reasons have caused people to stop practicing *shigin*?
- 4) Do you participate in any other form of musical activity besides *shigin*?
- 5) Were your parents or other family members involved with musical activities?

Regarding the procedures we applied for gathering data for analysis, first asked the participants in the recital to fill out a survey at the event hall. We then adopted the approach of interviewing each of the *shigin* masters (teachers) leading *shigin* groups after WWII that had fostered the preservation of *shigin* practice among Japanese Americans, followed by asking each teacher specific questions relevant to what we could distill from the respective life story they had recounted in the interview. The organizing principle of the analysis we conducted in this study was to center the analysis on the life story of each participant in the study, so our line of questioning did not extend to asking the participants for their opinion on the history of *shigin* among Japanese Americans; however, we plan to conduct a separate study in which we analyze the opinions of the master teachers of *shigin* (those leading groups, etc.) about the history of Nikkei *shigin* communities, the current conditions among such communities, what they think about the future of *shigin* communities in the USA, etc.

## Result

The study's sample group consisted of 61 valid respondents from among the 65 surveys. Even though the number of years of experience they had practicing *shigin* was small, there were only 5 participants who were in their 40s, with the remaining participants (92%) all being senior citizens over 60 years of age. We analyzed the survey responses by cross tabulating each of three respective groups of participants corresponding to their number of years of experience practicing *shigin*: 1-10 years, 11-20 years, and 21 years or longer.

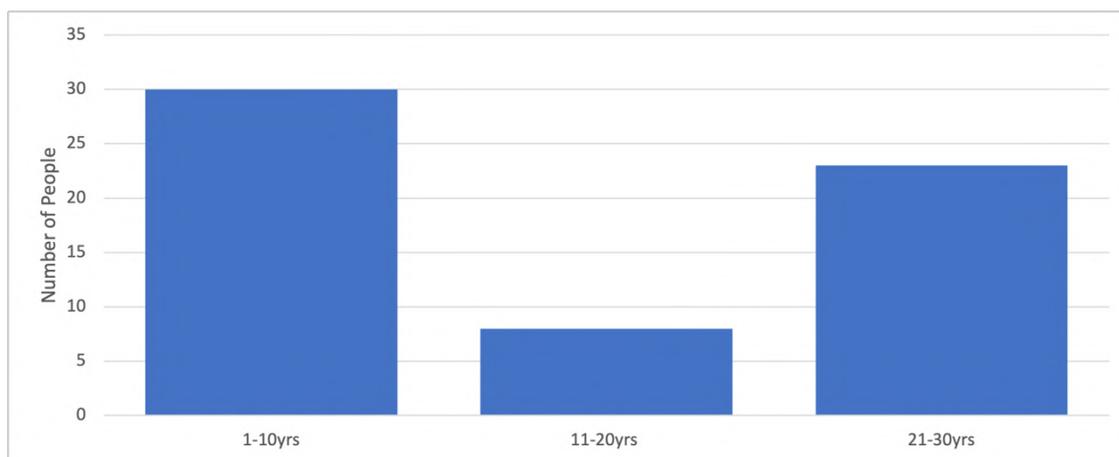


Table1. Years of experience

Regarding the opportunity by which the participant came to practice *shigin*, about 52% had started by being invited by a friend or acquaintance. 18% of the participants started *shigin* practice in order to make friends, and 8% with the object of taking up a traditional Japanese cultural activity. It became clear that the point of entry to *shigin* for about half of the Japanese American subjects of the study was because of the invitation of a friend or acquaintance; however, as can be seen from the cross-tabulation of the breakdown for that group (52%), more than half (59%) of them had had experience with a musical cultural activity other than *shigin* in their past. We understood that the Japanese-America *shigin* groups which have a continuous history since WWII constitute a large community for Japanese-American immigrants. There was a tendency among more than half of those who had started *shigin* to have a favorable disposition toward for music, even in their leisure activities, and it was clear that the household of either the subject or of their family was a household that has a predilection for music.

Next, we analyzed the survey responses to determine what was appealing or pleasurable about *shigin* to the respondents. Roughly speaking, the most prevalent responses as to what was appealing or enjoyable about *shigin* could be broken down into three categories: 1) Networking and making friends, 2) Maintaining a healthy lifestyle, and 3) Studying poetry written in the Chinese *kanshi* style.

When we divided the participants into three different categories of mastery, we did not see any difference due to *shigin* experience. Regarding musical experience apart from *shigin*, 64% of the participants overall had had experience with music other than *shigin*. In addition, as to “family experience with music”, 20% of the participants responded that their families were music lovers and practiced as a hobby or profession. Furthermore, 13% of the participants responded affirmatively to both foregoing questions.

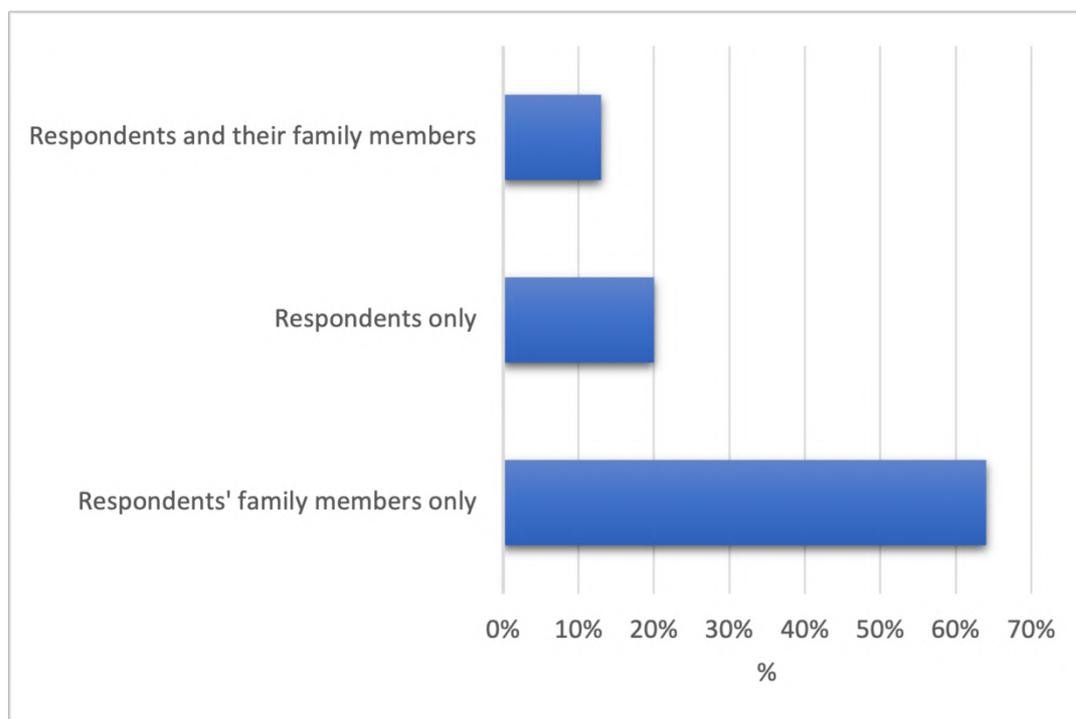


Table 2. Experience with structured music/dance activities

Show the specific results as per the content from the interviews.

### 1) Networking and making friends

#### Case 1: Ken

Born in Hiroshima. His parents returned to Japan from the USA before WWII, and he was born in Japan. Ken was not interred in an internment camp for Japanese Americans. He says, “Since I was born in Japan, does that make me first generation?” He has resided in the US since 1953. His older brother went to the USA first, which enabled Ken to follow, so he left Japan to go to the USA. He subsequently came and went between the Japan and the USA, but his partner was a second-generation Nikkei, so they immigrated to the USA together after getting married.

Ken recounts, “I think I immigrated after I was 20 years old. After living here in the states for about 10 years, a friend invited me and I started practicing *shigin*. At that point in time, there were no Japanese cultural activities to do. There wasn’t even karaoke. Going to a picnic for Japanese who had come from Hiroshima (held by the Association of Japanese from Hiroshima) was about the extent of it. The purpose was not to study traditional Japanese culture. At that point in time, there wasn’t even TV. So I took up *shigin* for fun, because my friends would be there practicing. Basically, the reason I started practicing *shigin* was because my friends were practicing *shigin*. I didn’t join the *shigin* group because I had wanted to pursue *shigin* in particular.”

#### Case 2: Tom

Born in Shizuoka. Tom returned to Japan after WWII was over, but having come from the USA, he didn’t feel comfortable attending school in Japan after returning. So he returned to the USA (second generation returnee to the USA). In the end, he found employment in the USA, so he immigrated. Tom recounts, “A friend invited me. In post-WWII Seattle, there were several *shigin* groups that were each about 100 members strong. At present, there are three. But as for me, I have to say that it is a just a fact that I like singing. I have long continued practicing

*shigin* and going to karaoke rooms, and the reality is that there are not a few people who, like me, have continued practicing *shigin* and going to karaoke rooms. I was invited to *shigin* by someone whom I had become friends with through karaoke.”

## 2) Maintaining a healthy lifestyle

### Case 3: Isao

Isao has lived in Canada as a permanent resident since age 15. Because his father had been a *shigin* teacher, he was familiar with it, but after his father passed away, he lost his connection to *shigin* for a time. He started practicing *shigin* again in 1982, and has been practicing continually for 36 years. At the time, a male friend of his had said to him, “If you join the *shigin* group, I will too,” whereupon he and his friend joined the group. After more than 30 years of practicing, Isao says that he has finally come to appreciate the value of *shigin*: “When I’m singing, it feels very healthy, (omission) and there is something akin to an inspirational dimension to singing *shigin* as well.”

### Case 4: Hiroko

Hiroko started living in the USA upon marriage. She had pursued a variety of interests over the years, but when she began losing her voice as she aged, her doctor told her she needed to practice reading aloud, singing, or some other form of vocalization on a daily basis, and receiving that prescription was what brought her to start practicing *shigin*. Hiroko recounts, “Since I started swimming and practicing *shigin*, it seems like I have gradually started to feel more healthy.”

## 3) Approaching the study of Chinese style *Kanshi* poetry

### Case 5: Dan

Dan moved to the USA due to a work transfer, and settled there after retiring. He states that, “I studied Chinese poetry (*kanbun*) in high school, and my teacher would frequently practice *shigin*. I thought that was awesome. Our teacher didn’t teach *shigin* during his off time, but he would sing for us in class. That left a lasting impression with me,” indicating that he had basically had no life outside his work community before retiring. Continuing his story, Dan states “My wife liked the tea ceremony, and while I also like the *wabi-sabi* esthetic prevalent in the world of traditional Japanese culture, our interests didn’t coincide. Her disposition was more of a static type, and mine dynamic, so in order to combine both our interests, the two of us started practicing *shigin*.”

To answer what was appealing about it, it was like the longer we stayed in the USA, the more we lost touch with the meaning of *kanji* (Sino-Japanese characters), and practicing *shigin* brought that meaning back in a deeply resonant manner that permeating my being.

## Conclusion :

Our findings make it clear that the significance of participating in traditional cultural activities of their native country to the participants in our study of the Nikkei *shigin* community can be roughly described by three key phrases: making friends, maintaining health, and studying Chinese style *kanshi* poetry. There was not a large difference in this tendency between beginners with 10 years or less of practice and masters with 30 years or more; thus, it can be surmised that the participants viewed *shigin* not as a leisure time activity to be enjoyed during a short span, but as an activity to be enjoyed over the long term. In addition, it also became clear from the interviews that there was an intellectually stimulating pleasure expressed in terms that by continuing to study *shigin* for a long time, one could gain a deeper understanding of the poetry.

Because more than half of the respondents to our survey question as to what had brought them to the practice of *shigin* had replied, “the chance to make friends”, it can be surmised that the Nikkei *shigin* community formed by Japanese Americans living as a minority group in the USA had had an impact on in Nikkei society. For Japanese Americans residing in the USA during the 1950s-60s, it cannot be said that there were many opportunities for partaking in a diverse range of musical activity, such as venues for doing karaoke or singing. In this study, we received almost no written responses or comments during interviews of the Nikkei participants to the effect that the participants recited *shigin* with a feeling of nostalgic longing for their native country, but saw a clear tendency among the participants toward the intellectual pleasure derived from a resonance with the philosophical content encountered in Chinese and Japanese *kanshi*, understanding the importance of *kanshi*, gaining a deeper understanding of the Japanese language as well as intellectually studying Sino-Japanese *kanji* characters in a type of academic exercise.

Among the participants who responded that they enjoyed the activity because it helped them stay healthy, we noted an awareness expressed in terms that, “vocalization is connected to health”, and there were cases such as Dan’s, where the participant had started practicing *shigin* in their old age after retiring for enjoyment. Since *shigin* is a “vocalization activity” that can be started without any experience with Western music or the like, it can be said that the threshold to entry is low. However, considering that more than 92% of the participants in this study were 60 years of age and up, and further that more than half of the families of the participants included near relatives with an interest in traditional Japanese music, that some respondents among the participants had themselves had contact with another form of traditional music, it became clear that the participants had been influenced by a predilection for music in their households, which were musical environments steeped in traditional culture.

It is clear from the statistical data that encouraging the practice of *shigin* among the youth is difficult within the Nikkei *shigin* community, which was started by Japanese Americans residing in the USA after WWII as a form of leisure activity for enjoyment. As the situation stands, it will be difficult for Japanese Americans living in the modern world in which music culture has become diversified to retain the connection to this traditional music culture as a leisure activity within the household. Because musical activity in the household is changing with the age in which we live, to provide a connection to such traditional culture, it will likely be necessary to provide educational environments in academic and outreach program settings which afford the opportunity to experience traditional culture, as well as opportunities to encounter the traditional culture in the form of demonstrations and the like performed at traditional matsuri festivals held by the Nikkei community.

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## Professional Music Teachers' Knowledge and Beliefs: Re-Forming Pedagogical Content Knowledge

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### Abstract

The concept of “pedagogical content knowledge” (PCK) was introduced by L. S. Shulman. He specified 7 categories of professional knowledge required for teaching, and defined PCK as the “special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding” (1987, p.8) among them. Though some researchers have argued the existence of PCK, others have supported the notion that PCK is too general of a term and each of the 7 types of knowledge are integral. Furthermore, these frameworks have been used, expanded and challenged by a number of authors in the fields of mathematics, science, social studies, music, among others. Within music education, several researchers have investigated how PCK affects the transfer of instruction and preparation for teaching in a classroom setting. Ogawa and Murakami also examined the professional knowledge and skills of talented teachers, and proposed a transformative model in which PCK, SCK (Specialized Content Knowledge) and SSP (Selecting Strategies in Practice) were shown.

The purpose of this study is to verify our model of organized professional music teaching knowledge. In study 1, 13 experienced music teachers in elementary schools were asked about their music knowledge, understanding and skills. In order to collect the data, a 26 item, 5-point Likert-type questionnaire was conducted. As a result of factor analysis (principal axis factoring with varimax rotation), PCK, SCK and SSP emerged as 3 factors. The majority of the teachers reported SCK (Mean=4.4) and SSP (Mean=4.5) were related to the core of professional music teaching strategies.

In study 2, the responses of 42 university students in a pre-service teacher training course were gathered and compared before and after their teaching practice using the same survey form as Study 1 (adding “Are you able to”). There were significant differences between the before and after teaching practice via the Wilcoxon signed rank test ( $p < .05$ ). All the students recognized the effectiveness obtained by the opportunities of practice. Some evaluated themselves more highly (73.4%) compared to before their practice, while others revealed an unsatisfactory level of detecting their lack of musical knowledge and skills (13.7%).

The results of this study support our theoretical transformative model in which the 3 domains combine, and music experience in teaching practice is extremely beneficial for the development of pre-service teachers' musical knowledge and skills. Music educators should help students organize their training period in order to guide the development of student competence.

*Keywords:* pedagogical content knowledge, specialized content knowledge, selecting strategies in practice, music teacher education.

### Background

In the 20<sup>th</sup> century, the term, Pedagogical Content Knowledge (PCK) was proposed by Shulman (1986). He pointed out what and how teachers teach in school, and also classified 7 types of knowledge: (1) content knowledge, (2) general pedagogical knowledge, (3) curriculum knowledge, (4) pedagogical content knowledge (PCK), (5) knowledge of learners and their

characteristics, (6) knowledge of educational contexts, and (7) knowledge of educational ends, purposes and values. These 7 types of knowledge were defined by Shulman as:

“Within the category of PCK I include, for the most regularly taught topics in one’s subject area, the most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations ---in a word, the ways of representing and formulation the subject that make it comprehensible to others” (Shulman, 1986, p.8).

Namely, Shulman identified PCK as very important knowledge among a teacher’s knowledge base. According to him, these are the bodies of knowledge that distinguish the teaching profession from other professions. Since then, the concept of PCK has been adopted in all fields including music education. A lot of music researchers have investigated how PCK affects the delivery of instruction (Millican, 2009, 2012; Raiber & Teachout, 2014), rehearsal preparation (Wacker, 2016), applied music teaching (Emerich, 2015; Villarreal, 2010) and in-service teachers’ observations (Hurrel, 2013). Many of them have explored the topics related to PCK, in spite of the fact that PCK was very widely used by them.

Since 2015, we have begun to develop a tool in order to collect quantitative and qualitative data in terms of talented teacher knowledge. Many valuable music class videos of discussions around professional knowledge were analysed and pre-service teachers’ written responses to the videos were collected. This was due to the fact that beginning teachers possess a limited PCK (Nason, Chalmers & Yeh, 2012; Nilsson, 2008), and teaching experience is significantly related to the development of PCK. Our study revealed that there are some differences between PCK and Specialized Content Knowledge (SCK), and that many talented teachers use a variety of SCK related children’s musical abilities. In addition, we have examined the professional vision for instrumental teaching of talented teachers and analyzed them (Ogawa & Murakami, 2020). As a result of an exploratory factor analysis of their responses (using Promax rotation), 2 factors relating to SCK emerged. After that, we revised the tool, new questionnaire for music teachers in which the feature of teachers’ PCK, SCK and SSP (Selecting Strategies in Practice) become appear.

In study 1, our revised tool was used to collect the opinions from experienced music teachers in order to prove the validity for PCK, SCK and SSP. In study 2, university students’ responses for pre-and-post educational training were gathered. The following research questions guided this paper: (1) What do experienced music teachers think about the PCK, SCK and SSP? (2) How do university students respond to the PCK, SCK and SSP? (3) What do university students think when they were required to attend teacher training? (4) Are there any differences between the before and after teacher training periods?

## Study 1

### Method

#### Participants

Participants were 13 talented music teachers (10 female, 3 male) from elementary schools in Okayama, Hiroshima, and Tokyo. Their ages ranged from 41 to 53 (Mean=44.2). All of them have experienced special music class as a music teacher, and also a classroom teacher in elementary school over 20 years. They have been teaching music for an average of 22.3 years, and they played one or more instrument(s).

#### Materials

Participants were required to answer a questionnaire consisting of 26 items, applied in 5-point Likert-type form: 1=definitely not, 5=absolutely yes. The questionnaire used in this study was revised from that used in Ogawa and Murakami (2020), the basic structure was similar to that

which was used in the previous study. Participants were informed that their information would be kept confidential, and their participation was voluntary.

Instructions given to participants were following: The questionnaire list 26 teacher skills and behaviors. All items were generated from several open-ended interviews and related research literatures. We would like to know how experienced teachers, like you feel about each item. Read and check all items integrity. If you have any questions, please let me know.

## Results

The majority of the participants reported most items as being “absolutely important/effective” or “very important/effective”. Factor analysis (principal axis factoring with varimax rotation) confirmed that the 26 items could be reduced to 3 factors: PCK, SCK and SSP. As evident in Table 1, the pattern is clear and interpretable; the majority of loadings exceeded .50. and only 2 cross-loadings exceeded .30.

Experienced music teachers believed that they should listen and respect the students’ opinions. They agreed that class management and class discipline are important roles as a music teacher. Many of them also have confirmed the students’ active learning is based on group activities. For SCK, participants indicated that their most useful knowledge and skills were about professional performance, conducting an ensemble and a choir, analyzing musical pieces and giving music history. Although some participants reported the importance of musical creativity, responses to this item had a larger variance than the other items in the study (Mean=3.11, SD=1.24). Furthermore, regarding SSP, most of them responded that they should show and explain the well-chosen strategies in order to make practice for each student. They also thought appropriate evaluation and assessment gave students good motivation.

Table 1. Means and results of factor analysis for the 26 items

Item descriptions	Mean	F1	F2	F3
<b>PCK (Pedagogical Content Knowledge)</b>				
It is important to listen to the opinions and thoughts of students.	4.51	<b>.87</b>	.09	-.23
It is important to give accurate advice when a student fails.	4.55	<b>.82</b>	.07	-.08
It is important to decide the discipline of the class.	4.42	<b>.81</b>	-.04	.21
It is important to organize the class well.	4.44	<b>.79</b>	.05	.24
It is effective to teach each other in a group.	4.09	<b>.75</b>	.21	.06
It is effective to discuss in a small group.	4.12	<b>.68</b>	.30	.07
It is important to motivate students.	4.58	<b>.64</b>	-.03	-.13
It is important to be happy with your students when they are successful.	4.39	<b>.63</b>	.06	.04
It is important to support what students want to express.	4.16	<b>.57</b>	.09	-.17

<b>SCK (Specialized Content Knowledge)</b>				
It is important to have professional knowledge and skills regarding performance.	4.67	.03	<b>.84</b>	.41
It is important to have professional knowledge about music history.	4.27	.33	<b>.82</b>	.26
It is important to have professional knowledge about musical pieces.	4.49	-.04	<b>.80</b>	.37
It is important to analyze musical pieces.	4.74	.34	<b>.79</b>	.24
It is effective to conduct an ensemble, and/or a choir.	4.72	.17	<b>.78</b>	.20
It is important to perform as a role-model for students.	4.55	.25	<b>.69</b>	.29
It is important to detect students' errors and correct them.	4.51	.21	<b>.66</b>	.28
It is important to have special musical creativity.	4.09	.10	<b>.57</b>	-.04
<b>SSP (Selecting Strategies in Practice)</b>				
It is important to show a practice plan for each student.	4.47	-.07	.24	<b>.82</b>
It is important to explain how to practice for each student.	4.61	.02	.09	<b>.81</b>
It is important to strengthen students' weaknesses.	4.52	-.05	.39	<b>.79</b>
It is important to explain what to practice for each student.	4.43	.02	.09	<b>.78</b>
It is important to assess students' progress accurately.	4.62	-.11	.25	<b>.77</b>
It is important to expand the world of music for students.	4.34	.10	.11	<b>.66</b>
It is important to make students' practice enjoyable.	4.51	-.16	-.03	<b>.65</b>
It is effective to listen to the performances of famous musicians with students.	4.46	-.21	.23	<b>.62</b>
It is important to perform together with students.	4.23	.34	.28	<b>.58</b>

The Pearson correlation value indicates that SCK and SSP correlate closely (0.58,  $p < .001$ ). No correlations between PCK and SCK (0.34,  $p < .001$ ) or PCK and SSP (0.29,  $p < .001$ ) were present.

Following are notable comments made by 3 female teachers to be considered:

“I usually tell my students structured practice is the most important thing. To analyze, organize and concentrate is important, when you practice.”

“How to organize yourself in a structured way? The professional music teachers should guide their students’ practice schedules and show some successful learning strategies.”

“You have to take your time to think and plan in order to improve your performance. Doing practice without thinking is meaningless.”

These responses demonstrate that knowing efficient and effective learning strategies is being perceived as an indispensable component of an expert’s professional knowledge. In this sense, some categories of SSP such as showing and explaining practice have a close relation with SSP.

## Study 2

### Method

#### Participants

Ten male and 32 female students at Okayama University, aged 19 to 21 years old (Mean=20.3) participated. Although all of them were in a pre-service teacher training course, their majors varied. Seven participants were music education majors, and others consisted of majors in: Japanese, science, mathematics, English, fine arts, early childhood, and so forth. Some of the female students have taken private music lessons in the past, and want to teach at elementary schools or junior high schools in the future.

#### Materials

All participants were asked to rate their feelings and thoughts about their educational teacher training on a questionnaire using the pre-and-post method. All of them have a month-long teacher training session in May or September at the attached elementary school to Okayama University. However, we had shortened the period in 2020 due to the COVID-19 pandemic. Before and after the training period, they were required to submit their questionnaires using a Google form. The questionnaire was similar to that utilized in Study 1. We replaced the beginning phrase of each item, “It is important/effective” to “Are you able to ....?”. We also added one item for comments about their preparation in becoming teachers. The completed responses were returned by 40 students (response rate of 95%).

### Results

There was a significant difference between the before and after training period via the Wilcoxon signed rank test ( $p < .05$ ). Figure 1 shows the students’ average score for the 3 factors compared in the 2 conditions: before and after.

In general, most students’ scores regarding the considerable items of questionnaire had “slightly improved” after training. To all items of PCK, the majority of respondents reported improved scores, and 16% of them reported a score of 5 (on 5point scale) after training. On the other hand, some of them (38.2%) reported 4 and 5, while others (11.5%) detected poorly score for SCK. For some items in SSP, half of them evaluated themselves as having an “average level”. Regarding 2 items of students’ practice: what and how, small groups noted poor levels and debated whether it was necessary or not. On the free description, all students left interesting notes and comments. Following are some opinions from students which may be informative.

#### Music major students

A: Before our training period, I had so much confidence because I am able to sing and play some instruments better than average. But I panicked, when I stood on the platform and saw

bunch of students' faces. My singing voice was harsh and couldn't conduct well. I realized my musical skill was below average. I should study more.

B: I couldn't commit to my students successfully, even though I have been a student conductor many times. I would like to learn many strategies to let students practice effectively.

C: Letting students practice with interest is the important thing, however, it was difficult to tell them.

Non-music major students

A: I had a good experience in which I supported my friend who was teaching music. Actually, I did well during the training period because my class was well organized and trained. I suppose that we need similar teaching strategies no matter what subject.

B: I have been studying how to analyze a musical piece during my training. I couldn't understand deeply the difference between reading pieces and analyzing them, though.

C: I understand well that the world of music is deep and wide. We should teach students about a lot of musical signs, such as *p*, *crescendo*, *ff*, *legato*.

D: It was not so hard to assess students' skill, so I believe my advice was appropriate. I didn't know exactly what practice students should do at home.

From these remarks, it should be noted that there is a big gap between music students and non-music major students with respect to their views on students' musical activity. Music major students tended to express their lack of specialized knowledge and skill, even though they were more talented than non-music majors. On the other hand, some non-music major students expressed optimistic opinions and behaviors. They seemed not to realize what specialized content knowledge and skill was.

To summarize the whole, we can say that some evaluated themselves higher (68.4%) compared to before their training, others revealed an unsatisfactory level detecting their lack of musical knowledge and skills (13.7%).

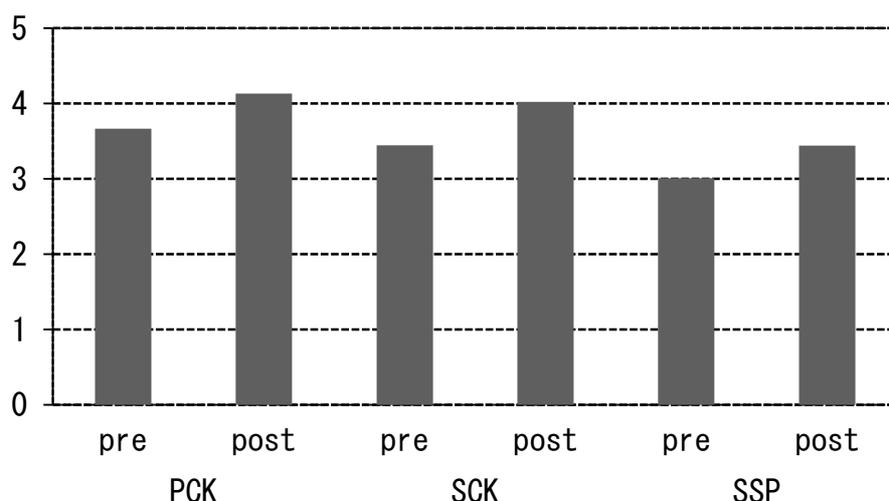


Fig. 1. University students' average score comparing before and after teacher training. (1=definitely not, 5=absolutely yes)

## Discussion and Conclusions

The primary goal of this study was to verify our transformative model that organized professional music teaching knowledge. By gathering the responses of 2 studies, we may be able to measure the reliability of this re-framed model in which PCK, SCK and SSP existed.

The first and second research questions were what experienced music teachers and university students think about PCK, SCK and SSP. Through their responses, experienced music teachers have supported the multidimensional features of teachers' special knowledge and skill. As we have indicated already, their scores of SCK and SSP were very high. It is an important fact to stress that talented music teachers have a common view of what teachers should have, although their age, experience and careers are completely different.

Meanwhile, university students' responses had slightly different characteristics. Although there is considerable evidence to show that they felt the importance/effectiveness of all items for questionnaire, they tended to underestimate themselves regarding some items for SCK and SSP.

The third and final questions were about educational training. Most of us would expect that many students expressed a positive experience and higher scores after the training period. It is interesting to note that efficient interactions with other students or teachers were effective, regardless of the fact that they were not given the full period of time. For PCK, some evaluated themselves higher than before training. We also must draw attention to the difference between music-major students and non-music major students. Non-music major students had a more optimistic outlook than music major students.

The present study addressed using selected elements of Shulman's construct of pedagogical content knowledge, and reconstructed new model in the context of music education. Based on the results of these 2 studies, it can be hypothesized that both experienced teachers and students in pre-service teacher training course generally agree on which skills and knowledge are considered to be important. Namely, professional music teachers need to have 3 different types of knowledge: PCK, SCK and SSP.

However, it is debatable how SCK and SSP are related. Teacher's knowledge is actually not set, but a continuum and amalgamation of many thoughts or ideas (Ogawa, 2015). Therefore, it is important to determine the phase of integration of all components related teachers' special knowledge. There is more empirical research about novice music teachers and how to improve their special knowledge and skills. Within other disciplines, like mathematics and science, several research teams have been trying to construct a new model which shows special knowledge for teaching. Future studies of the reliability and validity of our model could increase the understanding about its generalizability.

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## Exploring the Pedagogical Possibilities of the Idea of Composition Based on Children's Interests and Strengths

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### Abstract

Music-making activities in elementary schools in Japan follow the Japanese national curriculum. The current trend of music-making within the curriculum focuses on elements such as timbre, rhythm, tempo, melody, dynamics, and beat. These activities are expected to help children learn the characteristics of the various elements of music and their functions. However, children may not be able to exercise their creativity freely in such activities due to restrictions based on learning content; in some cases, the music they create may all be similar. Recent studies have reported cases in which teachers deliberately set fewer musical elements when children's improvisation activity, thereby reducing restrictions for the children and eliciting a variety of expressions from them. The idea behind this is to create multi-stylistic collage-style music by first focusing on each child's intention — what they want to attempt and what they are good at — and encouraging them to try these expressions. One of the authors of this paper developed a brand-new learning material, based on the idea of "composition based on children's interests and strengths," in 2017.

This study aims to illustrate the activities carried out using the learning material, taught by the authors of this paper, in two classes of the fifth grade (age range of 10-11 years) in Nara, Japan. It focuses on creative music-making practices and the pedagogical possibilities of the idea, through discussing their music-making and creative process.

As a result, children could make music with a mixture of diverse expressions. Students mobilized everything for their performances, including a variety of instruments, use of rhythmic patterns, singular sounds that had an impact, and quotations from their music repertoire. Furthermore, based on the characteristics of the children in each class, the content of the music for class 1 and class 2 differed. The pedagogical possibilities of the idea of "composition based on children's interests and strengths" are threefold: first, as we could illustrate from the classes, this idea contributes in eliciting a variety of expressions from the children; second, it facilitates children's realization that they can incorporate these various expressions into their music; and third, it allows children to think of each member's interests and strengths as a starting point of creative activity. Although this is a different approach from the aforementioned current trend in Japan, this need not be limited to music and can be generalized to many other creative projects.

*Keywords:* music-making activities, elementary school children, collage-style music, children's strengths, children's interests

### Introduction

This study aimed to illustrate the activities carried out by using the learning material developed through "composition based on children's interests and strengths" by one of the authors, Daisuke Terauchi, through actual classroom practice in an elementary school. Focusing on the pedagogical possibilities of the concept, children's music-making and creative processes were discussed.

### Educational and musical backgrounds

In the course guidelines stipulated by the Japanese government, the music-making activity was posited as one of four categories of musical expression: singing, playing

instruments, music-making, and appreciation. In Japan, the content of music-making has changed due to the influence and suggestions of various musicians and teachers, including Emile Jaques-Dalcroze, Carl Orff, R. Murray Schafer, and John Paynter (Nonami & Ikegami, 2005; Shimazaki, 2010). The current trend of music-making within the Japanese national curriculum focuses on all the various music elements such as timbre, rhythm, tempo, melody, dynamics, beat and phrase, and musical structures such as repetition (Japan Ministry of Education, Culture, Sports, Science and Technology, 2017). Such activities may help children learn about the various elements of music and their functions through music-making activities; on the other hand, children may not be able to exercise their creativity freely due to content-based restrictions, and in some cases, the music they create may be similar.

Conscious of these issues, Terauchi suggested composition based on children's interests and strengths as an alternative concept of music-making activities that would allow children to exercise their wide range of creativity (Terauchi, 2016; Terauchi & Hode, 2017). The idea was to create collage-style music not by using the aforementioned sound organization and sound materials, but by starting from each child's idea of what they want to try to perform and what they are good at, and by combining them. Performing with diverse children possessing various strengths and interests is one of the prominent characteristics of these classes, rendering the music performed, in collage-style.

In the context of serious European music, the collage-style first appeared in the 20<sup>th</sup> century. Bernd Alois Zimmermann and Alfred Schnittke are considered typical composers of this style. The "Fairlight CMI," was released in 1979, after which collage-style music came to be realized not only through original scores but also through the use of recordings as part of original compositions. The so-called "sampling" or "remixes" became common, hereafter. In the 1980s, John Zorn's "Cobra" (1984) and Lawrence "Butch" Morris's concept, "Conduction®" (1985) were performed. These works, instead of being either purely original compositions or those incorporating sampling, are live musical collages made of fragments of spontaneous performances of artists from various musical backgrounds. Composition based on children's interests and strengths draws upon these works, which rely on the abilities of the performers. Zorn and Morris's approach has two important features that make it appropriate for elementary school children's music-making activities. The first is that the collage is composed by performers hailing from different backgrounds. The diversity found among the musicians of "Cobra" and "Conduction" can also be found among children in elementary school. The second is the use of spontaneous performance fragments. This type of music-making is considered useful in encouraging expressions that reflect the individuality of each child, since the emphasis is on utilizing the inherent abilities of the performers. In fact, a significant number of children acquire a variety of musical expression skills outside their school music classes.

## **Methodology**

Realization of the idea of composition based on children's interests and strengths

The idea of composition based on children's interests and strengths was conceived by Terauchi in 2016. He published the idea titled "Stage" based on this concept (Terauchi, 2016). The classroom practices reported in this paper are not exactly the same as "Stage," but they are designed with the characteristics of the aforementioned concept. Although several practices based on this concept have been implemented in different elementary schools, universities, and music festivals (Terauchi & Hode, 2017), the most recent implementation was in an elementary school in the Nara Prefecture of Japan, in 2019, which is discussed in this paper.

It has three major characteristics. First, no conditions are set regarding musical elements, such as rhythm, melody, and harmony. Second, children's interests and strengths are used as the starting point of music-making and are used as much as possible as performance material. These expressions are not limited to musical expressions and can include any kind of expression, as long as it can be physically and/or verbally performed. Third, it is important

to be aware of the time structure of the music from the beginning to the end and to consider the combination and arrangement of performance materials.

According to Terauchi (2016), the performances described in “Stage” are designed to be carried out by groups of three to five children. First, each child writes down their own strengths and expressions that they would like to demonstrate, on tags (sticky notes) (Fig.1). These notes are called “expression cards”. Following this, they show their “expression cards” to each other and create a structure from the beginning to the end of the performance by establishing a combination (order and mixture). This is called a “performance sheet” (Fig.1). Through actual performance trials, the children complete their work. These creative methods have a highly affinity with J. Zorn's “file card composition” (Fukushima, 1997, p. 218; Duckworth,1999, p. 445.)

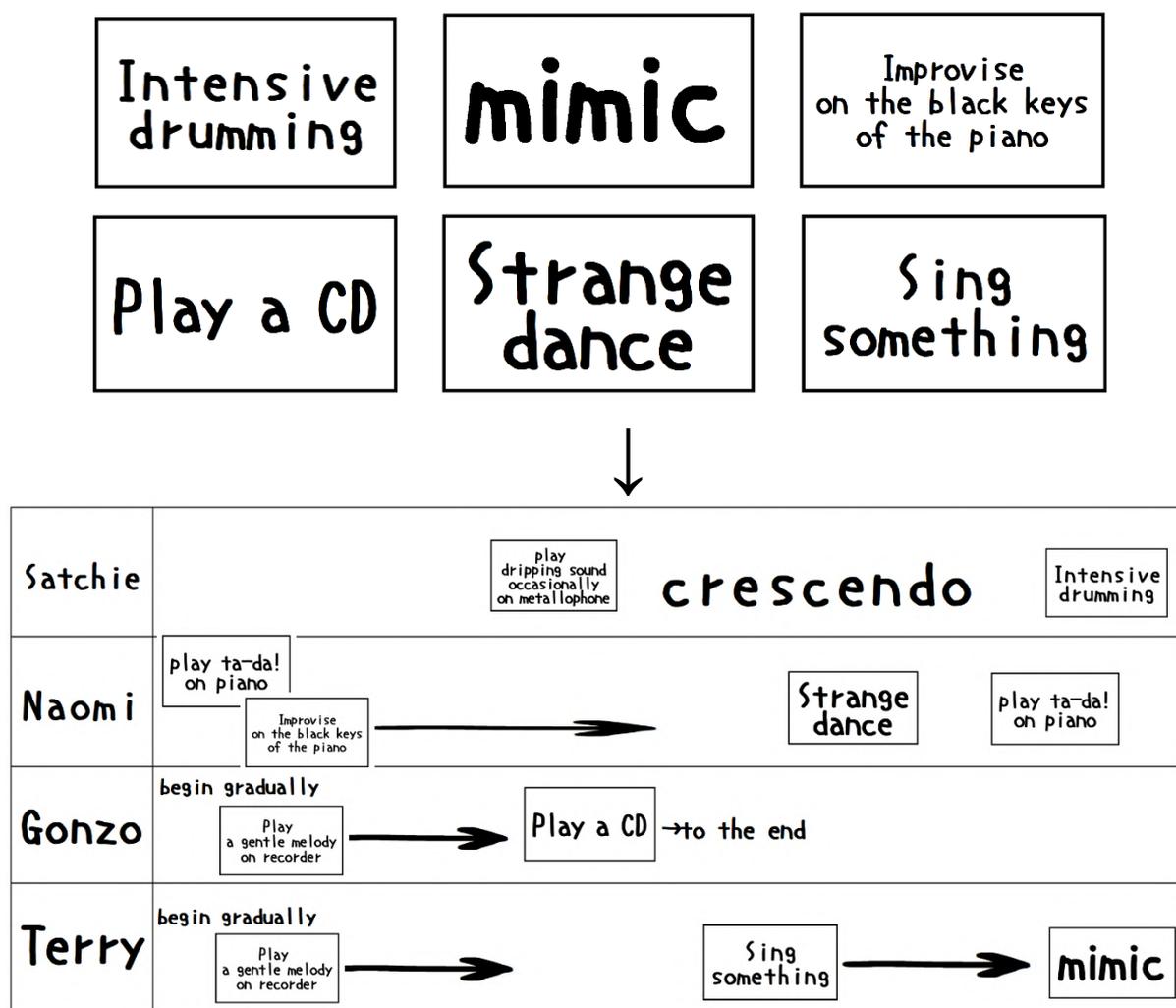


Figure 1. Examples of expression cards and a performing sheet.

Therefore, this activity does not focus on elements such as timbre, rhythm, tempo, melody, dynamics, beat, and phrase, but on the ability of composition as it were assembled from various materials. In particular, a compositional ability is required in order to combine a wide variety of expressions. This kind of ability is considered to be more important these days when copying and pasting have become one of the most important methods of creation. In addition, it could be expected that this will also lead to the expansion of children's views of music because collage-style music is unfamiliar to most children.

This study clarified the novel educational significance of composition based on children's interests and strengths, through a performance discussion of the music made by two fifth-grade classes (children aged 10-11 years) in Nara, Japan. This research proposed a new idea for creative music-making practices. Action research was employed as the method of study. All participating teachers provided informed consent; consent regarding the children's participation was obtained from their principal. Parental consent was also obtained.

### The study outline

Period of study: November to December, 2019

Classes: Two fifth-grade (children aged 10-11 years) classes at Oyodo Kibogaoka Elementary School in the Nara Prefecture, Japan participated in this study. Class 1 and Class 2 comprised 20 children each.

Teachers: Daisuke Terauchi (guest music teacher), Mariko Takahashi (guest music teacher's assistant), and Haruna Myodo (school music teacher).

### The method of conducting the activity

Day 1: November 11<sup>th</sup>, 2019 (45 minutes of activity)

Objectives: To make the children understand that music can have both regular and irregular beats. To make them experience various improvisations and obtain ideas for making music.

Activity:

1. Children listened to the improvisation of Daisuke Terauchi and Mariko Takahashi.

The purpose was to concretely show what kind of pan-idiomatic music will be practiced in this class. Therefore, they played a pan-idiomatic style of music while switching between many types of instruments. The children recognized the freshness of the various expressions they conveyed with the musical instruments they used.

2. Some groups comprising five children performed by overlaying simple rhythm patterns using percussions (e.g., xylophone, djembe, woodblock, guillo, claves, etc.).

Children were accustomed to playing music with a regular beat, and in a group of five, so it was easy to work together. They were able to play ingenuously.

3. Some groups comprising five children explored non-rhythmic improvisation using sparse lingering sounds by percussion instruments (e.g., glockenspiel, finger cymbal, etc.) while listening carefully.

Since children had not been familiar with music without regular beats, we adopted this activity as an opportunity to diversify the expressions of the children.

The children were a little confused at first, but after improvising several times, they understood the characteristics of music without a regular beat.

4. Consider the possibility of the children using their expressions based on their own interests and strengths for the performance.

Day 2: November 25<sup>th</sup>, 2019 (45 minutes of activity)

Objective: To consider which combinations and sequences are more appropriate for children's expressions.

Activity:

1. Children looked back on the previous class and shared their expression cards.
2. Children learned three ways to switch or combine expressions: gradually, at the same time, and suddenly.
3. Consider the arrangement of the expression cards on the performing sheet (using a blackboard), that is, beginning, middle, and ending, and how to perform by trial.
4. Finally, we performed based on the performing sheet.

Day 3: December 9<sup>th</sup>, 2019 (90 minutes of activity)

Objectives: To discuss how our performances can be improved. To perform in a concert at the end of the class. To recognize the goodness of each other's performance.

Activity: Class 1:

1. We rearranged the expression cards and reset the previous performance.
2. We created a new performance through discussion and trial.

Activity: Class 2:

1. We performed based on the performance sheet made in the previous class.
2. We discussed how we could improve our performance, order, and ingenuity.
3. We performed many times, based on our opinions and trial.

Activity: Joint concert (Classes 1 & 2):

1. First, Class 2 performed, followed by Class 1.
2. We all looked back at what was important and what we learned in this music class.

## Results

As a result of the activities, music with a mixture of diverse expressions was realized (Fig. 2: words and phrases enclosed in boxes represent notes written on expression cards; unenclosed words and phrases represent notes written on the blackboard.) They utilized everything they could to perform, including a variety of instruments, rhythmic patterns, just one sound that produced an impact, and quotations from the music repertory they already possessed. In this performance sheet, a bridge which they learned in PE class for physical expression and handbells used theatrically with a short word, were included. Furthermore, as a result of the differing characteristics of the children in each class, the musical content reflected by classes 1 and 2 were quite different. Children were pleasantly surprised by the diversity of each other's compositions.

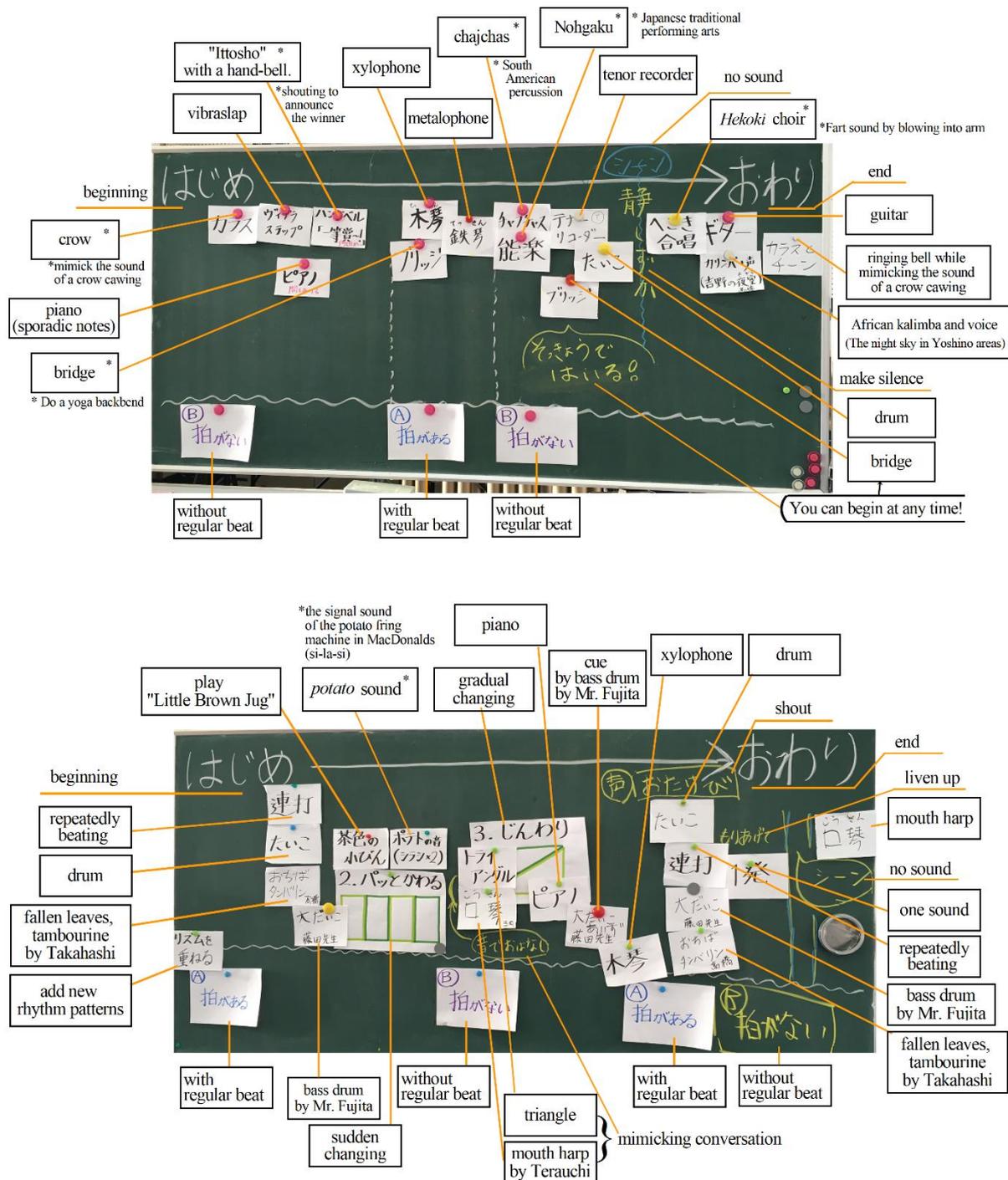


Figure 2. Performance sheets by classes 1 and 2

The more the children performed, the more the quality of their performances improved. Even though they were using the same performance sheet, the quality of each expression, the timing of beginning each expression, the relationship with other expressions (i.e., balance of volume and presence), and eye contact between performers kept on improving. Although there is no clear evidence of this, all the teachers felt it. The children's ability to make improvisational judgments improved as a whole.

## Discussion

Pedagogical possibilities of activities based on the idea of composition based on children's interests and strength from three perspectives: eliciting a variety of expressions from the children, facilitating children's realization that they can incorporate these various expressions into their music, and allowing children to think of each other's interests and strengths as a starting point of creative activity.

### Perspective 1: Eliciting a variety of expressions from the children

We were able to elicit a great variety of expressions from the children. Three factors contributed to this result. First, the collage style allowed the children to share the premise that any kind of expression could be included. Second, children can have a positive influence on each other to broaden the horizon of expressions when they used expression cards suggesting diverse expressions. Third, this increased the mental accessibility of the participating children. For example, the child who made a contribution to the performance by mimicking the sound of a crow cawing was not musically inclined and had low motivation; however, he participated in this activity with a positive attitude and also received high praise from classmates, which contributed to an increase in his musical confidence. In fact, there is less pressure on them to perform, because each person is in charge of a short moment, and even if they make some mistakes, it is unlikely that the whole performance will be damaged. As a result, they could make music together, despite the differences of their backgrounds.

### Perspective 2: Facilitating children's realization that they can incorporate these various expressions into their music.

It is possible to create together beyond the differences of each child's musical experience. For example, in Class 1, children who had studied Noh out of school privately and children who were good at the bridge in PE class were able to use their own expressions and mix them.

In addition, I would like to add a note on it in relation to the "marginal art," as defined by Shunsuke Tsurumi (1999). Terauchi (2016) evaluated the seemingly prank-like expressions of the children during the practice as marginal art in his discussion of the practice of "Cobra" in elementary schools. Tsurumi (1999) noted that art in today's terminology can be classified as "pure art" and "popular art." In addition, there is an even broader range of art than signified by both these categories, and it is important to note that there are many works of art that are considered both pure and popular art. He positioned works that fall on the borderline between art and life in the realm of marginal art and claimed that it is a source of art and has the power to produce both pure art and popular art. This practice also includes expressions that can be regarded as marginal art: putting your mouth on your arm to make a farting sound, mimicking the sound of a crow cawing, etc. This kind of expression, which has been neglected in elementary school music classes, contributes an important accent to the music produced by children. For children, such experiences can be a driving force for them to express without being confined to the existing concept of art.

### Perspective 3: Allowing children to think of each other's interests and strengths as a starting point of creative activity.

In this practice, Class 1 included a child with mild intellectual disabilities. She was not very active in other activities and sometimes she did not enjoy herself, but in this activity, she was as lively and delighted as any other child. Children with all types of characteristics can demonstrate their own interests and strengths, regardless of their knowledge, skills, experience, and background. The policy of making the most of the performance material as much as possible allows children to acquire an inclusive perspective on music-making.

## Conclusions

In this paper, we discussed the pedagogical significance of Terauchi's concept, composition based on children's interests and strengths, and its implementation on music-making activity in music classes in an elementary school in Japan. Some of them overlap with music-making activities that have been widely practiced in Japanese schools in the past. For example, this practice may also contribute to the acquisition of musical qualities and abilities. Some of the comments from the children after the class included learning about various instruments and the ability to express at the appropriate moment.

On the other hand, the novelty of this practice lies in the fact that the starting point are not the various music elements as indicated in the Japanese national curriculum guidelines, but, instead, the children's own interests and strengths. This will give children the idea to use themselves as a resource to carry out the project. Since collaboration that makes the best use of each member's interests and strengths is important not only in music-making but also in any collaborative project that allows for open results, this can be considered as an activity to acquire qualities and abilities that are important for children to garner any job in the future.

In addition, this could be positioned as a practice to realize a part of Small's musicking concept (1998). Nishijima mentions that Small believes the values of a group are "explored, affirmed, and celebrated" as the essence of music (Small, 1998, p. 183), and that "music education is a place to "explore, affirm and celebrate" the fact that each is a cultural body," and that "it is not a place to reproduce a given value system, but a place where the It is oriented to create values that can only be established by its members" (Nishijima, 2020, p. 22).

One of the important policies shared by all school educators in Japan today is not only a matter of acquiring qualities and abilities, but also of utilizing the qualities and abilities already possessed as creative material. These factors seem to be important for children who will inhabit the world in the future. Although this practice was for 5th grade elementary school students, this method of music-making could be used with older students as well. The authors hope that the concept extensively discussed in this study will become more widespread in Japanese schools.

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## **Exploration of Blended Learning in Higher Music Education in the Post-Pandemic Era**

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### **Abstract**

Global COVID-19 exposed the vulnerability of education, and promoted the process of education informatization. In early 2020, affected by the pneumonia epidemic, the vast majority of higher education in China adopted the form of online teaching. Offline teaching began to resume in the second half of 2020, but a considerable part of online learning resources have been used continuously, and blended learning has been further promoted. This study reports the results of a small-scale comparative study that investigated the teaching activities of "online teaching during the epidemic period" and "blended learning in the post-pandemic era" of music theory course in Beijing City University. The research used questionnaire survey, semi-structured interview, network teaching platform to collect research materials, combined qualitative and quantitative research methods to compare the differences in learning motivation, learning experience and academic record of students in the same course, using different teaching forms of "online teaching" and "blended learning". The research results show that "blended learning" has different advantages of different degrees in learning motivation, learning experience and academic record compared with "online teaching". Although some of these advantages are not always clearly distinguished from the more common experience of higher music education, some effective practice paths are determined in teaching, which is helpful to the reform and exploration of music education. In the post-pandemic era, the trend of education informatization is irresistible. The significance of "technology enabled music education" should not only be limited to an emergency means, but also become an important part of the future flexible education system. One of the most important issues should be how to do it. Based on the characteristics of music discipline, combining the advantages of online and offline, exploring a better mixed path will be the development direction to enhance the resilience of education and conform to the trend of education.

*Keywords:* post-pandemic era, blended learning, higher music education, comparative research

### **Introduction**

In early 2020, affected by the pneumonia epidemic, the vast majority of higher education in China adopted the form of online teaching(Wu, 2020; Yu & Sun, 2020). Offline teaching began to resume in the second half of 2020, but a considerable part of online learning resources have been used continuously, and blended learning has been further promoted(Li, 2020). The course of music theory is one of them.

"Music theory" course is a compulsory professional basic course for music majors. It aims to make students understand the nature of sound, the basic elements of music, the basic law of the combination of tone, master the basic knowledge and analysis methods of music, and prepare for the later theoretical course study.

The course started in 2011 when the music major was established. In the past 10 years, the traditional teaching mode has been adopted by the courses. It was not until the spring semester of 2019-2020 academic year (February-July 2020) that the course tried to build a network resource platform for the first time due to the outbreak of the global epidemic, and carried out "online teaching". After the resumption of offline teaching, the resources of the course "umoc platform" have been retained. The course began to carry out blended learning, exploring the implementation of blended learning in music theory course.

## Methodology

### Curriculum learning resources construction

The orientation of curriculum construction. The orientation of music theory course construction was based on Keller's "ARCS model theory"(Keller, 1983 & 2010). ARCS was derived from the initials of attention, relevance, confidence and satisfaction. Keller put forward a set of strategies and methods to stimulate students' learning motivation based on these four elements. The course emphasized the integration of music theory with music practice, carried out multi-dimensional three-dimensional teaching of "listening", "reading", "tasting" and "analysing", combined teaching with scientific research, mobilized students' subjective consciousness in learning through "stimulating learners' learning motivation", and enabled students to master basic music knowledge and have good basic knowledge analysis ability, make preparation for the study of other theoretical courses.

Curriculum construction and implementation. Considering the special period of the epidemic, the load pressure of the University's umooc platform and the limited network speed and flow of students' internet access, the course resources built in the spring semester of 2019-2020 were mainly audio and files, which were convenient for students to open, download and use.

### Research method

This study selected 69 Music Majors of grade 2019 and 2020 from Beijing City University as research participants. 37 students in 2019 used "online learning"; 32 students of grade 2020 adopt "blended learning"(Garrison & Kanuka, 2004; Huang, Ma, Zheng, & Zhang, 2009; Crawford, & Renée, 2017).

Questionnaire survey, semi-structured interview and online teaching platform were used to collect research materials, and quantitative and qualitative methods were used to conduct comprehensive research on learning(Holland & Campbell, 2005; Sally, Wiggins, Sarah & Forrest, 2004; Soller, 2010). First of all, during the course, students' learning process and achievements were collected and recorded. Next, after the end of the course, the questionnaire of instructional materials motivation survey was used to investigate students' learning motivation in the four dimensions of attention, relevance, confidence and satisfaction(Keller, 1983 & 2010; Jorge, Bacca, Silvia, Baldiris, Ramon & Fabregat et al., 2018; Jamil , Ningrum & Yani, 2019). Then, the study conducted semi-structured interviews to understand students' learning experience(Brownlee, Walker, Lennox, Exley & Pearce, 2009). At last, the questionnaire data was sorted out, interviews were transcribed and coded, and combined with students' final scores, comprehensive analysis was carried out(Mettiäinen, Sari & Karjalainen, 2012; Vanderlinde & Braak, 2013).

## Result

The research results show that "blended learning" has different advantages of different degrees in learning motivation, learning experience and academic record compared with "online teaching".

### Comparison of learning motivation

The total reliability coefficient of arcs of the two groups was 0.955 and 0.984 respectively, which indicated that the reliability quality of the whole research data was very high, and there was no significant difference. However, by analyzing the four dimensions of attention, relevance, confidence and satisfaction, it was found that the "blended learning" group had higher reliability coefficients in four dimensions than the "online learning" group. Among them, the reliability of the two dimensions of confidence and attention is greater than 0.1, which indicates that the stability and reliability of the "blended learning" group is better.

Table 1. The reliability of the "online learning" group and the "blended learning" group in the four dimensions of attention, relevance, confidence and satisfaction

Group	Attention	Relevance	Confidence	Satisfaction
"online learning" group	0.835	0.894	0.803	0.919
"blended learning" group	0.942	0.898	0.937	0.968

In the "online learning" group, satisfaction had the highest mean value; The dimension with the lowest average value was attention, which was lower than the average value of the "blended learning" group. It can be seen that in online teaching, students' satisfaction is high, while remote online teaching was weak in attracting students' attention. In the "blended learning" group, the dimension with the highest average value was confidence, and the dimension with the lowest average value is attention. Therefore, in blended learning, it helped to build students' self-confidence, but the attraction to students' attention was still relatively weak. The specific reasons need to be further studied.

#### Comparison of learning experience

There were obvious differences between the two courses in students' learning experience, with different emphasis.

The students' feelings of "online learning" group mainly focused on the convenience, efficiency and low psychological pressure of learning. It was worth mentioning that the interviewee enjoyed the relaxed state of answering questions online, just like "writing a pop screen" when watching video. Of course, some students also said that online learning is easy to distract, and more expect to face-to-face offline classroom.

The feelings of the students in the "blended learning" group mainly focused on the interaction of learning and the timeliness of answering questions. Students felt that the offline class was more lively and interesting, and the teacher's explanation was easy to understand. Combined with online preview and review, it helped to consolidate and improve themselves. There were also very few students who said they did not like the "online teaching platform", and more suitable for traditional offline listening to the class, and practice handwritten answers on the five line notebook.

#### Comparison of academic performance

The "blended learning" group was higher than the "online learning" group in the usual performance, final examination results and general evaluation results. In the usual performance, the advantage of "blended learning" group is obvious, which is 3.6 points higher than that of "online learning" group. In the final examination results and the overall evaluation results, the score of "blended learning" group is also slightly higher than that of "online learning" group. It is worth noting that this situation has reversed in the stage assessment results. In the stage assessment, the score of online learning group was 2.4 points higher than that of blended learning group. Among them, the possible reason is that although students like blended learning mode, they need to adapt to how the knowledge learned in this mode can be shown as "good scores" in teaching evaluation. The specific reasons need to be further studied.

Table 2. The academic performance of the "online learning" group and the "blended learning" group were compared

Group	Usual score	Stage assessment score	Final assessment score	Total mark
"online learning" group	83.8	84.0	81.6	82.8
"blended learning" group	87.4	81.6	82.6	83.2

## Discussion

Although some advantages of blended learning are not always clearly distinguished from the more common experience of higher music education, some effective practice paths are determined in teaching, which is helpful to the reform and exploration of music education.

In the post-pandemic era, the trend of education informatization is irresistible. The significance of "technology enabled music education" should not only be limited to an emergency means, but also become an important part of the future flexible education system. One of the most important issues should be how to do it. Based on the characteristics of music discipline, combining the advantages of online and offline, exploring a better mixed path will be the development direction to enhance the resilience of education and conform to the trend of education.

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## **A Practical Pedagogical “STEP5” Approach Based on the Learning from Chinese and Finnish Piano Teaching**

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### **Abstract**

In music education, especially related to instrument teaching, there are different pedagogic approaches and teaching methods applied around the world. China is an example of a competitive society, where also the aim of the piano teaching is to generate fast, measurable results with strict teacher's control, extensive practicing and advanced technical skill development. Although the strict “Pear Garden” (or The Liyuan) training method from the Tang Dynasty times has ceased to exist, the skills training requiring a lot of mechanical practicing and repetition with self-discipline is still the cornerstone of the Chinese instrumental education. Meanwhile, Finland represents an alternative “Happy Education” approach focusing more on creativity, expression and student-oriented teaching and learning with less pressure on achieving quick results. In the happy music education, teachers' sufficient patience and full trust for students is particularly reflected, and the students have less formal examinations or assessments.

This study compares the similarities and differences in piano teaching between China and Finland in terms of teaching environment, teaching materials, teaching methods, teaching results (both short-term and long-term), teaching evaluation, and the organization structure of the music education. The aim is to understand the pros and the cons of both systems.

As a result of the study and based on more than 25-year practical experience from piano teaching in both China and Finland, complemented with experience from music studies in both countries, we believe that there is no “one-size-fits-all” piano teaching method or pedagogical approach that would be optimal for all students. However, we have learned that combining elements from Chinese and Finnish approaches and supporting them with a comprehensive pedagogical toolbox, one can achieve better results. Based on the learning, we have created a practical pedagogical “STEP5” approach that includes five principles – (1) personalization, (2) motivation, (3) effectiveness, (4) sustainability and (5) quality – aiming for better quality teaching and learning, while keeping the student happy and motivated.

The purpose of the study is to show that there are things to learn between Chinese and Finnish, or even in more general between Asian and Western approaches, and that combining the best elements from both sides can provide new possibilities for developing piano teaching forwards. We also claim that there is room for further studies in formalizing the practical pedagogical approach presented and in applying it more widely for further feedback.

*Keywords:* music education, piano education, instrumental teaching, teaching method.

### **Introduction**

This article concentrates on two countries, Finland and China, and their music education systems from the piano teaching and learning perspective. China represents a musically strong country with vast number of population going through musical instrument (usually piano) learning, while Finland is recognised globally for its educational excellence.

China is an example of a competitive society. As far as piano teaching is concerned, its purpose is to quickly produce technically fluent performing artists through a learning path that consists of strict teacher control and intensive long-time practicing. The traditional “Pear

Garden” (Ulak, J. T., 2002) training method no longer exists, but learning environment is influenced by the Russian school, due to which the solid basic skills are still the cornerstone of Chinese piano teaching. Therefore, there is a lot of mechanical practicing and repetition with self-discipline training in instrumental education in China.

The piano education in Finland was also initially influenced by the Russia, but with the gradual unification of the European continent and the disintegration of the Soviet government – coupled with the establishment of the European Union and introduction of the the Bologna Process – Finnish education has stood out from global education with its “high quality and equal opportunities” characteristics for 20 years and is in a benchmark position.

Finnish education, sometimes referred to as "Happy Education", could be said to be diametrically opposed to Chinese education. Finnish education pays more attention to creativity, expression and student-oriented teaching as well as learning, while greatly reducing the pressure to achieve rapid results. In music education, it especially reflects the teacher's patience and full trust in the students, so the formal examinations or evaluations of the students are less important. Due to that, in piano teaching, there is not too much demand and pressure on the students, protecting the students' freedom and rights.

In this article, we are reflecting our more than 25-year practical experience in piano teaching by comparing the similarities and differences between the countries in terms of educational environment, teaching materials, teaching methods, teaching evaluation/assessment, and organization structure of the music education.

### **Teaching environment**

After the October Revolution in 1917, a large number of Soviet and Russian musicians left their homes and came to China to engage in music performance and education. In addition, affected by the international situation, the main destination of most Chinese students studying abroad at that time was Russia, including art students. After returning to China, art students often took teaching positions in major professional colleges and conservatories in China. Therefore, one could say that Soviet-Russian music culture is definitely a justifiable mentor to Chinese music culture, including piano teaching.

In the past 40 years, although piano teaching in China has been more or less influenced by Germany, France, and the United States, Russia's influence on China is still deeply rooted. With China's reform, opening up and international development, the number of children who study piano has grown rapidly. According to a recent online report (Sixiang Studio, 2020), approximately 80% of the 50 million piano learning children in the world live in China – and majority of them do it with private piano teachers and with relatively high costs.

Finnish education, on the other hand, is student-oriented and fully respecting students. Therefore, students are quite relaxed and happy – thus the "Happy Education" name. In terms of music education, Finland has the same “music for all” concept as Zoltán Kodály (1882-1967) and there are government-supported and reasonably priced opportunities – including piano teaching – for all children from preschool-age onwards to learn music in music schools.

### **Teaching materials**

The piano teaching materials currently used in China are not much different from those used 50-60 years ago. Traditional Chinese piano teaching materials are limited to Carl Czerny (1791-1857) and J.S. Bach (1685-1750). Czerny part focuses on the four major books (Op.599, Op.849, Op.299 and Op.740) with études in various stages from shallow to deep, while from Bach commonly used works are “Clavierbüchlein of Anna Magdalena Bach”, “Small Preludes

and Fughettas”, “Inventions and Sonfinias, “Welltempered Clavier”, “English Suites” and “French Suites”. The intensity of the technical études and their exercises is relatively high.

It can be seen that China attaches great importance to the basic skills of piano performance and fingering skills. In addition, Chinese piano teaching often uses “Sonatine Collection” as a preliminary preparation/transition to sonatas, concertos and other major works. Of course, China has also introduced some American teaching materials in recent years. Although such teaching materials are popular as piano enlightenment by young children and their parents at the beginning, students often return to the traditional études and repertoires after a few books in order to get better results.

Finnish piano teaching materials are extremely rich compared to Chinese. In Finland, piano teachers are not keen on using complete sets of technical études. Instead, they often use scattered materials from different collections. At present, the most commonly used works in Finland include Dmitri Kabalevsky Op.27 “30 Pieces for Children”, Friedrich Burgmüller Op.109 “18 Études”, Moritz Moszkowski Op. 91 “20 Petites Études”, Claude Debussy “Children’s Corner”, Béla Bartók Sz.42 “For Children”, Jacques Ibert “Petite suite en 15 images”, and a considerable proportion works from Finnish local composers.

Table 1. An example from the repertoire formulated by the Association of Finnish Music Schools in 2005 regarding the versatile PT1 (Basic Level 1) composers (SML, 2005)

For a single pianist	For four hands
Burnam , Bastien, Hirschberg, Hietanen-Hynninen-Vapaavuori, Haydn, Goedicke, Gretsaninov, Gurlitt, Johansson-Syrjälä, Kolar-Raikamo-Syrjälä, Kleinova-Fiserova-Müllerova, Kabalevski, Karkoff , Kirchner, Kurtâg, Louhos-Nyblom, Norton, Oesten, Persichetti, Quaile, Rebikov, Rowley, Rehberg, Rowley, Schüngeler, Schütte, Sarmanto-Neuvonen, Suorsa-Rannanmäki, Suzuki, Sostakovits, Stravinsky S., Teöke, Takács, Walterman-Harewood, Zeitlin-Golberger	Blake, Bramsen, Bruckner, Diabelli, Garscia, Gray, Hannikainen I., Helyer, Hirschberg, Karhilo, Kirkby-Mason, Marttinen, Scott, Smith, Sugar, Wells

Table 2. Composers from the repertoires assessed by the Musicians Association for Grade 10 in the past 10 years in China

Year 2012	Year 2013	Year 2014	Year 2015	Year 2016
Moszkowski, Chen Mingzhi, Haydn	Bortkiewicz, Rimsky-Korszkov, Schubert	Chopin, Mendelssohn, Chaminade	Mendelssohn, Bach, Prokofiev	Hummel, Brahms, Beethoven
Year 2017	Year 2018	Year 2019	Year 2020	Year 2021
Chopin, Handel, Schubert	Zhu Jianer, Bach, Qu Wei	Debussy, Shostakovich, Zhu Wanghua	Tchaikovsky, Schumann, Beethoven	Arensky, Wang Jianzhong, Sun Yiqiang

Obviously, Finland is far superior to China in terms of repertoires. This is extremely beneficial for cultivating students' familiarity with various musical styles and the grasp of musical feelings. It also promotes the enthusiasm of the students for learning piano playing, by always maintaining their desire for exploration and curiosity for piano works. However, the period for

Finnish teachers to renew the repertoire is generally too long (even only 3-4 pieces per study year), which has also caused many students to lose interest in continuing to learn piano.

### **Teaching methods**

In Finland, piano teachers hardly pay attention to the basic elements of the students' hands or the strength of the fingers. Instead, they pay much attention on cultivating the students' musical expression from the very beginning. Undoubtedly, they have a richer selection of music styles, which can be seen easily from Table 1. The Chinese piano teaching is more technical-oriented, which can also be seen directly from Table 2.

In China, it is normally suggested to practice for at least one hour a day, some teachers even suggest more than four hours a day for practicing. In addition, the parents of piano students are often willing to participate in the training process. While the Chinese teachers put a lot of emphasis on skills, they tend to ignore students' emotional expressions. Compared with children of the same age in Finland, the skills of the Chinese piano students are outstanding. However, as they grow older, when they need more musical understanding and expression, Chinese piano students gradually lose their advantages.

In Finland, teachers often encourage students to decide by themselves which piano piece they want to practice/play, and help students to explore their own musical style. Teacher is neither demanding on basic technics/skills nor emphasizing the need to ensure a certain amount of practicing time. This is indeed in line with the Finnish "Happy Education" model. Moreover, parents rarely participate the learning process of the piano students.

However, a famous Finnish pianist Matti Raekallio, announced an article in early June 2021 regarding the music education in Finland (YLE, 2021). In the article, he once again pointed out that "Finnish education, especially in the field of music education, has too low requirements for students. We don't need to be as extreme as Asian students, but we also need to train outstanding students."

Although the Finnish "Happy Education" model has its benefits, especially in the area of music education and instrument playing, it is not the most ideal for teaching either. It takes more into account the student's general musical knowhow and development, but does not support the skilled students and might be too slow for the motivated ones.

### **Teaching results (long-term/short-term)**

In China, the short-term results are very obvious. Taking Shanghai as an example, the goal of most students is to pass the highest amateur exam (Grade 10) before the 5<sup>th</sup> grade of elementary school. This means that in the six years of learning piano, the child will play the piano all the way to Chopin, Liszt and Rachmaninov. This kind of situation abounds in China, but it is almost invisible, or even unimaginable, in Finland.

After completing the amateur Grade 10 exam, however, many Chinese children choose not to touch the piano anymore, and even have a kind of rejection towards playing. This obviously goes against the original intentions of the piano education to cultivate the motivation of lifelong learning and the continuous improvement of music accomplishment.

In terms of short-term teaching results, the results of Finnish piano teaching are not as significant as those of Chinese piano teaching. While in China some students might give up from piano playing because the practicing is too demanding, in Finland some students may stop because they cannot progress and see enough positive results.

Based on our teaching experience in Finland, many students who have studied in music school for 4-5 years still cannot read the music sheets and they cannot progress with their

pieces. Partial reason for this is that the formal music theory teaching in Finland starts only when the children are 10 years old. Consequently, many who came to our music studio were piano students with several years of studies in the music school, and their (or their parents') initial aim was to catch up with the music school homework. Another reason was that the teaching was not motivating due to slow progress with no visible results.

However, in terms of long-term results, Finnish piano teaching draws a relatively long line of education, and shows positive results over the Chinese counterpart. The core curriculum of the Finnish art education (Finnish National Agency for Education, 2017) divides art education into four parts: general education, thematic education, core education and professional education. They progress in a logical way from the shallower to the deeper, creating a concept of lifelong learning.

### **Teaching evaluation/assessment**

In our opinion, China's piano playing evaluation system is not systematic. At present, it mainly relies on the amateur grading system from various associations, and these social grading certificates have no direct effect on applying to professional music colleges or conservatories in the future. In other words, even if you passed amateur Grade 10 exam at the age of 10 and afterwards stopped playing the piano for eight years, you have to take the entrance examination at the age of 18 and before that warm up your skills again.

China has a huge social piano grading system. There are grading certificates from the Chinese Musicians Association, the Central Conservatory of Music, the Chinese Conservatory of Music, the Shanghai Conservatory of Music, and even now in China, you can also participate in overseas piano examinations, such as the piano examination of ABRSM (Associated Board of the Royal School of Music). However, none of these amateur level certificates can be directly transferred to the study credits for further studies in music colleges or conservatories, because they are not in the same evaluation/assessment system.

In Finland, the assessment in music schools is directly integrated with professional music academies (Sibelius Academy, part of the University of the Arts Helsinki since 2013). Music schools provide four different Basic Levels (PT1- PT4; before year 2019 there were only three levels PT1-PT3), followed by the Music School Level assessment. These levels are followed by Level D, Level C, Level B and Level A. Nowadays most music schools are qualified to organize up to Level C assessments and give certificates.

All of these certificates can be used in further education, e.g., while applying to Sibelius Academy. Moreover, with the appearance of the Bologna Declaration and the advancement of the Bologna Process, the certificates of different levels of instrumental performance within the EU are now mutually recognized. Since 2018, Finland has also introduced the ABRSM, but its market is not large.

### **Teaching organization**

The amount of piano students in China is so huge that it's impossible for all piano students to be trained by professional music academies. In fact, piano teaching in China heavily relies on the private music education market. However, the tuition of piano learning is not unified in the market. In China, among the existing private piano teachers, there are a large number of people who have graduated from non-professional music colleges or conservatories.

Such situation is relatively rare in Finland. Finnish piano teaching is mainly concentrated in formal music schools. Private teaching is also available, but rather rare. Moreover, the fees for piano teaching in Finland (or in Europe) are generally lower than in China. One reason is that the Finnish music schools, as training institutions that provide music education outside the normal school, are supported by the government. Art teachers employed in music schools,

including piano teachers, theoretically should have vocational teachers' qualification<sup>1</sup>. Some music schools even hire professors from the Sibelius Academy (the only Finnish music university) to give lessons. According to statistics<sup>2</sup>, there are 96 music education institutions in Finland providing music education before Sibelius Academy, including 85 music schools and 11 conservatories. The private piano teaching has no governmental support and subsidies, thus the market is small and the tuition fee is normally somewhat higher – but not too high not to lose the students – than that in music schools.

### Research result – the STEP5 method

We believe that it would be beneficial to combine the positive aspects from the Chinese and Finnish teaching methods. Music education requires detailed planning and gradual progress, so that students can be taught effectively and grow healthy in music. For this need, we have created a new method called “STEP5” that includes five principles aiming to improve teaching quality and learning results, while maintaining students' happiness and enthusiasm, with lifelong learning as the ultimate educational goal.<sup>3</sup>

**Step 1: Personalization** of students means that when teachers come into contact with new students, they need to spend enough time to communicate with them, communicate with their parents, and keenly observe students' reactions and reflections in details, so as to roughly infer which type of group the students belong to. In the future teaching process, teachers fully consider the leading thoughts of students.

**Step 2: Learning motivation** means that all piano students will encounter a bottleneck period with ups and downs in the process of learning piano. When in the bottleneck period, teachers need to focus on caring for the students' psychology, temporarily slow down the teaching progress, and use all possible means to protect students' curiosity and interest in learning. Not catching up at this time is to prepare for the future blowout period. The so-called accumulation of sand is not in a hurry. Instead, it takes the big goal of "lifelong learning" as the consideration.

**Step 3: Learning effectiveness** refers to the need for visible stage results in the teaching process, and it must be visible in a short period of time. For young children, short-term results are one of the effective ways to motivate them to continue learning. Piano teachers must explore and develop a unique learning method suitable for such students after understanding the personality characteristics of the students. This is the individualization of teaching. Only in this way can students be encouraged to learn and make progress gradually.

**Step 4: Sustainability** of learning is mainly reflected in the choice of works. An excellent piano teacher must master a large number of repertoires and be able to choose what works for different students to show his/her personality. It is the teacher's duty and responsibility to introduce and stimulate students' interest in other styles of works on the teaching road. In this way, learning the piano can be continued.

**Step 5: The quality** of learning is the final result, which is divided into short-term results and long-term results. Generally, the short-term we design is a one-year period, either through the assessment/grading, or through the compilation of works, to do a deliberate or unintentional review. If conditions permit, one should hold student concerts. For example, in Finland, we have successfully held a student concert at the Paavali Church in Helsinki. The long-term

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<sup>1</sup> <https://www.oph.fi/fi/koulutus-ja-tutkinnot/ammattillinen-koulutus>

<sup>2</sup> <http://www.musicedu.fi>

<sup>3</sup> “STEP5” method is inspired by Seligman's PERMA (Seligman, M.E.P., 2012) that contains the five elements of Positive emotion, Engagement, Relationships, Meaning and Accomplishments.

results actually start from the level of educational significance, that is, the implantation of the concept of lifelong education.

We have implemented the “STEP5” method for several years, and based on our own results, more ideal teaching and learning results can be achieved.

### **Concluding remarks**

The aim of this study was to understand the pros and the cons of the piano teaching systems in China and Finland, and to show that there are things to learn between countries, or even in more general between Asian and Western approaches. As a result of this study, we presented our own practical pedagogical “STEP5” method that includes five principles aiming to improve teaching quality and learning results, while maintaining students' happiness and enthusiasm, with lifelong learning as the ultimate educational goal.

In piano education, building basic technical framework for students can be regarded as the minimum requirement; exploring students' personalities and finding matching works can bring safety feeling to the students. When students are investigating their own musical world by slowly expanding to new music styles, they can gradually develop the sense of musical belonging. In the process of learning piano, teachers and students are equal and always need to respect each other, so that it is possible to establish a lifelong learning concept in music.

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## The Intercultural Link of the "Aesthetic Education" Movement in the Early Republic of China

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### Abstract

The term "aesthetic education" is not a Chinese word, but a noun concept seen in Europe as aesthetic education. "aesthetic education" in the early beginning of the republic of China movement is with the Chinese new culture movement cultural modernization development important content, peep its origin has the essential characteristics of cross-cultural connection — using new vocabulary behind the new concept of Chinese traditional education view, and give its modern significance, at the same time innovation western exmology with Chinese connotation, so become the beginning of Chinese modern aesthetic education. On the basis of the paper, the origin of "aesthetic education" based on the perspective of cross-aesthetic theory, which is the basis of "aesthetic education".

*Keywords:* "aesthetic education"; aesthetic education movement; cross-cultural connection; Schiller;

### First, The cross-cultural origin of the "aesthetic education" term source

The term "aesthetic education" is not a Chinese word, but a noun concept seen in Europe as aesthetic education. Mr. Cai Yuanpei, a Chinese educator, once said: "The term of aesthetic education was translated from *Asthetische Erziehung* in the first year of the Republic of China, as never before."<sup>①</sup> From this trace, German classical aesthetician and famous poet Schiller put forward the term "aesthetic education" for the first time, and endowed the term "aesthetic education", pointed out its discipline essence, and emphasized the necessity of cultivating a country's citizens' aesthetic consciousness within the social scope. However, To, The Friedrich Schiller "aesthetic education" is not groundless, As the host of German classical aesthetics, It inherits Kant's aesthetic super-utilitarian aesthetics, Rich and developed the German classical aesthetic thought, And the subject content of "aesthetic education" is more systematically sorted out, The proposition that "aesthetic education" can not be limited to the perspective of education, Starting from the social reality, Focus on the return of human nature; But the formation of its aesthetic education thought, With the high-quality genes of European aesthetics, As in ancient Greece and Rome, Plato, a famous western aesthetician, has already put forward the ideas of "art serves to improve the soul of people" and "it should be influenced by music and art education as a child", As he said: "Every day influenced in beautiful works, Like breathing a breeze from a quiet state, To breathe their good effects; Is to make them unconsciously cultivate a hobby for beauty, And cultivate the habit of integrating beauty in the mind."<sup>②③④</sup>; since the 18th century, many western bourgeois enlightenment thinkers have further emphasized aesthetic education, such as French Rousseau in the famous "return to nature" education proposition: to let children to nature, cultivate beauty habits, cultivate their sentiment; moreover, the founder of German classical aesthetics, Kant divided spiritual activities into knowledge, feeling, meaning, that the particularity of understanding and practice is to unify understanding and practice through aesthetic education, and then solve the contradiction between host and object. To sum up for Schiller aesthetic education theory,

<sup>①</sup>Cai Yuanpei. Complete works of Cai Yuanpei: Volume 6 [M]. Beijing: Zhonghua Book Bureau, 1984:61.

<sup>②</sup>Plato. The Ideal State [M]. Zhuang Li, Beijing: Current Affairs Press, 2014:370-410.

<sup>③</sup>Plato. Literary Dialogue Set [M]. Beijing: People's Literature Publishing House, 1983:62.

<sup>④</sup>Jean-Jacques Rousseau. *Amir* [M]. Ye Xiaoting, Beijing: Taiwan Strait Publishing House, 2016:60-145.

"aesthetic education" noun laid the context of European aesthetic theory, therefore, under the oppression of western mechanical era and exploitation, how to balance the human nature division, distortion, dislocation, make people really comprehensive development and free people become the key motivation of western aesthetic education, is also Schiller aesthetic education is the best way to solve the emotional driving factor.

As a global phenomenon of intercultural connection, the term "aesthetic education" in the eastern countries "travel" in the late 19th and early 20th centuries, especially Chinese and Japanese intellectuals generally recognized the necessity of aesthetic education to cultivate aesthetic literacy, such as the famous writer Xia Mu (1867-1916) once compared Japan and British gentleman cultivation education: " how brilliant the literature and art of this country (Britain) is continuing to cultivate its citizens.. There is no supposed samurai in England, but a gentleman says... I fear that, for moral and physical education, Japanese gentlemen are too far apart<sup>①</sup>"; However, The Meiji period, In the Library of Congress of Japan contains the word "aesthetic education", There are even seven kinds of books published for the "Aesthetic Education Society", This shows that the word "aesthetic education" has become a general concept in Japan; For example, the chapter of "Principles and Practice of Education" in "Aesthetic Education at the beginning of Aesthetic Education" said: "The purpose of intellectual education is the purpose of true moral education is the purpose of good aesthetic education is beauty"; Koukujiro, a lecturer at Waseda University (1871-1917), argued that, Modern education focuses too heavily on utilitarianism, intellectual, moral, imperial and mechanical education, But regard art as the enemy, Thus going further and further with God, Therefore, He contends that, To develop an all-human education, Aesthetic education and religious education are indispensable.....<sup>②③</sup> From this point of view, the relationship between "aesthetic education" and religion has also become one of the important thoughts of the aesthetic education movement in the early people, while promoting the term "travel" of the word "aesthetic education" has to mention the ideological enlightenment of the early aesthetic education movement in China.

## **Second, the cross-cultural experience of Schiller aesthetic education thought.**

The idea of Schiller's aesthetic education was proposed in the era of German social turmoil. Caring for human inner contradictions and solving social practical problems became the focus of German aestheticians and philosophers gathering at that time "Aesthetic education" was born in the context of this era, becoming an important tool for caring social reality and connecting the subjective and objective world; the formation of this concept was first proposed by the German classical aesthetist Schiller and endowed with an academic form independent of aesthetics. However, Early People, With the New Culture Movement, China raised the banner of "democracy" and "science" and shouted the slogan of "Down with Kongjiadian", Then to launch the "new culture" creation structure with vigour and vitality, The cross-cultural connection of the "aesthetic education" movement presents two premise factors: on the one hand, the traditional cultural system of the Chinese nation itself is incompatible with the development of cultural modernization, On the other hand, it also shows an initial trend of exogenous cultural modernization; But this is undoubtedly a bridge of interactive and dialogue for the cross-cultural connection between the western modern aesthetic education thought and the cultural modernization of the early people; In the social modernization drive, On the one hand, consciously and rationally self-washing the traditional culture of the Chinese nation, On the other hand, it also accepts the people of the penetration of modern western culture to different degrees, And the localization and creation, Trying to explore favorable ways and methods to save the national danger, reform the social situation and innovate the cultural connotation.

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<sup>①</sup>Summer. Complete works: Volume 9 [M], Tokyo: ama Study, 287-302.

<sup>②</sup>Hideo Takolin. New Education: Volume 3 [M], Tokyo: Tokyo, 1885 (6): 447. (Original: Originally James Johonnot. Principles and Practice of Teaching [J]. New York: D. Appleton and Company, 1878)

<sup>③</sup>Kohara. Mother のための pedagogy: Education for mothers [M], Tokyo: イテア, 1926:2-141..

### **(1) Wang Guowei: from "full of human nature" to "complete character".**

Combined with Germany in the late 18th and early 19th century and China in the late 19th century and the early 20th century, although the times are different, but there are many similarities between the national situation and the national situation: both countries are in the process of transformation from the feudal society to a capitalist society, and are facing the reality of the decline and the morale of the people. So Mr.Wang Guowei, like Mr.Schiller, also wanted to get rid of China's "disadvantages" of the time. He believes that the aesthetic realm is the material realm and moral realm of Jinliang, and this Jin Liang should be realized with aesthetic education. As he wrote in "The House of Education": " Hilline thought true and good, comprehensive in the United States. Art and literature involuntarily comfort the tools of life, and the art that declares the deepest meaning of life. All knowledge, all ideas, all take this as the pole. People's feelings are only satisfied and detached, people's behavior is only pure and noble. The same is true of the solution of art and literature Therefore, teach people to think the way of people, must not pay attention to aesthetic education... The book is that without aesthetic education, moral education is not self-complete, which has the same meaning as the Greeks saying that 'human spirit does not learn from beauty and can not reach the good'." Wang Guowei accepted Schiller's aesthetic education thought, and regarded aesthetic education as the fundamental way to transform the society, beautify life and save the world.<sup>①</sup>However, we have to pay attention to that the iller utopian aesthetic education thought is very consistent with modern China, which fits in China's attention to the transcendence of psychism.Yes, aesthetic utopia is not a real plan, nor does it fundamentally solve problems. It is non-practical, and often can only stay at the spiritual and conscious level.What is commendable is that it is precisely the pursuit of the ideal realm, which virtually determines the new trend of the human world in the turmoil of the new times.As: " The greatest charm of human spirit is that it can infinitely surpass any given existence, although this transcendence may be extremely limited in the specific reality, but it can make people have the courage to exist, make people face their own difficulties can constantly produce hope, in order to maintain the source of self-development, give up the pursuit of utopia, means that people lose all the possibility of development, people no longer become the real meaning."。 <sup>②</sup>It can be seen that this thought undoubtedly has strong practical significance on the aesthetic construction of humanistic care and the inheritance road of human civilization, and the existence of aesthetic utopia should also be accepted and absorbed from the two aspects of consciousness and practice.

In general, the "developed and harmonious" and spiritual "complete" becomes the core key of Wang Guowei aesthetic education; especially the three components of the intelligence, emotion and will of the Kant aesthetics, and proposes that the modern education system should include the —— morality, intelligence, body, beauty, but moral education is an important means of "complete person"<sup>③</sup>Highlight, "Yes, aesthetic education developed feelings, to achieve perfect domain, and for moral education and intellectual education, which is not noticed by educators." Because of its own "aesthetic unutilitarian" social attributes to the spiritual attributes beyond the objective reality, so he believes that only complete education, including aesthetic education, can adapt to the speed of modern society and match the goal of modern education.Also because of this, Mr.Wang Guowei put forward the famous "replacing religion with art" said, which also directly inspired Mr.Cai Yuanpei's "replacing religion with aesthetic education" said.

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<sup>①</sup>Wang Guowei Wang Guowei Collection: Volume 3 [M].. Beijing: China Literature and History Press, 1997:370.

<sup>②</sup>Wang Hui Pure and transcendence: Zhang Wei's novel creation theory [M].. Beijing: China Social Sciences Press, 2007:12.

<sup>③</sup> Wang Guowei Wang Guowei Collection: Volume 3 [M].. Beijing: Chinese Literature and History Press, 1997:58.

## **(2) Cai Yuanpei: From "replacing religion with art" to "replacing religion with aesthetic education".**

Referring to the "aesthetic education", In China, It is well known that Mr.Cai Yuanpei, the first president of Peking University and the founder of the Aesthetic Education publication, has devoted himself to the connection and development of aesthetic education and Chinese education in his whole life, As the early Chinese period, he helped Western knowledge, Educators and revolutionaries who reconcile the Chinese and Western countries and compromise the old and the new, Its thought and practice not only enrich and perfect the academic form of aesthetic education, It also provides a practical basis in the process of practical application; For example, the new ideas of "freedom" and "democracy" actively advocated in the New Culture Movement, It is the continuation of the idea of "freedom, equality and fraternity" in the reform of education. Therefore, the reputation of "academic leader and model of the world" is worthy of the name.

Mr.Cai Yuanpei's inheritance and transformation of Schiller's aesthetic education thought "borrowed a lot from it". Among his many theories, the most famous and far-reaching significance is the current situation of "religion" and retro aesthetic education position, with the theory of "art for religion" as reference, and combined with Mr.Wang Wei's "art for religion", put forward the famous "religion", he believes that can save the nation cannot be religion but only aesthetic education, because: "aesthetic education is free, and religion is compulsory; aesthetic education is progressive, and religion is conservative; aesthetic education is universal, and religion is bounded".<sup>①</sup>It is worth noting that in Mr.Cai Yuanpei's replacing religion with aesthetic education, he affirmed the aesthetic education factors in religion, and also affirmed the role of religion in bringing people aesthetic feeling and association. However, he believed that such an aesthetic feeling is not pure, so religion can not be replaced with aesthetic education, and the spirit of saving the nation can only be aesthetic education. Beauty does not involve interests and can be shared by everyone without obstructing others. Apart from practical utilitarian purposes, beauty can separate people from real life and not serve —. Compared with religion, it can only have the positive effect of inspiring people and promoting the sound development of the personality without having any negative effect. In December 1930, he published "Replacing Religion with Aesthetic Education", which further elaborated the reason why aesthetic education replaces religion: "First, aesthetic education is free, and religion is compulsory; two, aesthetic education is progressive, and religion is conservative; third, aesthetic education is universal, and religion is bounded". The proposition of "replacing religion with aesthetic education" is in line with the Chinese artistic spirit and national education tradition.<sup>②</sup>Because the Chinese people are different from the Westerners, and do not take the religious and external bodies as the highest realm, the highest realm that the Chinese people pursue is aesthetic. Religion has the conditions of expanding its own religion and attacking paganism, which is fundamentally opposed to the universality of beauty, and is also contrary to the bourgeois democratic education thought of freedom, equality and fraternity. Opting religion and advocating aesthetic education embodies his distinct fighting spirit and revolutionary spirit, reflects the democratic revolutionary dare to break through the spiritual shackles, hope in the reality and future life ideal.

From the present perspective, we have to say that the early people "aesthetic education" movement in China is more inclined to "aesthetic utopia" construction, out of the early bureau, political situation, system construction, economic conditions and other aspects, considering its development in the early period is largely a fantasy, the main reason is that the Chinese modern form of aesthetic education can only be on the basis of independent aesthetic value, it is possible to find the logical starting point of survival. However, in this period, the construction of cross-cultural system of Chinese aesthetic education promoted by the linkage provides the practical significance and academic value of research horizon and research paradigm for

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<sup>①</sup>Uncle Gao Ping Cai Yuanpei Aesthetic Education Paper Collection [M].. Hunan: Hunan Education Press, 1987:206.

<sup>②</sup>Uncle Gao Ping Cai Yuanpei Aesthetic Education Collection [M].. Hunan: Hunan Education Press, 1987:207.

modern Chinese aesthetic education, and the far-reaching connotation cannot be ignored.

## **Conclusion**

As the pursuit of truth, goodness and beauty, Schiller aesthetics is trying to build a bridge between scientific truth, religion and art, and Kant attempts to communicate reason and sensibility, cognition and will, knowledge, affection, meaning, good and beauty, highlighting the modernization of Chinese education and artistic concept. Therefore, the acceptance, dissemination and development of western aesthetic education thought in China should essentially coincide with the aesthetic connotation of traditional Chinese culture, and complete the transformation and creation of its sinicization logically and self-consistently. It is a collision of culture and thought, connecting the cultural interaction and communication between China and Europe, inspires the modernity of traditional culture and thinking, not only self-certification value, but also the beginning of its culture, and plays a programmatic organizational role in the establishment and development of the modern Chinese society. Nowadays, the global pattern of multiple cultural interaction and heterogeneous cultural symbiosis in the human world is already obvious. Based on this, cross-cultural links is undoubtedly one of the important means to promote the interaction and dialogue among heterogeneous cultures.

## **Enriching Children's Experience of Hearing with an Original Sound Collecting Instrument: A Pilot Study**

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### **Abstract**

Child-oriented musical activities and programs are actively being conducted. Given such opportunities, children experience sound-producing events using natural and artificial objects. Additionally, it is not unusual to introduce innovative digital devices, sophisticated software, and apps into the field of music education, demonstrating how children-technology interaction facilitates musical learning and creative activities. Based on this, our challenge is to introduce a new musical artifact that will enhance children's interest in hearing sounds, which will activate the interaction among children, objects, technology, and even their surroundings, including social entities. The fundamental framework behind our attempt is ecological acoustics, ensuring that our hearing experiences should be considered multimodal activities, enabling us to perceive the dynamics of interaction between agents and their surroundings. Based on this view, this study aimed to explore the possibility of enriching children's hearing experience (not just hearing but knowing about the ecology of sound) in musical activity with minimal technological ingenuity. We conducted pilot sessions for preschoolers using our original instrument equipped with a child-friendly interface and functions of recording and replaying sounds. We also conducted a follow-up questionnaire survey with a music instructor and a childcare worker who participated in the study and directed the sessions. The children were asked to record and collect sounds produced by themselves with the objects around them in the sessions. The results showed that the original instrument successfully elicited active performance from the children in a series of activities. While using it, all children were enthusiastic about exploring acoustic events and recording and replaying them. In addition, when hearing recorded sounds from each other, the children concentrated on listening to the sounds replayed on the other's instrument. From this observation and the responses to the questionnaire, we concluded that the process of recording and replaying sounds on their instrument provided a fresh and enjoyable experience for children. Moreover, the process resulted in cultivating self-initiative and a collaborative attitude in the children, implying that our instrument can enhance children's sense of hearing and make the musical activity more social.

*Keywords:* musical activity, experience of hearing, original instrument, sound collecting, ecological acoustics

### **Introduction**

Child-oriented musical activities and programs are actively being conducted. Given such opportunities, children experience sound-producing events using natural and artificial objects (e.g., Child's Play Music is a brilliant source to see play-based musical activities for children). In addition, it is not unusual to introduce innovative digital devices, sophisticated software, and apps into the field of music education, demonstrating how children-technology interaction facilitates musical learning and creative activities (Addessi & Pachet, 2005; Panagiotakou & Pange, 2010; Weinberg, 2008).

Based on this background, our challenge was to introduce a new musical artifact that will enhance children's interest in sound hearing, activating the interaction among children, objects,

technology, and even their surroundings, including social entities. The main framework behind this idea is an ecological approach to perception and action (Gibson, 1966; 1979). According to Gibson's argument, when hearing a sound, we perceive information about an event producing the sound, such as its source (i.e., orientation and localization), and a kind of mechanical disturbance occurring at the source (i.e., identifying the event). This is because the pattern of propagation of the sound wave is specific to the structure of the sounding event, which Gibson called "the important ecological facts for auditory perception" (Gibson, 1966, p.81). This direction has been developed as an ecological acoustics framework by Gibson's proponents (Gaver, 1993; Kunkler-Peck & Turvey, 2000; Rosenblum, 2004) and has also been applied to the fields of musical listening and performance (e.g., Clark, 2005; Leman, 2008; Windsor, 2017). It seemed to be a reasonable development of an ecological view because Gibson (1966) counted human musical performance as an example of a mechanical disturbance in the environment. The following point quite simply captures that fact: "the listener does not merely hear the *sound* of a galloping horse or bowing violinist, rather, the listener hears *a horse galloping* and *a violinist bowing*" (Shove & Repp, 1995, p.59: the italics are original). In short, we hear the dynamics of the interaction between agents and their surroundings rather than the sound itself.

Based on this view, we aimed to explore the possibility of enriching children's hearing experience (not just hearing but also knowing about sound ecology) in musical activity with minimal technological ingenuity. To do so, we conducted pilot sessions for young children using our original instrument equipped with a child-friendly interface and functions of recording and replaying sounds. In the sessions, children were asked to record and collect sounds produced by themselves with the objects around them. We expect that the recording function might work as an "activator" or "incentive" for children to learn about the structure of sound-producing events, including their actions, because it would allow children to listen to the recorded sounds repeatedly and update the instrument to their specifications. In addition, by recording, children might easily let others hear the sounds they produce. This would promote the formation of interactive activities. With this motivation, we descriptively evaluated the effectiveness of our original musical instrument in this study.

## **Method**

### ***Participants***

One music instructor, five healthy children (two boys and three girls) aged 3–5 years, and a childcare worker participated in this study. The instructor was a lecturer at a music school and was sent to the day-care center where all sessions were conducted on-site. The children were toddlers who went to the day-care center, and the child care worker had been working there for one and a half years. The study was conducted with the full approval of the Research Ethics Committee of Komazawa Women's University. The participants (music instructor, childcare worker, and parents of all children) gave informed consent.

### ***Apparatus***

We used our original musical instrument, the "Mycas" (a contraction of "my customized maraca," Figure 1 a), which the second author of this paper developed. The Mycas looks like an ordinary maraca, which consists of a sphere (8 cm in diameter) attached to a handle (13 cm in length), with a total weight of 145 g, which is light enough for a child to carry and play. There are three color variations in body color (red, blue, and yellow-green). The Mycas has a function to record sounds with a built-in microphone and save audio files into an SD memory card in the order of the timeline. The uniqueness of the Mycas is in its playback mode: the saved sound files are replayed from an internal speaker by shaking it, just like playing the maraca. For this reason, we intentionally call the Mycas a musical instrument and not a mere recording device.

The interface of the Mycas is simple; thus, every user can intuitively manipulate it. Three physical buttons are attached near the bottom of the screen, and each function (recording, replaying, and sound file selection) is assigned to an individual button (Figure 1 b). After activating the Mycas, the user can start sound collection only by pressing the recording button. After recording, by shaking the body of the Mycas or pressing the replay button, the last recorded file is replayed. Next, the user can select the desired file by operating a button for sound file selection. An example of a sound waveform and the spectrum of a recorded sound is shown in Figure 1 c. This example has been drawn based on a saved file of the participating boy's voice, which demonstrates that the Mycas has an adequate performance in capturing the features of a sound.

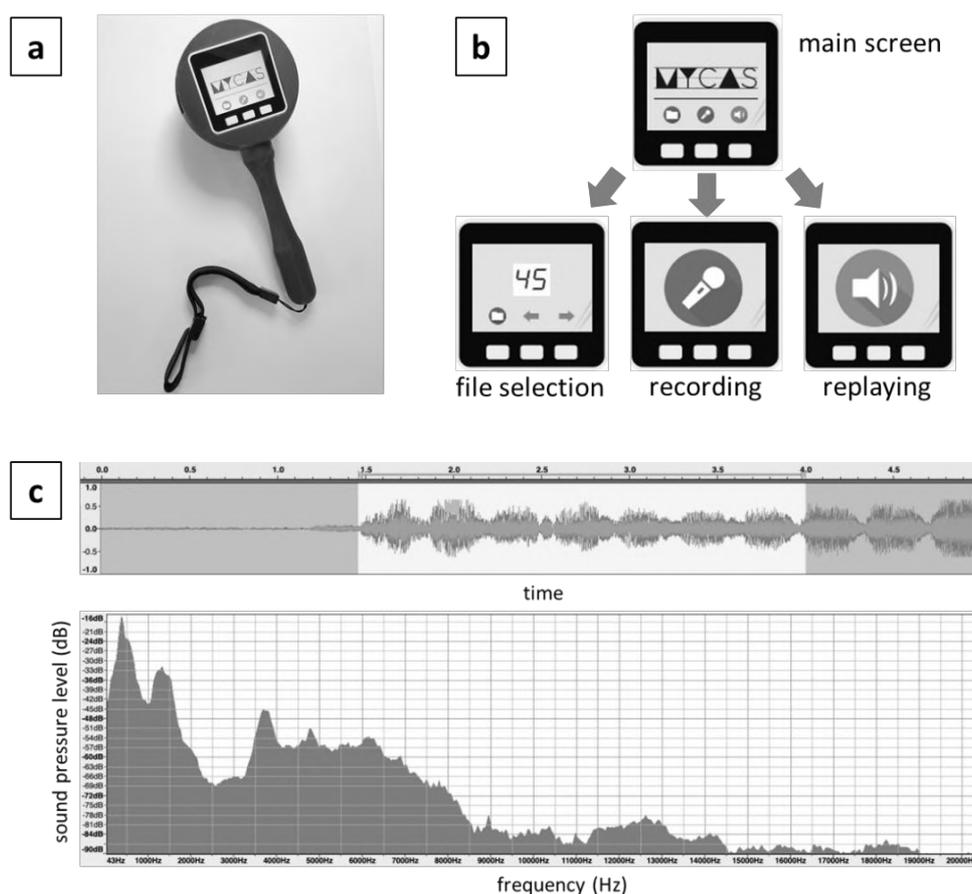


Figure 1. An overview of the Mycas: (a) appearance, (b) transitions of the operation panel, (c) an example of sound waveform and spectrum of a recorded participant's voice (this example illustrates an utterance by a boy [gū, gū, gū, gū...]).

### Procedure

Through preliminary meetings with the instructor, we decided to hold three sessions. The sessions were conducted once every week at an on-site day-care center and continued for three weeks (three times in total). The nursery room, where all the sessions were held, had a wooden floor and was provided with an upright piano, a handmade cardboard playhouse, shelves, and toys. During the session, the participating children were allowed to use the equipment.

Day 1 was for demonstration and instruction of a Mycas by the instructor. She showed children how to use a Mycas, and then, under her direction, all children were encouraged to explore sound sources in the room (about 20 minutes). On day 2, the session proceeded to a more lively phase: each child was given a Mycas and prompted to interact with it independently. For this day, one of the sounds (e.g., sound of hitting the desk) had been recorded beforehand in each Mycas by the instructor so that children inflated their images of the sound. The children were allowed to freely collect sounds with their Mycas within the room (about 30 minutes). On day 3, the children first watched a movie, "The Sound of the Forest," used in regular music activities held at the center. The movie depicts scenes of the life of creatures living in the forest, for instance, a woodpecker drumming on the tree, a horse, and an elephant coming to the riverside to drink water, and others. Although the original movie contains sound effects, such as the footsteps of creatures, all sounds and interactive functions were turned off in this study. Instead, the children were instructed to reproduce the sounds that match the movements of the animals and scenes in the movie with particular objects (e.g., paper cups, plastic bags, etc.) prepared by the instructor. After that, the children recorded sounds with their Mycas and played them back along with the movie (about 30 minutes).

The sessions on days 2 and 3 were videotaped with a fixed camera (day 1 could not be recorded because of technical problems). We also conducted questionnaire surveys with the instructor and childcare workers after the sessions. After considering the prevention of the spread of COVID-19 infection, we decided to have the local staff conduct all sessions without outside investigators being present.

## Results

Overall, the Mycas were welcomed by the children and successfully elicited dynamic performance in various sessions. While using it, all children were enthusiastic about exploring acoustic events and recording and replaying sound files. Here, we report a summary of the results based on a descriptive analysis of the data.

### ***Outline of the collected sounds and observation of the children's behaviors***

After all the sessions, we checked the sound files saved on all Mycas and sorted them out in terms of the types of their sound sources (files without any audible sound and extremely short files were excluded). To do so, we classified the files on a three-point scale (obscure, somewhat clear, clear) based on the degree of articulation of the sounds and referred only to the files with the "clear" and "somewhat clear" rank in this analysis. We then set up six categories according to the type of principal sound source and counted the number of files corresponding to each category (Table 1: Only the data of the Mycas operated by the children are targeted).

For example, the type of "child's voice" refers to files in which the participating children's voices were audible as the dominant source. The complicated case was the "mixed sound." We classified them as such because multiple sources could be identified as clearly as they were. However, because of the difficulty in identifying each source, we excluded them from the analysis. Note that in Table 1, files are not divided by the session date. This occurred because we omitted the implementation of a function to record the timestamp on each file, which caused the non-recording of the date and time information. Therefore, by referring to the videotaped data, we supplemented the analysis of the features of the collected sounds and children's behaviors.

As shown in Table 1, the highest number of identified files were those classified as a child's voice. It was well reflected in their behavioral features on day 2 when each child was given a Mycas and they could record sounds by themselves. When free exploration began, some children enthusiastically recorded their voices while moving around the room. They enjoyed repeating the cycle of speaking to (and yelling at) their Mycas, shaking them, and listening to the replayed sounds for a while. In addition, in the session, children actively engaged in this

activity and made various sounds while devising ideas. The number of files of “produced sound with object” and “musical instrument sound” illustrates this situation well. Children recorded the sounds produced from objects such as play-house toys and paper cups, among others, and the sounds played by musical instruments such as the piano, bells, and tambourines. It was observed that when the children finished recording, they went to the instructor or the childcare worker and made them listen to the sound. In this way, there were opportunities to share each child’s experience of the sound collection.

Table 1. List of the recorded sound files

<i>Sound type</i>	<i>Number of identified files</i>	<i>Examples</i>
child’s voice	44	participant’s voice, yelling (“ah, ah, ah!”) , sound of shaking lips, a kind of onomatopoeia (“ bu, bu,...”, “gū, gū, gū...”), conversation
adult’s voice:	9	conversation, instruction, evaluation
musical instrument sound	16	piano, tambourine, tinkle of a bell
produced sound with object	19	sound of tapping, hitting, and rasping
daily life noise	1	ringtone
mixed sound	18	Instrumental sounds with children’s voice and laughter, or with produced sounds

Further, we observed cases where the children and the instructor tried to produce sounds with objects simultaneously; for example, a participating girl (4-year-old) wrapped the strap tied to the Mycas around her wrist and ran through the room with a plastic sheet in her hand. First, she attempted to produce a sound by fluttering the sheet in the air, but it did not work well. Then, the instructor helped to hold her Mycas, and the girl ran again with the plastic sheet and tried to record the sound, but that did not work, either. Eventually, the instructor suggested holding the plastic sheet together and shaking it up and down to record the sound. In this way, the girl’s activity developed into a collaborative one.

On day 3, the children were asked to (re)produce sounds according to the movie content using the objects prepared in advance. At this point, the instructor proposed the division of roles for the children: one child made the sound of a woodpecker pecking a tree, another making the

sound of the babbling of the brook, and so on, while another recorded the sounds with the Mycas in order. In this way, the degree of freedom in the children's activities might have decreased compared to the situation where the children were free to explore sounds as on day 2. However, with such constraints, we could see the scene in which children used the objects to make sounds and shared ideas in response to the instructor's question about creating sounds that match the movie content. They carefully observed how other children made sounds with typical objects and then concentrated on listening to the sounds replayed on each other's Mycas. At the end of the session, the children tried to play the Mycas during the movie according to the sound of the role assigned to each of them. They focused on watching the movie quietly (nobody made any irrelevant noises!) and prepared to shake the Mycas to fulfill their roles.

### ***Questionnaires with the instructor and childcare worker***

In the questionnaire survey, we asked the instructor and childcare worker mainly about the children's attitude and atmosphere in the Mycas sessions, their impressions of the sessions, and any suggestions for improving the Mycas as an educational tool.

We conducted this questionnaire for the instructor after each session and the childcare worker after the last session. From their responses, it can be said that the children had very high interest in the Mycas throughout the series of sessions. For instance, the childcare worker wrote that the children liked the Mycas so much that some of them wanted it as a birthday present. In addition, both mentioned that the children seemed to enjoy exploring, producing, and recording various sounds with the Mycas by themselves. While watching over the children's actions, they both enjoyed the activities together. The instructor also commented that, especially on day 3, the children learned to make sounds by themselves, recorded them with other children, and listened to each other's sounds.

No major problem with the basic operation of the Mycas was mentioned, but regarding the mechanical aspects, it was pointed out that some improvements were required. For instance, the recorded sounds were sometimes replayed even when the Mycas was not shaken, or the sounds were replayed with only a little vibration.

### **Discussion and Concluding remarks**

This pilot study examined whether the Mycas was accepted by children as an instrument to drive their interest in sounds and enrich their hearing experiences from an ecological perspective. As reported, we observed that the children enthusiastically recorded their voices and actively produced various sounds by using objects around them and instrument sounds. This suggests that the use of the Mycas provided an opportunity for the children to explore and learn about the relationship between the sound and its producing event. This included their body movement as events that generated voices and interactions with objects. At this point, it is possible to see the intersection between our view and ecological acoustics. As mentioned above, the sound is thought of as structured information about sound-producing events that consist of interactions between agents and objects (Windsor, 2007). Thus, hearing and knowing about a sound results in perceiving the meaning (i.e., the content) of the corresponding movements (Clark, 2005). From these positions, it is necessary to view our experience of hearing from its multimodal contexts. The meaning of the experiences of the participating children would be parallel with these positions in the sense that the children monitored the structure of sound-producing events (e.g., vision and auditory perception) and sensed the dynamics of the events by becoming part of them (i.e., proprioception). A key characteristic of musical play is multimodality (Marsh & Young, 2016), which is the case here.

We speculate that the unique appeal embedded in the Mycas succeeded in motivating the children and brought about this outcome. The instrument-like appearance with a child-friendly interface, portability, and recording function helped the children broaden their meaning of sound collecting activities (more than just hearing). This might also contribute to a sense of

self-efficacy in controlling the “musical instrument” by themselves. Moreover, the portability and recording function seemed to elicit collaborative behaviors from the children: recording and replaying each other’s sounds and hearing (sharing) them together while carrying the collected sounds with their Mycas. This observation may be in line with recent studies indicating that joint musical activities enhance young children’s prosocial behaviors (Buren, Degé & Schwarzer, 2019; Kirschner & Tomasello, 2010), although our study is quite a limited attempt at this time. In the future, we will verify the session under more formal conditions with mechanical improvements to Mycas, as pointed out above.

Based on this discussion, we conclude that the recording process and replaying sounds under their immediate control provided fresh and enjoyable opportunities for the children. This resulted in cultivating the self-initiative and interactive attitude of the children, implying that our instrument can enhance children’s sense of hearing, raise awareness of the sound ecology, and make the musical activity more social.

Igor Stravinsky once said that the natural sounds (e.g., the rippling of a brook, the song of a bird) are not yet music themselves, but these “suggest” music to us (Stravinsky, 1942). Therefore, we continue to aim to develop programs using the Mycas, which will make children more sensitive to the ecology of sound and give “suggestions” to lead them to a richer and deeper musical experience.

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## Declaration of conflicting interest

The authors of this manuscript declare that there is no conflict of interest.

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## **Inspiring a Regenerative Approach to Music for a Post-Pandemic World and Sustainable Future**

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### **Abstract**

Whilst University of Macao commemorates its founding under its present title some 40-years ago, Colégio Memorial Moon Chun, began its life less than a decade ago, at the start of 2013 academic year when it moved onto a newly-acquired Chinese island of Hengqin, joined by the rest of the University some twelve months later.

The island campus, a multibillion construction now all but complete, was handed over at midnight July 20 2013, as officials from Guangdong border control withdrew from the north gate of the University's campus, a gesture for which there is 'no recent precedence', New York Times, 17 July 2013.

Fast forward to first semesters 2019-20 and 2020-21, and the College saw a veritable stream of master classes and music workshops, resulting in residencies by Clare College Choir Cambridge; Austrian jazz ensemble, Michaela Rabitsch & Robert Pawlik Quartet; and Hungarian concert pianist: Endre Hegedűs.

Together with the Stradivari Piano Trio, the semester was capped by a Macao SAR initiative to bring the Vienna Philharmonic to Macao. Envisioned as alfresco performances in the University's Library piazza, forecasts of severe tropical winds conspired against a wide, open-space locale and consecutive performances were moved to Centro Cultural. That the residency was conceived not by flagship cultural industrialists but as a collaborative venture says much about the organic nature of association between town and gown.

Formal table with Lusophone music performed by undergrads contributed to a rich cultural environment with College ensemble; Tetrad - comprising fellows, local professional and semi-professional players and young undergraduate music makers at Salon Clube Militar - a venue which provided formative performance experience. 2020 semester culminated with College freshmen Henry Che's professional début with Macao Orchestra, as soloist in Mozart's Violin Concerto No 3 in G Maj. That there were visits by Shanghai Conservatory and Tsinghua University during the same period says much about the College's standing.

How has such a journey been possible in a time of neo-liberal capitalism, aggravated socio-political tension and radical violence, when curricular content is driven by employment relevance and hyper-competition; a period of pandemic and economic crisis deeply affecting Gen Z and impacting on music education across the world? One in which universities reeling from aftershock have migrated towards blended learning and intensive campus testing, yet where all-too-scant time has been given to cultural EQ, increasing transformative learning modalities, acknowledging the sensory, regenerative value of arts and music as part and parcel of wrap-around pastoral, mental-health and restorative well-being.

Keywords: regenerative approaches to music post-pandemic

## Introduction

For generation Z the débâcle of lockdown and ensuing sense of entrapment, may have felt like the cheerless refrain of Hôtel California: 'You can check out any time you like / But you can never leave!' <sup>1</sup>

Broadly conjectured the eponymous 'Hôtel California' was, according to one of the song's co-creators, Don Henley, more about overindulgences of American society rather than anything prophetic, together with heady sense of weighing adolescent desires with capitalism at large.

Yet quotes of song lyrics can sometimes help to illuminate a world changed. Today's perhaps forever, by a raging contagion. One which has conspired to alter our lives in distinct ways. One in which we are only now coming to terms. But for Henley and his *confrères* the words were - in truth – of a different time and place, of a different nature.

The lyrics offer a structure with the fabled hôtel being a somatic construct, the Hôtel California. Whilst there is no tangible Hôtel California, the Beverly Hills Hôtel approximates and its twilight image provides artwork for the album's front cover.

And, what on earth does it all mean? A mind set? A way of looking at life and of one's demise - a *memento mori* of the inevitability of impermanence?

Hardly, if we are to accept the account given by one of Henley's fellow Eagles' band member, Glenn Frey, 'It works, it means whatever the listener wants it to mean', he says. 'Vaguerly is the primary tool of songwriters'.

As weary months wear on, many countries still in lockdown, this period may be recollected not as guests residing in Hôtel California, nor confinement of Covid Prisoners, but rather as a seminal moment of reflection flanked by fore and aft periods. The beginning of a new ascendancy in how we communicate marked by an unprecedented centrifugal expansion of digital power in an online world. Perhaps like Sartre's play, *Huis Clos*, the true imprisonment of Covid-19 lies within.

## Music anthropologies

Positively, we may concur that a return to nature and the natural world has been a welcome move.

Allowing an indulgence of a further citation<sup>2</sup>, now, quiet streets are indeed 'Quite over-canopied with luscious woodbine, With sweet musk-roses and with eglantine'; music from open windows, impromptu recitals from roof tops, an aubade, evoking day-break in Tuscany; then a serenade from a Florida lanai garlanded with Spring flowers at nightfall'; plaudits from communities positioned two metres apart in praise of medical front-line personnel, supermarket cashiers and ambulance employees.

As ethnographer and music anthropologist, Kristina Jacobsen, writes, "Into [the] void of daily scents and sounds, a multitude of melodies and activities has been born", veranda solos, impromptu dance, daily rituals of kitchen worktop barre exercises for articulate bodies, kitchen-sink drama, "recordings and in-home videos, These: "wail about corona, express defiance towards the disease and communicate the sense of hostility that some locals feel towards the influx of wealthy northern Italians who have been rushing to their summer houses."

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<sup>1</sup> Thompson, K. (2020). Checking Out of Hôtel California: Blinking in Post-Pandemic First Light. Collegiate Way International July 2020, 1. 5-8.

<sup>2</sup> Ibid.

In a time when the world is confronting daily totals of coronavirus of some 152,046,708 cases, over 3,204,702 people<sup>3</sup> have died of Covid-19 worldwide, the British Government is proposing to reduce by half funding of music and the performing arts<sup>4</sup>, seeing these as no longer of strategic import. The disheartening news would seem counterintuitive in a period in which an audience estimated at some 12 million viewers watched in rapt interest the serial dénouement of 'Line of Duty'<sup>5</sup>.

For 'Line of Duty', to have gripped a nation, when multiple channels, cable and internet proliferate serves as a seminal barometer, or rather a sphygmomanometer of a people made restive by pandemic; of a moment when same family groups came together seeking solace and restorative comfort. Viewing figures of the police drama's dénouement<sup>6</sup> corroborated the sway the series held over the national psyche; the outcome of a complex sequence of events revealed a day when publican landlords held screening socials.

Putting to one side the value and values of cultural industries to the nation's economy, the British Government's belt-tightening proposal suggests a dispiritingly unenlightened position with regard to arts education; manifest disregard for subjects with ideals of reconnecting with what it is to be human, with spiritual reawakening, mind and body. It is a concept Lauren Kapalka Richerme posits of 'becoming feeling,' informed by a meld of Langer's and Deleuze's writings on the ontology of arts, specifically, the form and manner in which arts exist and how they relate to a broader world<sup>7</sup>.

The desire for reconnection now would seem more profound than ever as people chastened and made weary by a prolonged pandemic-laden period seek egress from a transmuting, unmerciful virus, one which knows no borders, island or sea, recognises no exceptionalism. Nor should we. Given the moment may not reoccur, the opportunity exists of moving to a fairer trajectory, to a kinder world.

The Musicians' Union has responded to the UK Government's proposal for cuts in funding with "horror" saying the proposal will be "catastrophic for music provision at HE level"; Equity dubbing it as "another government attack on arts education after years of deprioritising creative subjects in our schools"; forewarning it could "block a route into the creative industries for working-class and other marginalised groups". The Public Campaign for the Arts countered that arts and arts education should be among the Government's strategic priorities with millions in lockdown turning to the arts to support psychological health and wellbeing<sup>8</sup>.

Concern coming from someone working in Pacific Asia, could appear tinged perhaps with a degree of *schadenfraude*. Save, lest it be erased from the mind, the pandemic is rampaging, seemingly out of control with new strains and variants zigzagging around much of the developing world with infection rates soaring, fatalities rising to new daily highs. Understandably, people are feeling exhausted, at risk, and fearful.

It is necessary, therefore in taking an endogenous regeneration and restorative approach to music for a post-pandemic world and sustainable future, to look at the broader collegiate and higher education piste in which music and music education can take place.

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<sup>3</sup> Julie, M. (2021). Coronavirus in the world: latest case and death tolls in 24h per country <https://www.sortiraparis.com/news/in-paris/articles/212134-coronavirus-in-the-world-as-of-datadatestodayfrlatest-latest-case-and-death-toll/lang/en>

<sup>4</sup> Sachania, M. (2021). Value of Music, The Times.

<sup>5</sup> Wills, E., & Saunders, E. (2021). Line of Duty finale lands record ratings. BBCNews. <https://www.bbc.com/news/entertainment-arts-56945425>

<sup>6</sup> Ibid.

<sup>7</sup> Richerme, L.K. (2017). A Deleuzian reimagining of Susanne Langer's philosophy: becoming-feeling in music education. Music Education Research. 20(3), 330-341. <https://doi.org/10.1080/14613808.2017.1409201>

<sup>8</sup> Public Campaign for the Arts May 2021

Few parts of the world have not been impacted by the pandemic or its repercussions. It has sent shockwaves through economies and polarised politics. We have seen a sea change in the way we live and and go about our lives. Macao too, has not escaped though largely free of the virus, effectively, borders with the rest of the world are all but closed save we can at least go about our business albeit with precautionary, requisite safeguards in place.

It has given rise to profound fears of a monetary downturn, retail, hospitality and gaming industry job losses, provision of public housing and public services, and of a shrinking, traditionally a somewhat paternalistic social welfare system, a culture if not a web of dependency, introspection, protected jobs and annual hand-outs.

Increasingly, the economic basis of Macao has begun to look insecure and unstable. Acknowledgement of this erased all traces of what were once regarded as the certitudes of life in Macao. The economy over time, had become overly reliant on income from the hospitality industry, and truly eye-watering revenues from gaming.

In essence, gaming did not so much overshadow Macao economy. Gaming was Macao's economy. The downturn was viewed, perhaps not unexpectedly, as questioning a decades-held rationale of Macao. Yet, significantly, with the context of dealing with a pandemic, the response from gaming remained surprisingly muted.

Catalytically, this was to serve as an incentive for an alternative, more diverse economic base, and conceiving and realising an endogenous regenerative strategy: one grounded in Macao's talent pool; substituting programme content and personnel with respected local players, academics, arts practitioners, young musicians and recreational artists in programmes formerly contingent on artists and musicians from overseas; another encompassing music and arts development in the community, and a third, corporate and angel investment in new venues and multi-facility arenas.

Naturally, there were those who were optimistic about the opportunities of embracing and of profiling within Macao's shoreline local, home-grown cultural talent, and perhaps filtered through an aspirational sense of empowerment, self-determination, and of having greater prospects of self-expression.

Conversely, there were some - relatively few - fearful of long-term reputational damage, or simply sceptical as to the extent to which standards would be upheld with regard to the City's growing, prior to pandemic, exemplary reputation and international credibility as a centre for arts and world heritage, the subject of extensive national and international media attention.

### **Place-based, social commentaries grounded in the realities of life**

Government inward investment in infrastructure came in the form of transportation and renovation of UNESCO listed and heritage buildings - some specifically for arts and cultural use and given acoustic and lighting enhancement, were transformed into new evocative spaces for arts to take place. The significance of these spaces refracted through the many-layered lens of Macao's history, mirrored and revealed its rich intercultural past.

Players of the local patuá theatre company, Dóci Papiaçám di Macao were, to some extent, already marginal to the principal, substantive arts programme, drawn largely from within Macao's Macanese, Philippine and Lusophone community. With a loyal following for its brand of satire and its view of the world - produced from a position of being relatively insulated and autonomous – it may well have been able to continue to perform were it not for months of limited availability of much-used venues, of spatially-distanced seating, and of patrons wearing masks in theatre and music auditoria.

Inevitably, there have been moments - town-and-gown, civic and commerce - of closure and of reopening once immediate risks of contagion subsided. Once more, arts, music and culture and their venues were re-established as an instrument through which the City's cultural history could be maintained and through drama – in the case of the patuá theatre, in song and through visual art - light, topical knockabout satire might be played out: perhaps of Macao's prodigal, mega-rich scions, of a wider range of social issues, or of something topical and germane to the City's outlook. Place-based, these social commentaries were invariably grounded in the realities of life in Macao, and latterly, the realities of pandemic.

Backtrack to 2012, the conception of the idea of Orquestra de Macao making its home within the University took tangible form with appointment of writer, together with an invitation to help found a college within the University of Macao, and to serve as inaugural Master of Colégio Memorial Moon Chun, on the newly-acquired island. The idea was not new however. Mendelssohn, founded the first German music conservatoire in Leipzig in 1843, with leaders from Gewandhaus teaching within Leipzig Conservatory.

Whilst the model has not been emulated to extent of establishing an academy or conservatoire, College has become something of a centre for experiential learning in the round, for promoting music and horizon-broadening of international exchange, from Oxford and Cambridge Choirs to the Royal College of Music.

The College is in every sense a community of scholars from its freshmen and fellows to its wider circle of town-and-gown supporters. Its reputation is one of primus-inter-pares, first-amongst-equals, for the quality of its educational leadership and policy, music in performance, cultural activity, and within international business sectors is immensely valuable to the University at this time.

Building upon its early success, the College has seen a diversity of interdisciplinary activities and keynote residencies from William Christie to the Choirs of Clare College Cambridge (2 visits), Gonville and Caius, and Girton College Cambridge; BBC Philharmonic to Academy of St Martin in the Fields, each contributed alongside celebrated artists, film-makers and musicians, perhaps for the first time<sup>9</sup>. In 2015. The College gave the Asian première of the original Bristol first performance version of Vaughan Williams' *The Lark Ascending*, at the College's Great British High Table to promote the Great Britain Campaign.

### **Responding to the beat of a different drummer**

In pursuing a brokerage rôle, drawing out that which lies within seems to enable a more culturally informed, common wealth of intellect; a mutuality made richer by sensitivity to those who respond to the beat of a different drummer, to a diversity of faiths and diversity of cultural values, we arrived at a set of outcomes enhanced. Anecdotally, at least, the context of a collegiate life informed by music, arts and cultural brokerage would appear to enrich quality of life to the community about us and to enable conducive town-and-gown relationships to develop. People, even the shining ones, musicians the world over feel intensely vulnerable, respond to an environment in which they feel to be in safe hands and protected.

Artist, Jeff Koons, has not so much outgrown his 1980s reputation as being *enfant terrible* of 1980s contemporary art as to recapture puckish energy and whimsy, irrepressibly finding buoyancy in testing the boundaries of American taste. It is a heady symbol of American art, and of a vital spirit of renewal for the augmented reality of a post-lockdown world: "What you want to do in life is to remove anxiety and the way you remove anxiety is through

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<sup>9</sup> Thompson, K., Evans, H. M., & Burt, T. P. (Eds.). (2016). *The Collegiate Way*. University Education in a Collegiate Context. Sense Publications.

acceptance'.<sup>10</sup> And, in a time of unpredictability when cultural dialogue is vital, perhaps more than ever: 'It makes bearable things that are almost unbearable'<sup>11</sup>

Through music, arts and sciences human stories are told, many left uncelebrated. These stories enable connections with those seemingly unreachable in the initial phases of encounter, and, where only a small part of character is observable. These examples – held in a moment when a look intensifies, then opens and softens into luminous kindness - may be singularly disposed to effect constructive intercultural and interfaith understanding and to promote reconciliation. A locus of consciousness, rationality, generosity of spirit, kindness to, and of, strangers, embodies the quintessence of whom we are.

Whereas social support hypotheses derive predominantly from trauma and coping literature, Colleges are in a rare position to enable preventative support in house. It is by looking at the challenges international and home students face we may come to understand their experiences and vulnerabilities, dispel misconceptions around internationalism and seek to enhance their studies together through advising on local and national policy changes, widening pluralism and parameters of social interaction.

Collegiate communities cannot of course claim to be Jupiterian bringers of peace, but can assuage separation, allay fears of unfamiliarity, reduce unawareness and enable conflict resolution. Over and over again when one reveals a disconnect between young peoples' world views they so often move to bridge it and remap peace.

The daily relentless depiction of rocket attacks and airstrikes between Palestinians and Israelis now seem in stark contrast to times when the paradigm of the *Israeli, Palestinian West-Eastern Divan* - founded as an intercultural workshop for Israeli, Palestinian and other Arab musicians by pianist Daniel Barenboim and cultural theorist Edward Said - gave so much hope of peace. Let us hope it can be regained.

Evoking the elemental quality of counterpoint in music, Barenboim illustrates that, 'in the act of challenging each other, the two voices fit together', that 'music is always contrapuntal, in the philosophical sense of the word', 'joy and sorrow can exist simultaneously in music'. He contends, 'acceptance of the freedom and individuality of the other is one of music's most important lessons'.

It is a viewpoint which underlies the West-Eastern Divan Orchestra: 'You can't make peace with an orchestra', but one can 'create the conditions for understanding' and 'awaken the curiosity of each individual to listen to the narrative of the other'<sup>12</sup>

Linguistic and cultural narratives - Chinese, African, Lusophone and Western - have long been part of the Janus-faced nature of Macao, looking East and West. It remains quintessentially multi-culturally and artistically diverse.

Today music is to be found within the splendour of Catholic cathedral and church, in mainstream orchestral, chamber music, children's and social outreach programmes of the Macao Orchestra, in the relaxed cocktail hours of hotel bars, in early evening soirées of the 18<sup>th</sup> century Casa Garden, pubs, and after-hours' jazz clubs. Within African tribal dance and talking drums. Within the collegiate cloister of academe and without. Music comforts, supports and releases the creativity of community town and gown in ways people define for themselves.

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<sup>10</sup> Graham-Dixon, A. (2011). Art of America, What Lies Beneath. BBC Four.

<sup>11</sup> Ibid.

<sup>12</sup> Vulliamy, E. (2008). Bridging the Gap, The Guardian.

<https://www.theguardian.com/music/2008/jul/13/classicalmusicandopera.culture>

For Music, as with visual art and so many art-form expressions, is an “art of questions; not of certainties”.<sup>13</sup>

### **Points of discussion: ideals, points of articulation, fewer certainties**

As the College and the world has moved on there are fewer certainties. It is less easy to comprehend the whole of its remarkably protean nature. It has assumed a shape and format somewhat dissimilar from those originally intended. It has sought more of the student voice, characteristic of new pathways of activities pursued by succeeding cohorts of undergraduates within the MCMC fold.

Within this still small City (especially in terms of proportionality of neighboring megacities) there is positive recognition of finding a pragmatic, post-pandemic compromise between widely-held free-market economics, and pro-development, liberal democratic values held to embody sharing material wealth for benefit of a pluralistic society and diversity of cultural practices<sup>14</sup> (UNESCO) .

Specifically, staying true to communitarian redistributive practice, supporting music and culture in the round, together with balancing more targeted investment based around small, locally-managed music and performing groups; and recognising individual aspiration through the City’s Corporate Social Responsibility (CSR), and Cultural Industry Funds (CIF). It is the art of politics and of enlightened governance: an ability to achieve desired, respective ends without giving rise to cycles of dependency, or of replacing one type of dependency with another.

There are issues of greater universal applicability to be adduced beyond Macao’s shoreline in relation to preparing young musicians for the realities of life in a post-Covid world, and in terms of inspiring an endogenous regenerative approach, a sustainable future and long-haul restorative well-being. As in the Latin root of education itself (*educere*), leading out from a point of curiosity and bewildered wonderment to precious *in vivo* moments of wrapped engagement in ways young people feel invested, empowered to make music through their own endeavour or through co-operative approaches, reflecting their character, sense of identity and modes of expression, on their own individual terms.

Through these articulations the College has remained true to its ideals, enabled a point of articulation with faculties, and given some encouragement and importance to the rôle of creative arts in a predominantly, science and engineering university. That these are recognised in the University, locality and within the wider community at large is source of enduring pride for undergrads, fellows and colleagues alike. Something of a touchstone perhaps, of success in itself.

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<sup>13</sup> Ibid 10.

<sup>14</sup> UNESCO. (2013). Development of Cultural and Creative Industries (Macau). <https://en.unesco.org/creativity/policy-monitoring-platform/development-cultural-creative>

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SPA-085

## Early Childhood Music Intelligent Development Based on Multivariate Perception

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### Abstract

The purpose of this article is to explore the significance of learning keyboard instrument for children aged 3-6 and its role in the development of music intelligent. First, the problems of music education in early childhood and the challenges faced by children's musical instrument learning are presented. Then, the problems of music perception and music learning in children were analyzed and studied by means of current situation investigation, actual teaching mode evaluation and learning method result measurement. The results show that music education in early childhood is based on multivariate perception training, to seek a happy learning process, and the development of music intelligence through happy learning.

*Keywords: Multivariate music perception; happy learning; music intelligence; complementary pattern*

### Introduction

Through the ages, piano learning has always been a traditional music education paradigm in the mind of the people. Although some young parents had cognitive deviation towards piano learning and some children were tortured by piano learning, the parents forced children to stick to it due to a herd mentality and longing to success(Lisa Huisman Koops,2018). A survey of early childhood piano learning in a certain region of China from 1990 to 2000, 6% of the children received the ideal music training and engaged in the professional study and work on music (Fang Li,2008), 25% of the children received intelligent development and achieved in study, 43% of the children had only acquired some playing skills, but no full training of music literacy, 26% of the children did not get anything.The results only reflect a region's situation, and inevitably have different degrees of deviation, but it prompts children's music educators how to understand the purposes of early childhood instrumental learning and how to construct the contemporary early childhood music education theory and the path of practice. Based on the traditional music education concept and instrumental music teaching system, facing to the multi-variation and intelligence of music cognition and development in information era, musical instrument teaching system and learning pattern in early childhood are challenged.

One challenge is the traditional piano teaching system aims at piano skills training, embodying in the fingering training of teaching materials and methods. With the improvement of playing skills, playing style and expression will also join in the teaching content. Till now, the traditional piano teaching system is established on the basis of playing. Depending entirely on the education teaching system is not suitable for all children, and can't reflect the purpose of early childhood music education. Therefore, the early childhood piano education teaching system needs to be perfected and innovated.

Challenge to another, the electronic and the Internet music of Information era change people's perception to music. Because of the diversity of music spread and the intelligence of music creation, music educators return to music extension intelligence attribute(Yumeng He,2016). They engage in establishing the thought of a happy music and thinking style of happy study. To meet the needs of the early childhood music education, the diversity and intelligence should be led into early childhood piano education, it is an urgent problem to be solved for children's piano educators (including other instrumental educators). In fact, early childhood music education is an old topic, we have explored more than a century and

acquired a variety of childhood music education concept, pattern and system. However, no any education and teaching mode applies to each child. In other word, there is no universal, absolute music education teaching mode due to the individual differences in the perception of the keyboard, the environment adaptability and the way of acceptance.

The paper put forward to early childhood music education concept from the multivariate perception to music intelligence development in information era. Through the comparison and analysis of the evaluation results of the piano and electone for 3-6 years old children, a teaching strategy and mode from music enlightenment to music learning was obtained.

## **Music enlightenment based on multivariate perception**

### **The inspiration of Orff music education system**

There are two important music puberty stages for people's whole life, one is 3 -6 years old in preschool, and another one is 12-15 years old in middle school. As we all know, the first stage is the important period of early childhood music enlightenment. The current situation in Chinese early childhood music enlightenment education is no systematic and complete education system (mainly refers to the kindergarten), that is, we lack of individual and object-oriented music enlightenment education, simply singing children's songs and playing games. Therefore, parents have to cultivate children's music talents by selecting family music teachers and social music education institutions. For children of 3-6 years old, it is a common phenomenon using the piano as a zero-based music learning method (or other instrumental music). Through the survey data as mentioned above, only few gifted children in instrumental playing acquired higher music achievements, the majority of children did not obtain satisfying music education effects.

In recent years, the Orff music education system arouses widely attention in Chinese early childhood music education. In theory, Orff music education system conforms to early childhood music education features. The instruments he played based on rhythm, combining with body rhythm, singing, playing, moving, listening, and prominently performing percussion and various phonoreception characteristics, is called "Orff instruments". However, it is uneasy to achieve the sound conditions and environment of various "fixed" and "unfixed" sounds required by the "Orff instrument" in the music teaching activities. Moreover, how to effectively organize and use the "Orff instrument" in children's music education also needs careful teaching design (Miao He,2017). Then, it is a meaningful research topic how to choose and innovate "Orff instrument". In the research and teaching practice of electone, we found that the electone is an intelligent "Orff instrument". Because its rich sound effects, with hundreds of timbre, can simulate the string, wind, acoustic, vocals, percussion and other tone, it is the embodiment of a perfect sound effects of music perception space.

Orff music education system has an actually basic concept: everything is for children. Its teaching purpose is to let children fully experience the music, using natural, primitive, diversified material guiding children. In the child's music initiation period, the goal of teaching is not a skill, but allow children naturally into the music space from the perspective of diversification. Children are not students in class, but as players involved, it is an experience that precedes intelligence.

### **The meaning and function of multivariate perception**

Early Childhood music education consists of two aspects, one is the music enlightenment based on the perception, the other is the music learning based on the skill. Only when the child becomes involved into music space, feeling music happiness and music demand, can it truly reflect the significance of music learning.

Perceptual training is an important content of early childhood enlightenment education .It is the basic training for children in memory, imagination and thinking, so the effective perceptual training will directly affect the child's intelligence level (Alexandra C. Taylor,2017). The sensitivity of music is the nature of children, and it is also guarantee of

arousing interest, so perceptual training becomes a necessary part of early childhood music education. Music perceptual training has become a consensus of early childhood music enlightenment education, and it has been conducted in further study and practice. Many researchers also put forward to training children's musical perception from a full range of environment including listening, watching, thinking style(David J,2012; Cristina Arriaga Sanz & José-María Madariaga Orbea,2014). For example, focusing on developing the children's line of song, rhythm of melody, fast and slow, strong and weak, and even to slightly more difficult pitch and timbre, etc. On the basis of perceptual training, the perception of music style, music structure and other aspects is gradually achieved. In fact, perception training is a general and fuzzy process, and there is no specific standard or pattern, which needs to be carried out for the acceptance of different children.

Research shows that children's music perception is not only limited to the area of music, but sets up among the time, space, and various life experience in the process of music activities. The training through various forms of music perception training can be called multivariate perceptual space training. For 3-6 years old children, the music is not quiet to learn, but to feel the music in different time and space environment and participate in from head to toe, feeling the rhythm, pitch, and all kinds of sound perception. For example, in order to train the children to get the perception of different instrument, some music teachers or parents allow the child to listen to the band rehearsals closely. When at the start of any instrument, the children will pay attention to what is the sound of cello, flute or the trumpet. In fact, orchestral music and symphonies are the most suitable for children to train music perception, which is the best reflection of music perception of time and space characteristics. But there are not too many opportunities for children. Now, with an electone, the children can sense all kinds of instruments and music effects.

Therefore, children's music enlightenment can be established on time, space, and active environment by electone. The children can set up the idea of music demand through children's music perception training, so they can really join into music learning stage through their own experience of playing the instrument.

## **The comparative analysis from happy learning to music intelligence**

### **From multivariate perception to happy learning**

As we all know, child is curious about everything, childhood is a significant period for people's whole life due to the high potential and promising future. Children acquires the useful materials and tools and lays the foundation of happiness during this period. So what is a happy life? If one can discover his own intelligence type and characteristic correctly and show it in his life and obtain certain harvest and satisfaction from it, they make it. Parents hope their children can live a happy and good life in the future, so children's wonderful life should start from "happy music". The trend of childhood music education transfers from the traditional techniques of education to the happy education of multivariate intelligence. Nowadays, "happy music and happy learning" are widely advocated, it is the duty for the teachers to discover the joys of learning and share it with children in practice. As a result, children are very happy and voluntary to be involved into music. Music teachers should concentrate on these elements which can influence the teaching efficiency and children's happiness.

Musical instrument learning requires a hand - eye coordination, which can also help the children in other aspects of intelligent practice. However, learning instrument may be a little reluctant to the child younger than 4 years old, because they are not very strong in muscles development, weak concentrating, and fond of playing. They are tortured by the dull instruments study. The traditional training usually choose the piano and other instruments to lead the 3-6 year old into music space, but it is not easy for music enlightenment education. With the further development of electone in music education in China, it shows its irreplaceable role in the early childhood music education. In recent years, many music teachers play electone as an effective way to teach the kids due to the gradual recognition of

electone. 10 Chinese cities questionnaire survey results through the network show that 48.8% of the children choose learning double key electronic organ, 89.5% of them are said to obtain happiness. And even 96.3 % of the respondents believed that children can benefit from this organ in improving music interest and hobbies for early childhood enlightenment education. For children aged 3 to 6, the study of electone combining with the piano are consistent with the characteristics of them(Yumeng He,2016). Electone consists of various instrumental playing style and tone characteristics, so it can attract attention of children and arouse their curiosity and interest. The electronic organ plays the role of bridging the gap between children and music, making children love music, willing to engage in it and gaining happiness finally.

### Comparative analysis of children music intelligence

A large number of research results show that children's language, memory and spatial imagination are related to their early childhood music learning. According to a new study in the journal of neuropsychology, playing a musical instrument in childhood helps maintain brain function in old age, we can see that playing instrument is a cognitive practice, it can keep the brain healthier(Valerie Krupp-Schleußner & Andreas Lehmann-Wermser,2018). Any children music education or teaching system, such as Darkroz music education system, Orff music education system, as well as the Suzuki teaching method, even though they have different characteristics in education mode and teaching method, they have the common goals to make the children know the world in the process of nature and happiness through music.

It is the basic principle of music education in children from "happy music" to "happy music cognition", from "happy music cognition" to "music intelligent discovery". The multivariate intelligence education theory points out that human intelligence is divided into eight aspects, namely language, music, mathematical logic, space, body movement, introspection, interpersonal relation and natural intelligence. Music intelligence appears the earliest one in human talent, and all the other seven intelligences can be reflected in music perception and learning. Music intelligence is the ability to detect, identify, change and express music. This intelligence includes sensitivity to rhythm, tone, melody or tone. It is an effective way to promote music intelligent development by enabling children to learn musical Instruments early in life.

Through the comparative analysis of the learning effects between piano and electone for children aged 3-6, we obtained that the happiness based on multivariate perception influenced children music intelligence. We selected 20 children from 3 to 6 years old, training them with piano and electone. Finally we got the different level from music perception to music intelligence as shown in Table 1:

Table.1 Comparison of Music Perception Level for 3-6 years old (%)

Perception Pattern	Music perception ability				
	Highest	Higher	Normal	Lower	Lowest
Piano	0.10	0.20	0.40	0.20	0.10
Electone	0.40	0.30	0.20	0.10	0.00

In Table 1, it can be found that children trained by electone is obvious better than that of piano perceptual training. However, no matter which type of music perceptual training requires a lot of synergistic education from parents and Kindergarten teachers. Multiple side's coordination can guarantee the training effects in early childhood music enlightenment education. Although piano perception is limited comparing with the electone, there are 30% of

the children can get higher music perception? The reason is that teachers' elaborate design, parents' participation and good music environment. Table 1 also states 70% of children trained by electronic organ can improve the music perception, but there are 30% of the children cannot meet the requirements. The reason is that children's characteristics, the participation of parents and teachers lacking of individual enlightenment education method.

Besides the comparison of music perception training for children, it is necessary to compare the learning between two instruments. Because music learning is a process based on the perception, and then reorganize music skills, music performance and music creation, namely the formation of music intelligencer. They three sides interact seamlessly. While teaching children playing piano and electone, it is significant to design teaching pattern and system to take full advantages of them. The actual learning effect of the two instruments of 20 children was measured, and the results were shown in Table 2:

Table 2. Comparative analysis of learning effect for 3-6 years old (%)

Learning Style	Music Learning Effect											
	Technique				Performance				Creation			
	B	G	Bad	W	B	G	Bad	W	B	G	Bad	W
Piano	0.40	0.20	0.30	0.10	0.20	0.30	0.20	0.30	0.10	0.10	0.50	0.30
Electone	0.20	0.30	0.40	0.10	0.40	0.30	0.20	0.10	0.20	0.30	0.40	0.10
Mixed	0.50	0.30	0.20	0.10	0.60	0.30	0.10	0.00	0.40	0.30	0.20	0.10

Table 2 shows that 60% of children improve the music skills by playing piano, but it depends on the level these children accept the keyboard playing or not. If yes, these talent children obtaining happiness from keyboard playing can choose professional training. From table 2, three elements of learning effects can decide children's learning style, and teachers can design the different teaching mode for different children. In fact, these three music learning elements embody music intelligence from different angles. How to train children's music intelligence through electone is also a topic for music education research.

## Conclusions

The study of this article shows early childhood music education need to solve the following problem for the parents, music teachers and education organization: (1) children's intelligent promotion can benefit from the instrumental playing, we should confirm the best ages to learn and best ways to learn; (2) it is the information age nowadays, we should select the modern music educational mode. (3) The children music education depends on the efforts of professional music teachers, kindergarten teachers and parents, it is hard task for the enlightenment music teacher how to take the full advantage of the cooperation education function.

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## **Transitioning from Absolute to Creative Evaluation: Applying Trial and Error on the Time Axis**

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### **Abstract**

This paper investigates student evaluation in music education from a philosophical point of view. Traditionally, teachers measure student achievement by administering tests that evaluate their attainment goals for the class. However, quantitative assessment and ranking do not account for the student's individual learning process, and they can hinder a student's progress and growth potential. A review of the evaluation protocols used in music activities is necessary to prevent the negative effects of evaluation in the school music education.

The methods of evaluation have changed in recent years. Teachers use portfolios and rubrics for performance evaluations to evaluate various levels of learning and measure the student's overall performance ability. Nevertheless, these methods only allow for empirical knowledge that corresponds to predetermined assessment criteria and learning processes. They do not account for life events or overall well-being in the student's performance. Schools have shifted toward numerical evaluations to guarantee an objective measurement of all students. The significance of evaluation in the relationship between recognition and desired goals as a result of conscious and unconscious goals oriented toward life and happiness in time must be defined before re-examining the current evaluation methods, including portfolios and rubrics.

This paper discusses the significance of student evaluation in music education from the perspective of Japanese philosophers Bin Kimura and Kitaro Nishida. The results show a need to shift from absolute evaluation to creative assessment. In ontology, maintaining existence through evaluation and future choices is a deliberate act of the pursuit of happiness through trial and error. In such a system, the subject of one's own self and his/her recognized *world* is constantly renewed. Contradictions that cannot be recognized without segmentation generate trial and error of the movement and action of the phenomenon. Given such contradictions and nonpersistence of phenomenon, people must have the ability to assess new values. This investigation is a basic study that pursues the essence of evaluation and offers a practical perspective to recapture evaluative behavior.

*Keywords:* evaluation, phenomenological, philosophy, happiness, music education

## Introduction

Music education researchers have argued that student music is difficult to evaluate (Matsui, 2003; Ishigami, 2016). We “evaluate” with our taste each day, though, for example, how well a meal was cooked or whether our appearance is acceptable before leaving for work in the morning and how either could improve. Similarly, we naturally respond to music with thoughts regarding its sound and presentation. Considering that we commonly evaluate creative activities, why do researchers find evaluating the creative activities of music education difficult?

One reason is that teachers have become accustomed to ranking each student’s position in class and calculating the deviation of each position according to a set standard. Researchers have discussed evaluation methods at length, but few question the significance of evaluation itself. Before discussing evaluation methods, we must consider the basis of evaluation itself.

David Elliott et al. (2019) asserted that music education should be based on the student’s happiness, and Shimizu (2021) revealed that true musical pleasure does not derive from competition. However, the literature has not addressed how evaluation relates to happiness. The recent use of portfolios and rubrics for performance evaluation enhances judgment in qualitative evaluation by increasing possible results (Nishioka, 2003; Matsushita, 2007). Performance evaluations are generally used in experiential subjects, such as music, which do not seek correct answers to specified questions. However, schools have also ignored the essential purpose of performance evaluations. As a result, they also are now quantitative. A performance evaluation always compares students by ranking their performances.

The significance of evaluation in creative activities from logical and philosophical perspectives must be considered. This paper reconsiders the phenomenological significance of evaluation in relation to recognition and action on the time axis.

## The Problem of Symbolization in “Rating” and the Function of “Evaluation”

A “rating” is generally considered a quantity that organizes people hierarchically. Letters, as well as numbers, can be used to quantify people. When formulating a rating, teachers must remember that the numbers and letters are symbols that omit the many *things and matters* that distinguish the student’s learning process.

Consider, for example, ordering two apples by symbolic operation. You would convert each apple into the number 1. Then, added, the apples convert into the number 2 (Figure 1). However, the moment you replaced the apples with a number, you omitted their qualities of taste, texture, and weight. Symbols, e.g., the number 1 or the word “apple,” are used by subjects to represent experiences for communication. However, the symbol represents more to the subject than it communicates to another. The symbol replaces what the subject felt at the moment of experience.

A “rating” is only one method of quantification that makes up the social system called “school.” A rating, in this case, is synonymous with student evaluation. The question then is the following: What significance does evaluation, represented by the symbol of “evaluation” (e.g., grades or student ranking), not the symbol itself as number or letter, have on the subject’s creative act? To answer this question, it is necessary that the word “rating” will be bracketed in the Husserlian phenomenological sense, and that the ontology of evaluation will be considered. We will then return to the concept of ratings.

Kitaro Nishida (2015) argued that the *world* is a fluidity of relations, “from the formed toward the forming” (pp. 169). He claimed that self-existence and movement on the time axis as Bergson’s *pure duration* are *many-to-one* and, simultaneously, *one-to-many*. He called a relationship with the same self the *absolute contradiction of self-identity*. According to Bin Kimura (1982), independence occurs when the self-predicate conscious action (“that is me”) that reminds me of the past and the subjective self (“I am...”) that acts from the future form a circular relationship (pp. 78–86).

On the basis of the time theory and ontology of Nishida and Kimura, the relationship between

the perception of the subject and the action is the following (see Figure 1): The subject (X) recognizes that time moves continuously from the present to the future on the time axis of absolute difference (a). According to Heidegger (1953), the present of the subject is coming toward the future (b). At that time, there are innumerable choices in the future, but the choice of the subject self consists of the past facts ( $\alpha$ ) and its accumulation ( $\beta$ ), which are the predicate actions of the self. The present (X) is already in the “past” when consciousness is turned to the present, “I who is conscious of the present,” and when it accepts “it is not me” as me. This establishes the movement of time.

Derrida (2005) coined the term *différance* to describe a difference in a present situation that does not occur in the present, with the delay from the past making the situation a conscious object. Similarly, Nishida (2015), in his essay “Zettai mujunteki jiko doitsu,” described a situation in which *I* who is not me and *I* who unifies possibilities confront each other and form a subject being. He called this situation *absolutely contradictory self-identity*. In the relation of that situation, the subjective move from *many* possible choices ( $\beta$ ) to *one* ( $\alpha$ ) possibility is a part of conscious function that is “evaluation” (“one” is what the subject expects out of “many” possibilities).

The selected fact is one possibility of the past (it is spatially “many” because the subject requires conscious-objects for recognition, but here, it is treated as the “one” selected thing on the time axis). Owing to the circular relationship, the present, which has been selected out of *many* future possibilities, is a past “fact” that becomes determined in reflective thought.

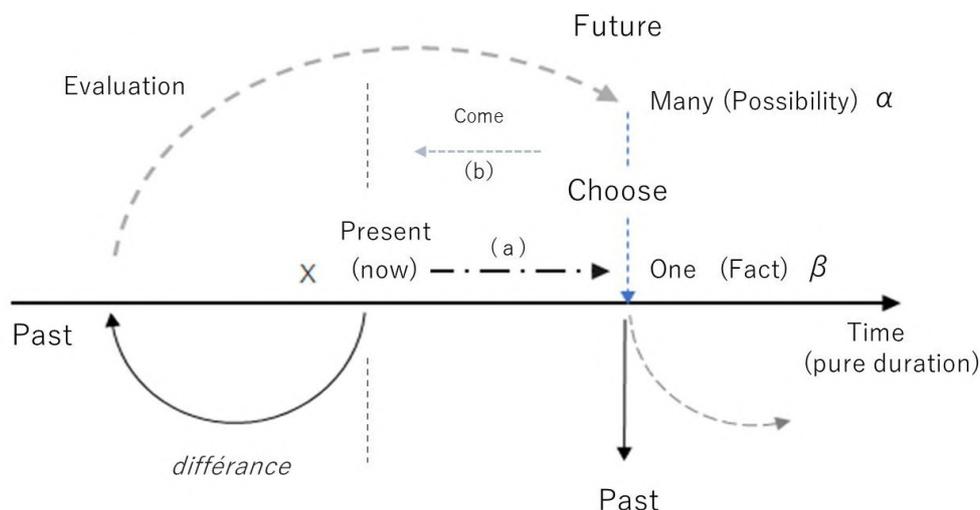


Fig. 1 Relationship between evaluation and selection of subjects on the time axis

A subject chooses an action while interacting with his/her recognized *world*. The subject is sustained by the interaction of cognition and the act of *I* to create the future and change that *world*. The “things” (objects of recognition and evaluation) that are judged as “better” are changed. The *I* on the time axis gives value to the thing that becomes the recognized object, whether it is “better” or not. “Happiness” is the criteria that affect the valuation because the subject aims at “something” that it calls “happiness” or there are objects and situations that “humans” determine as opportunities for desire.

For the sake of “happiness,” *I* values the object and chooses *one* out of *many* future possibilities. The “matter” (*koto* in Japanese) that is “better” is based on prior cognition, so it is “repeated” at the time of selection. In other words, the recognition and valuation of “better” involve the desire of representation. “Repetition of actions” and “desire for repetition” are external to the subject. Space becomes an opportunity to create the continuation of

something-objects (*mono* in Japanese). At that moment in time, the intended “happiness” precedes the act, but as long as *I* is generated in relation to the *world*, which includes “human” as a collective *other*, the “happiness” for *I* that is recreated in relation to the “happiness” of the *world* is constantly changing. Therefore, “evaluation” is not an absolute and universal thing for both *I* and the *world* that are sustained by creation.

### Importance of Timed Establishment in Evaluation

The valuation of “evaluation” is fluid as a result of the system of existence on the time axis. The criteria for evaluation must be established with a certain degree of commonality, universality, and repeatability whether the segment on the time axis is on a macro- or microscale.

A criterion for evaluation based on “happiness” for the collective *other* is required because the “happiness” of the individual *I*, which grounds evaluation, stems from the “happiness” of the collective *other* (i.e., “us” or “humanity”). Then, we need to generalize “evaluation” as it is commonly used by the collective *other*. “Evaluation” is sometimes used iteratively. Therefore, the evaluation criteria for *I* based on the *other*, expressed at various levels with words such as “us,” “people,” or “humans,” are required for the individuated *I*. “*Other* (*Autre* in French)” is a Lacanian term that, in this case, refers to an unspecified number of *others* and a common *third party* whose subject is to be conscious. The “*other*” requires a certain amount of time, depending on its level, to have certain evaluation criteria verified through *trial and error*. The expression through words means that “discussion” is required for evaluation. This indicates the significance of language to evaluation. From the perspective of “happiness,” creating “evaluation criteria” in a timely manner through reflective communication is an opportunity to satisfy the desires of the subject and subsequent creative acts. It sustains “*trial and error*.”

The Japanese word *kotoba* used for acts involving speech and thought originates from *koto-no-ha* or “the leaf of *koto*.” *Koto* refers to events on the time axis, unconscious matters of a subject, or nature of things. *Koto* is used alone or as a noun after a verb or adjective. In ancient Japan, People pronounced “*koto*” without separating words and events (Kimura 1982, p. 14). Thus, *kotoba*, or a leaf of *koto*, is an object that is recognized after the fact based on the event that occurred in the subject and disappeared on the time axis.

The fact that creative activities in music education are effective in acquiring techniques for evaluation is a result of the relationship between time and cognition. As Kimura (1982) stated, conscious things (*mono*) appear in unconscious matters (*koto*) and unconscious matters (*koto*) can be read from conscious things (*mono*). The moment they are recognized as conscious things, the event has passed (p. 24). The subject exists on the time axis of absolute differences.

In other words, the *world* is experienced unconsciously before it is put into words. Alternatively, there is the *world* where the object is symbolized and the self appears as a mirror image; the object is unconscious before the self is symbolized. Musical acts are creative acts with unconscious matters that precede words. However, if language activity itself becomes the student’s purpose, as when writing an essay on music, the student disengages from music itself. In that moment of disengagement, the student’s *inner-world* is distant from what he or she felt when playing music. *Kotoba*, in this case, is a thing that enters consciousness in the future. The matters of experience must first occur in the subject in time.

However, in the system of the subject’s existence, the gaze of the other gives intentionality to the consciousness of the collective *other*. The *other* conducts a semantic action prior to its recognizability as the “other’s voice” or “voices without sounds.” Osawa (1994) described the function of the semantic action as “*judgment in third party*.” By *third party*, Osawa meant the social dimension of a people. He stated that language activities distort the subject’s pure needs or desires, as if the subject is being judged in court. The act of judging oneself involves judgment of the human being as a substrate that recognizes its existence as a subject. The person chooses the future in order to avoid being regarded as *hito-de-nashi* or lacking a humane heart or mind.

For example, in *The Stranger*, Albert Camus described society as unconsciously approving

discourse as social-goodness-human. Paku (2016) interpreted Camus as follows: “There are unique rules to each society and era, such as how to use vocabulary, how to make gestures” (p. 119). One’s *third party* participation in the “judgment class,” using words such as “public” or “common sense,” is not noticed in the moment because the experience is of them. Therefore, one must take a moment to move away from their context and return to pure matters that connect one with the *world*. Humans benefit from reflecting on the senses of their experiences before it took on language. This suggests that creative activities are effective in learning music. Creative activities require *trial and error*, where the experience of sound and music naturally precedes language.

## Problems of Quantification in Rating

Aristotle’s philosophy on happiness continues to guide today’s discussion on happiness. In *Nicomachean Ethics* he said, “activities in line with *arete* (ἀρετή)” as “things that have decisive power for happiness” (p. 54). If the mimetic individual establishes “who *I* am” in relation to *others*, then the subject measures excellence by the approval of *others*. In other words, it is presumed that the desire to obtain excellence for “*I*” leads to the desire of ranking for people.

On the time axis, the question, “Who am *I*?” extends from the concept of excellence that *I* acquire from the approval of *others*. This structure requires competing forms of approval. While receiving approval as “human” (judgment from a third party called society), the subject as *I* wants to be differentiated from that “human” and cut off as *I*. In other words, although it is approved as a “human,” and not as a “no human being” (*hito-de-nashi*), it is necessary to differentiate oneself from *others* that “*I* am *X*” rather than an alienated being.

The *others*’ approval of the subject as *I* is an evaluation that is both the object of anxiety and the object of desire because the subject can only recognize things on a time axis. The subject cannot experience certain unconscious matters on the pure-time-duration because language intervenes. In that situation, the subject is required to prioritize important unconscious things over *others*. It is a place of struggle against *others* on the time axis.

Lacan explained that the generation of meaning is temporally structured using the allegory of “three prisoners” (Shingu 1995, pp. 78–80). The three prisoners have black or white disks on their backs. They promise to be released if they can logically derive the color of their disk without verbal communication. The three prisoners could get the correct answer because the amount of time it takes to convey an answer is logically correlated with the answer.

Two relationships establish the structure of significance for the subject: first, the subject must decide the act for a situation where *I* lack knowledge (the right answer) but the *other* does not; second, the decision that conditions the logic for nonverbal communication is the subject’s movement. The former is a spatial relationship, and the latter is a temporal relationship. The subject cannot know how *I* is spoken by *others*. Anxiety is the driving force of competition for the subject as *I* who knows that he/her is thrown into such a *world*. This is because if you lose the right time to start moving, the reasoning that allows for success in the relationship with *others* does not establish. The anxiety is anxiety of losing opportunities.

This temporal anxiety regarding the indefiniteness of the future is, as Kierkegaard stated, “the possibility of freedom” (1951, p. 279). At that moment in time, competition with *others* is judged by the criteria that past *others* have already decided for evaluation in order to anticipate the desire of *others*. What is “better,” in this case, in the criteria of the *other*. Therefore, the subject as *I* is involved in the desires of *others*. In other words, the existence of *I* out of the quantified rating that creates the *I* also makes ranking the weak satisfying, even if the desire for excellence is satisfied by the *other*’s rank of the subject.

As a result, the subject is alienated in a system created by the *Other*. Additionally, it only functions as the thing that represents excellence for *I* in the group related to the competition of the system. In reality, the self is alienated. The things that supported *I* when the subject experienced the unconscious world, which for Lacan is the *real world* (*le Réel*), disappear. This situation results in a psychotic crisis (Matsumoto, 2015).

In order to avoid false excellence, it is necessary for the subjects to discover or utilize the excellence that is inherent to their creation. However, in school, including club activities, a

one-sided standard of evaluation creates the hierarchy, so the subject will not perceive excellence as a unique possibility. The subject is designed to serve *others* out of its apparent excellence. It cannot be denied that the desire for excellence in the human perception of existence gives rise to the system of quantitative competition itself.

### **Conclusion: Creative Activity as a Place for Learning Creative Evaluation**

In summary, first, “evaluation” is not an absolute and universal “thing” that sustains both *I* and the *world* through creation (Definition 1). Second, creative activities in music classes are effective for learning creative evaluation because the experience of sound and music is the first sensation when *trial and error* occurs through creation. “*Trial and error*” is the need to communicate a word that arises from a feeling, and the creation of new values is evaluated. A new value is evaluated because it is not established (Definition 2). Thirdly, in order to avoid false excellence, it is necessary to discover or utilize the inherent excellence in the subject’s creation (Definition 3). Thus, qualitative evaluation is important because it pursues the things that are best for each individual among a variety of values, rather than numerical ranking.

In conclusion, creative evaluations are necessary for school education. In a *world* of sensibilities, before words, where students ask what is “better,” it is necessary for them to create criteria for “evaluation” and evaluate performances and works to achieve the skills of evaluation.

Portfolio and rubric performance evaluations should not be assessed according to the fixed premise of teachers, even if they are used numerically for hierarchical evaluation. Rubrics should be created with students not only teachers, and rubrics should be fluid through trial and error. Then, teachers should evaluate not only music-works or performances but also the learner’s actions and the evaluation criteria themselves.

Students enter a *world* of creativity where they can play a leading role through media. Instead, of following the desires of *others*, students should develop the ability to create new evaluations by looking at otherness at a distance. The creative activity of music education is a valuable place of learning where educators can engage in creative evaluation.

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## **Programming Education in Japan: Approaches and Implications for Music in Elementary Schools**

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### **Abstract**

As digital technologies reshape societies around the world, computational thinking and programming are being introduced in the school curricula of several nations. In that context, Japan has launched a cross-curricular reform aimed to integrate *programming thinking* (a Japanese version of computational thinking) in all subjects. However, questions remain on how computer science concepts may be meaningfully integrated into music, in addition to the impact of those measures on music education.

This study focuses on Japan's *programming education* in elementary school music, officially implemented nationwide in 2020. Since *programming* in music seems to be in an early stage, some of its key aspects are examined and presented here in English for the first time. For that purpose, the results of a software-assisted content analysis of Japanese sources on *programming* in music-making activities are summarized and discussed. Due to its critical orientation, this analysis takes special account of the interplay of computer science and music learning contents.

Findings reveal that the integration of *programming* in music is based on general definitions that highlight logical thinking, not on a specific theoretical framework aimed at music learning goals, which may lead to creative processes being oversimplified. Furthermore, tensions between flexible and fixed-goal approaches are pointed out in music-making activities within this policy framework, as well as interpretations of IT terms that have permeated music education, namely, *algorithm* and *program*. Following that, and stressing the need for strategies that can specifically support music learning goals, it is argued that *programming* in music education should not constrain spontaneous expression but transcend logical thinking and foster creativity within flexible processes.

Regarding the implications of *programming education* for this field, music may risk being relegated to secondary roles in relation to computer science, as suggested by approaches that seem to define it as a means for assimilating IT-related concepts. That fact raises questions about changes sparked by the *infotech* revolution of our time, along with challenges and goals particular to this country, such as *society 5.0*. In view of this, further debate is considered necessary on how teachers, policymakers, academic societies and the entire community, including technology developers, can generate and support innovative practices for music education.

*Keywords:* programming; Japan; elementary school music; computational thinking.

### **Introduction**

Over the past decade, several nations have reformed their school curricula to include computational thinking and programming. Those IT-related skills have been integrated into a separate subject (*Computing*) in England, into several subjects in Finland, or addressed through a specific program (*Code for Fun*) in Singapore, to name a few examples; but, in general, reforms have been based on the need to strengthen students' problem-solving skills and digital competence for a changing job market (Bocconi et al., 2016). In this context, Japan is a peculiar case of cross-curricular policy. Since the new Japanese national curriculum came into force in 2020, *programming education* has become mandatory as part

of every subject in elementary schools, including music, following guidelines by the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

This transversal, IT-led transformation in Japanese schools stems from both international trends and domestic challenges. Japan joined the *EdTech* boom after PISA 2015 proved that Japanese students' use of computers was below average. Since then, investment in software and mainly hardware infrastructure has been linked to a broader national goal: *society 5.0*, intended as the step after societies 1.0 (hunter-gatherer), 2.0 (agrarian), 3.0 (industrial) and 4.0 (information society). This "super-smart" society powered by technology should integrate cyber and physical spaces and is seen as a pillar for the future of the country. Through this new model, Japan aims to overcome sociodemographic issues such as population aging, record-low birth rates and over two decades of economic stagnation. However, the country is short of several hundred thousand IT workers, which hinders the achievement of *society 5.0*. To that end, major reforms are underway, including the implementation of *programming education* starting from the elementary level.

*Programming education* is broadly referred to as "learning activities for children to acquire the logical thinking skills necessary to make computers execute their commands," and should be "systematically implemented according to the characteristics of each subject" (MEXT, 2018c, p. 83). In policy documents, this reform appears as an "improvement for proactive, interactive and deep learning" (p. 76), a local version of *active learning*. Its aims may be quoted in translation as follows:

- (1) nurturing *programming thinking*; (2) raising awareness of how programs work, of their advantages and the fact that the information society is underpinned by computers and other information technologies, while fostering an attitude that looks to solve common problems and build a better society through the skillful use of computers; and (3) further ensuring the learning of the contents of every subject. By engaging in *programming*, children may naturally learn programming languages and acquire programming skills; however, it should be made clear that those are not aims in themselves. (MEXT, 2020, p. 11)

*Programming thinking*, a key concept in *programming education*, is a Japanese version of *computational thinking*, a term now widely used overseas. Known in the second half of the 20th-century as procedural or algorithmic thinking, *computational thinking* is defined as "the thought processes involved in formulating problems and their solutions so that the solutions are represented in a form that can be effectively carried out by an information-processing agent" (Wing, 2010). Therefore, in Japan, *programming thinking* may be understood as an umbrella term encompassing logical thinking and multiple problem-solving skills, which emphasizes thought processes over results, in line with international trends. However, the word *programming* has been placed at the core of this reform – a strategy that may serve the goals that Japanese authorities wish to prioritize in today's local circumstances.

The implementation of *programming education* started even before 2020, with training sessions and pilot tests. Now, as every subject is expected to comply, music teachers have started adapting to new digital skills, computer science concepts and pedagogies, based on a few classroom examples. But there are no official reports on the progress of implementation in specific subjects to date.

A review of 12 class activities implementing *programming education* in music was conducted by Nagayama (2019a), who concluded that almost all of them were compositional and used software. However, the pedagogical and philosophical underpinnings of *programming education* in music are yet to be examined, and the implications of this reform for music education must also be discussed. Given that, this study is based on three questions:

- (1) What are the objectives of music-making activities framed within *programming education* and how are they related to computational thinking?
- (2) In which ways is the creative process approached in those activities?
- (3) What roles are attributed to music and computer science learning contents?

## Methodology

Based on the previous research questions, selected Japanese sources were subjected to a content analysis (Krippendorff, 2018) assisted by QDA Miner, a qualitative research software tool. This technique involves applying codes to textual sources, in order to systematically identify, organize and describe patterns of meaning in the data set, hereby reported in English.

The sources chosen for analysis are 3 government publications (MEXT, 2016, 2018b, 2020) that contain references to *programming* in music (including the new music curriculum guidelines), an interview with Prof. Shitami, Senior Specialist for the Music Curriculum (*Mirai-no-Manabi* Consortium, 2018), a specific section titled “Programming education and music” in Fukami and Konashi (2019), and 7 academic research papers by Moriwaki (2017, 2019), Nagayama (2019a, 2019b), Nakamura (2019), Ohba et al. (2019) and Terauchi (2020), selected for reporting about music-making activities framed within *programming education* in elementary schools. All 12 sources were accessed through the CiNii database and loaded onto QDA Miner for efficient, systematic organization of the data.

This interpretive content analysis started with the immersion of the researcher in the textual sources through repeated, active reading of the whole data set in search for mutually exclusive units of analysis (codes). After that, initial codes were collated into themes, that were later reviewed and refined. Finally, the most relevant extracts were selected in relation to the research questions, upon which the presentation of results was structured. The following section summarizes those results.

### **Programming education in music**

#### General guidelines transposed to music activities

Most Japanese reports on *programming* activities in music start by quoting the “general rules” set by MEXT (2018c). That is, they omit the foreign term *computational thinking* and define *programming thinking* as the ability to think logically on sets of actions and signals necessary for task performance. Although “judgement” or critical thinking and “expressiveness” (MEXT, 2020, p. 13) are said to belong to that type of thinking, suggesting that elements beyond logic are taken into account, the music curriculum does not provide a subject-specific strategy. In brief, incorporating the Japanese version of computational thinking is mandatory in music, but the term has not been defined for this area. Instead, a general concept is being transferred to music unaltered, a fact that has not been problematized by music educators.

In alignment with MEXT, most of them approach *programming education* through activities that should encourage students to “communicate images and emotions awakened by music” or express “ideas and intentions” musically. “Verbal” communication combining “sounds, music and words” is also encouraged (MEXT, 2018c, p. 82). Unlike other subjects, study units have not been officially specified for music, but Fukami and Konashi (2019) interpret MEXT’s implementation scheme as a way to borrow class hours from music and other areas in order to reinforce *programming*.

In music-making activities, students should be encouraged to “enjoy” composing and “realize the links between structuring sounds into music and *programming thinking*, as well as the common characteristics that exist between length, pitch, intensity or speed indicators and the elements of programs” (MEXT, 2016). However, those common characteristics are vaguely justified through a reference to a logical-procedural aspect of music theory: repeat signs, which have “features in common with the elements that form the structure of programs, such as sequences, conditions and repetition” (MEXT, 2016).

In addition to a few “unplugged” activities promoting computational thinking without technological devices (i.e., using worksheets, body percussion and music instruments),

several software tools are employed in classroom examples. In these, computer-assisted music production (mainly on digital audio workstations) is seen as “especially effective for nurturing *programming thinking*” (Fukami & Konashi, 2019, p. 87). In general, the role attributed to computers lies in visualization and instant playback, allowing for multiple reproductions and re-editions.

*Programming* activities with software include games with rhythmic patterns to enhance students’ expressiveness, so that their “limited instrumental skills” do not hinder creativity. They mostly use Scratch or, less often, Viscuit (Moriwaki, 2017, 2019), a visual programming language developed in Japan. Besides, Sony’s MESH (visual programming) supports activities with light and motion sensors, which trigger musical phrases or chords created on given ideas, such as “a sudden moment of joy” (Ohba et al., 2019, p. 3).

Additionally, Japanese music is represented in *programming* activities with pentatonic scales. In one of these, Nakamura (2019) proposes students to “express gratitude” through a song, and they “program” melodies on Yamaha’s Vocaloid, displaying sound pitch vertically and durations horizontally. For that, they only use notes from three Japanese scales and write lyrics on the given topic, which the vocal synthesis software then “sings.” Through this, they seek to meet a learning goal set for years 3 to 6: “To structure sounds into music by composing with musical techniques,” such as variation, repetition or call and response, “and [students’ own] ideas and intentions” (p. 120).

### Approaches to the creative process

Learning through *trial and error* is a frequent mention, found in 11 out of 12 sources, often alongside *repetition*, as continuous improvement through *trial and error* is considered necessary to develop *programming thinking* (MEXT, 2016, 2020). Also, its co-occurrence with the words *experience* and *tinkering* suggests strong associations to active learning pedagogies. Indeed, listening, editing and re-editing may give opportunities for creative music learning. But not all sources approach the creative process in the same way.

In this regard, Nagayama (2019a, 2019b) argues that music-making might not start from clear “ideas and intentions” as stated in policy documents (MEXT, 2018c, p. 82). Instead, “ideas and intentions” may become clear along the way, as students explore, compose with software, listen and check whether the results reflect their intentions. Interpreting students’ “programs” (i.e., students’ works, or the signals combined by students and processed by a computer) as “means of expression,” Nagayama (2019a) adds that they might well come up with new ideas along the way. Therefore, upon listening, students are prompted to a double verification, that is, checking “whether the means of expression (program) produces the intended result” and, most importantly, “whether that result is musically convincing” (p. 62).

With this, Nagayama deviates from logic-centered problem solving to explicitly consider a more spontaneous way of expression, which appears essential to the arts. As such, it must be contrasted with policymakers’ structured visions of *programming*, according to which students should compose “based upon given conditions (...) to create planned, coherent music” (MEXT, 2016). In opposition to that “planned model,” Nagayama (2019b) prioritizes flexibility over “efficiency”.

In that context, *tinkering* is proposed as linked to improvisation, but it does not exclude logical thinking, as students draw conclusions about which sets of signals produce results that they judge musically convincing. This approach aligns with the progressive-constructionist tradition of Dewey, Piaget and Papert. It also defines *tinkering* as “a playful, exploratory, iterative style of engaging with a problem or project,” following members of MIT Media Lab, who maintain that *tinkering* is “exactly what is needed to help young people prepare for life in today’s society” (Resnick and Rosenbaum, 2013, p. 164).

## Interplay of computer science and music contents

As IT-related terms permeate arts education, not only *programs* adopt musical meanings in compositional activities. In Japan, some teachers propose to structure composition as *algorithms* that outline the “process by which students reach the music that they wish to express” (Nakamura, 2019, p. 123). These *algorithms*, in computer science, denote a sequence of steps or instructions to solve a problem or perform a task (in this case, a music-making activity), but those instructions should be unambiguous.

Despite admitting that compositional processes may be “very ambiguous and hardly reproducible” (p. 119), Nakamura elaborates flowcharts that visually represent the steps followed by the student, from setting a theme and imagining musical motifs and lyrics, until completing their work. In doing so, this logical model sticks to planned goals (MEXT, 2016), since it leads the student to “reach the image conceived at the beginning” of that process (Nakamura, 2019, p. 120). Therefore, spontaneous creativity might be compromised as composing becomes an oversimplified set of planned actions.

But Nakamura's proposal suggests further risks that stem from the functional, secondary role attributed to music. Its title promotes “learning algorithms through sound learning in elementary school,” and seems to allow that music be reduced to a means for learning computer science. Likewise, his conclusions are clearly oriented to *programming*, as suggested in quotes by fourth-year students: “If humans program without errors, machines will repeat the right actions forever. [...] Programming can do anything” (p. 123).

Others take different stances on *algorithms*. Terauchi (2020) avoids having students create mere “sound structures” or reducing the role of computers to sound playback. Instead, his approach stimulates a “performance behavior” closely related to improvisation. Similarly, Nagayama (2019b) interprets *programming* itself as performance and highlights the “situational” aspects of *tinkering* along with music-making *algorithms*. Once more, their approach contrasts with closed-ended, logical models. Based on this, connections may be drawn between the type of goals set for the *programming* process (flexible or fix) and the interplay of music and computer science contents.

## Discussion

*Programming education* in Japan seems to be in an early stage. Moreover, the COVID-19 pandemic has forced the country to prioritize other goals, such as having one computer per child by the start of 2021 as part of a more solid *e-learning* infrastructure. To fully implement *programming* as planned, music teachers will need more time, together with stronger training and new classroom activities. That said, at least two aspects should be discussed: the general *programming education* guidelines transposed to music, and the risk of reducing music to a means for computer science.

In the first place, efforts should be made to propose a specific theoretical framework that can support music's particular characteristics. Otherwise, closed-ended models of music-making based on pre-set goals may prevail, founded on logic “problem solving”. To avoid that, acknowledging the cognitive, psychomotor and affective domains of music learning, as well as music's ambiguous, non-verbal, non-visual nature, should help ensure that creative processes are not oversimplified or overregulated.

Flexible-goal approaches linked to *tinkering* may certainly contribute to developing music-specific *programming education* in Japanese schools. Nevertheless, questions remain on the extent to which creative freedom may be enhanced in an environment that favors standardization and homogenization. With respect to this, policies to bolster *active learning* are still quite recent (OECD, 2018), but they might only be superficial changes if students are not effectively motivated to creativity and expression within flexible environments. The arts should play an essential role in such change, which leads to our next discussion point.

In view of the discursive frames that inform the interplay of computer science and music contents, the roles attributed to each must be considered. Among the classroom practices reviewed, for instance, those with sensors by Ohba et al. may be labeled as interdisciplinary, while Nakamura's activities for "algorithm learning" look IT-centered, with music as a tool for *programming*. In either case, music might risk being relegated to secondary roles in relation to IT in the music classroom, which, again, stresses the need for a music-specific strategy.

Based on this, the implications of *programming education* for music should be debated. What will the role of arts education be in Japan's "super-smart" future? And, will *society 5.0* be the realization of personal freedom and creativity, or constrain learning activities in areas that go beyond logical thinking?

In the 2020s, music as a school subject looks increasingly influenced by the all-encompassing *infotech* revolution of our time. Therefore, the functionalities of music education might no longer be defined only by moral values and aesthetic sensibility, but also by elements of computer science (IT skills and *programming thinking*) regarded as keys to propelling economic growth in the 21st century. As a result, the achievement of objectives assumed as particular to music – developing musical skills, creating and reflecting upon music or transmitting local musical heritages – may be inevitably hampered by a growing number of non-musical goals that override all other aspects of schooling.

In this context, will music buckle under the weight of logical thinking, or generate original contributions using new technologies for creative expression? For now, given the strong roots of music in the curriculum, the subject does not seem at all likely to be excluded from elementary schools in Japan. However, innovation appears difficult to materialize in a test-driven system.

Since *programming education* is now a part of elementary school music, we may think that Japanese teachers need to define their roles in relation with computer science more urgently than their counterparts in European countries (Bocconi et al., 2016), where computational thinking does not seem to have directly affected the arts curricula. But we cannot expect that Japanese elementary school teachers alone can assign a high priority to this issue if less than 2% of them are specialized in music (MEXT, 2018a). For them, it seems more urgent to reduce their "extraordinarily long working hours" and "high degree of responsibility, which limits teachers' ability to train and to adapt to the new curriculum" (OECD, 2018, p. 2). In fact, discussions on the future of music education should also involve policymakers, academic societies and the entire community, including technology developers, who should support new pedagogies with tools that transcend memorization and mechanization toward creative learning.

Additional research could usefully explore different aspects of *programming education* in Japan, and other nations should also examine its outcomes, which may reveal further implications for music education.

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## The Influence of Performance Anxiety of Career Adaptability and Career Optimism in Music Students: Self-Efficacy as a Mediator

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### Abstract

Music performance anxiety has traditionally been an important issue related to musical performance, both for professional performers or music majors. Although extensive research has been carried out on the negative effects of musical performance anxiety on musicians, including biological and psychological vulnerabilities. Nevertheless, literature that focuses on the relationship among music performance anxiety, self-efficacy and career development of music majors remains limited. China has many high-level music conservatories that prepare students for performance and teaching careers. Based on Social Cognitive Career Theory (SCCT), this study is designed to explore the impact of musical performance anxiety on music majors' self-efficacy and future career choice within the Chinese context.

Participants were 360 students majoring in music performance and music education from several regions in China, who had internship experience in related fields (e.g. private teachers, schools or orchestras), completed a set of questionnaires that included Music Performance Anxiety Inventory for Adolescents (MPAI-A), Self-Efficacy Formative Questionnaire, and Career Future Inventory (CFI). Students who suffered from high MPA were interviewed trying to explain why do MPA affect self-efficacy and future career inventory from different perspectives.

The results show that music performance anxiety has significant differences in students' self-efficacy, which is mainly in terms of gender and major differences. Comparably, females suffered more MPA than males. Performance students had higher MPA than music education students. In addition, MPA also has an obvious negative effect on music learners' self-efficacy and future career choice, which plays a mediating role between self-efficacy and three perspectives from career future inventory.

As MPA has a significant negative impact on music majors' self-efficacy and career expectations, music colleges could strengthen education on MPA-coping strategies, and shape an appropriate learning environment to help students gain a better sense of self-efficacy. At the same time, students may also can enhance their self-efficacy, find MPA management, and try to reduce the destructive impact of MPA.

*Key words: music performance anxiety, career inventory; self-efficacy, music students*

### Introduction

In recent years, there have witnessed an increasing interest in music performance anxiety. Literature included its definition (D. Kenny, 2012; Kesselring, 2012; Wiedemann et al., 2021) and correlates (Cohen & Bodner, 2021; Osborne et al., 2020;), its antecedents (Butković et al., 2021; Sabino et al., 2020; Sugawara & Nikaido, 2014) and consequence (D. T. Kenny, 2009; MacAfee & Comeau, 2020), as well as coping strategies (Clarke et al., 2020; Cohen & Bodner, 2019; Huang & Song, 2021).

Bandura (1977) defined self-efficacy expectation as the conviction that one can successfully execute the behaviour required to produce the outcomes, which not only directive influence on the choice of activities and setting, also determine the efforts and persistence in the face of obstacles and aversive experiences. Through self-efficacy theory, self-efficacy expectations are based on four significant sources of information, including performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. The fourth

source, emotional arousal, includes anxiety arousal, making this source essential and special when discussing the relationship between self-efficacy and MPA. Self-efficacy has been studied in relation to MPA in music students (MacAfee & Comeau, 2020). MPA was measured with some version of Kenny of Music Performance Anxiety Inventory, while self-efficacy was measured with a different version of Self-efficacy Questionnaires. Studies mainly confirmed the association between self-efficacy and MPA, while findings were complex. Whilst taking into account the research literature on self-efficacy that indicates its centrality to staffs' work, the present research (Gottschling et al., 2016; Karademas, 2006) take focus on the relationship between self-efficacy and career optimism. Current research into students' careers (Rand et al., 2020) has not yet specifically affirmed the empirical relevance of students' self-efficacy to their career optimism, and very few researches (Miksza & Hime, 2015) focused on music students.

Despite extensive research in previous literature, few studies have investigated the relationship among music performance anxiety, self-efficacy and, career development of music majors. Participants were music students, especially those who major in music performance, a specific group of musicians. Therefore, these findings need to be examined in more diverse music students and cultural context. The current study will base on Social Cognitive Career Theory (SCCT), explore the impact of musical performance anxiety on music majors' self-efficacy and future career choice within the Chinese context.

## **Participants and procedure**

Participants in this study were music students (N = 360) from three music conservatories in China. 256 participants were undergraduate students and 104 participants were graduate students. All of the selected students were instructed to complete one questionnaire, all of the questionnaires were answered anonymously. After excluding 20 students who provided invalid data, 340 (98.29%) students were analyzed. There were 239(70.3%) female students and 101(29.7%) male students

This study will conduct in-depth interviews with students with high MPA scores (selected from the top 20% of the participants) trying to explore why does MPA affect students' self-efficacy and career choice from different perspectives.

## **Measures**

### **Music performance anxiety**

As the participants in this research were students from music conservatories, most of them were undergraduate, we use the Music Performance Anxiety Inventory for Adolescents (MPAI-A; Osborne & Kenny, 2005) scale to assess the MPA level in music students. MPAI-A is a 15-item self-report measure that assesses the somatic, cognitive and behavioral components of anxiety experienced by adolescent musicians.(e.g, Osborne & Kenny, 2005;Thomas, J. P., & Nettelbeck, T,2014) Fifteen items measure somatic (e.g., 'Before I perform, I tremble or shake'), cognitive (e.g., 'I often worry about my ability to perform'), and behavioral (e.g., 'I would rather play on my own than in front of other people') characteristics of anxiety, rated on a 7-point Likert scale ranging from 0 (not at all) to 6 (all of the time). Higher scores indicate higher MPA. The internal consistency reliability estimate for this scale in the current study was 0.760.

### **Student self-efficacy**

Student self-efficacy support was assessed using the 13 items detailed in Self-Efficacy Formative Questionnaire (Gaumer Erickson et al.,2018). In the context of education, self-efficacy refers to perceptions an individual has about his/her capabilities to perform at an expected level and achieve goals or milestones. In short, self-efficacy can be defined as believing in your ability to accomplish challenging tasks and that your ability can grow with effort (Gaumer Erickson & Noonan, 2016). The Self-Efficacy Formative Questionnaire is

designed to measure a student's perceived level of proficiency in the two essential components of self-efficacy, which are: Belief in personal ability (8 items; e.g., "If I practiced every day, I could develop just about any skill"). Believe in your ability to meet specific goals and/or expectations (5 items; e.g., "I believe hard work pays off"). Each of these items is rated from 1 (very slightly or not at all) to 5 (extremely). Students can use the questionnaire results to build an awareness of how their perceptions and beliefs about their ability contribute to their academic success. The internal consistency reliability for the belief in personal ability was 0.872, 0.839 for belief that ability grows with effort.

### **Career futures inventory**

The career futures inventory was measured using 25 items that were developed by Rottinghaus, P. J. et al (2005). It contains three subscales: Career Adaptability: The way an individual views his or her capacity to cope with and capitalize on change in the future, level of comfort with new work responsibilities, and ability to recover when unforeseen events alter career plans (11 items; e.g., "I am good at adapting to new work settings."). Career Optimism: A disposition to expect the best possible outcome or to emphasize the most positive aspects of one's future career development, and comfort in performing career planning tasks (11 items; e.g., "I get excited when I think about my career."). Perceived Knowledge of Job Market: Assesses perceptions of how well an individual understands job market and employment trends (3 items; e.g., "If I practiced every day, I could develop just about any skill"). each on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The responses were averaged and high scores indicated high levels of outcome expectation. The internal consistency reliability was 0.925 for career adaptability, 0.896 for career optimism, 0.869 for perceived knowledge of job market.

## **Result**

### **Preliminary analysis**

Firstly, the ANOVA analysis of several basic information variables about students shows that there are significant gender differences ( $F = 29.883$ ,  $SIG = 0.000$ ) and professional differences ( $F = 7.970$ ,  $SIG = 0.005$ ) in MPA, while the two items of academic period ( $F = 0.303$ ,  $SIG = 0.582$ ) and age ( $F = 1.771$ ,  $SIG = 0.134$ ) did not pass the significance test. The average MPA score of female students is higher than that of male students, and the average MPA score of music performance students is higher than that of music education students. The results show that MPA is negatively correlated with belief in personal ability and belief that ability grows with effect of students' self-efficacy, and negatively correlated with career adaptability, career optimism and performed knowledge of CFI. At the same time, self-efficacy has a significant positive correlation with the c

### **Model testing**

In prior to test the theory research hypothesis model, we took the single method factor approach (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) to address the potential for common method bias because the data for independent and dependent variables was obtained from the same respondent by self-report measures. Guided by the approach of Podsakoff et al. (2003) we created a model with an unmeasured latent variable (i.e., common latent factor) in addition to the initial measurement model and allowed all measured variables to be loaded to a common latent factor (see Fig. 1). Specifically, Chi-square, comparative fit index (CFI), incremental fit index (IFI), Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA) were considered. The CFI, IFI, and TLI are all relatively approximate fit measures and forms of "goodness of fit," with a good fit indicated by values of 0.90 and above (Hu & Bentler, 1999). The results of the model with a common latent factor showed a good fit ( $\chi^2 (N = 340, df = 28) = 1555.128$ ,  $p < 0.001$ ;  $CFI = 0.993$ ;  $IFI = 0.970$ ;  $TLI = 0.989$ ; and  $RMSEA = 0.042$ , which is not a poor fit compared to the measurement model, the

Chi-square comparison was not significant ( $\chi^2_{diff(1)}=1.608, p > 0.01$ ). In addition, factor loadings of the measured variable to its latent variables did not decrease significantly. Therefore, we concluded that the common method bias does not seem to be a major problem in the current study.

### The influence of MPA on the self-efficacy and career optimism

The bootstrap method (Shrout & Bolger, 2002) was implemented for testing the indirect effects of MPA, self-efficacy associated with career adaptability, career optimism, perceived knowledge. We generated 1000 bootstrap samples by random sampling with replacement from the original data set and then tested the hypothesized model 1000 times. Finally, we calculated estimates of the indirect effects as well as their standard errors and bias-corrected 95% confidence intervals.

According to the results from the mediation model at Figure 6, We can find that MPA has a direct impact on music students' career adaptability( $\beta=-0.1804, p<0.0$ ), career optimism ( $\beta=-0.1830, p<0.0$ ) and performed knowledge( $\beta=-0.1834, p<0.0$ ). At the same time, through the indirect path, we can find that self-efficacy plays a partial mediating role in MPA and career adaptability, career optimism, and performed knowledge. Thus, we can find that MPA has a significant negative impact on career adaptability, career optimism and performed knowledge, and it also affects career adaptability, career optimism and performed knowledge through belief in personal ability and belief that ability grows with effect. That is to say, the increase of students' self-efficacy can enhance their future career adaptability and confidence, and decrease the negative impact of MPA. Serval sub-themes were identified in the case of each theme in tandem with the supporting comments listed in Table 1.

Table 1. Negative influence of MPA to self-efficacy and career development

Themes	Sub-themes	Supporting comments
Self-efficacy	Belief in personal ability	'MPA will make me doubt my personal professional ability, and make me worry that I will receive negative comments from others after every performance. I think I am not good enough.' (Interviewee J, Music performance)
	Belief that ability grows with effort	'I think it's an insurmountable thing. No matter how hard I try not to think about it, I can not overcome the fear of MPA... It makes me feel that all my efforts are useless' (Interviewee C, Music education)
Career development	Career doubt	'MPA will make me doubt whether I am suitable for the major I am studying, and it will make me think I am not suitable. Because of this, I don't think I will make any achievements in the future in my field'(Interviewee I, Music performance)
	Change major	'I was majored in music performance when I was a undergraduate student...Then I found that I be puzzled by MPA for a very long time and finally I changed my professional to art management and music education, I think I would not do any job about music performance in the future.'" (Interviewee H, Music education)

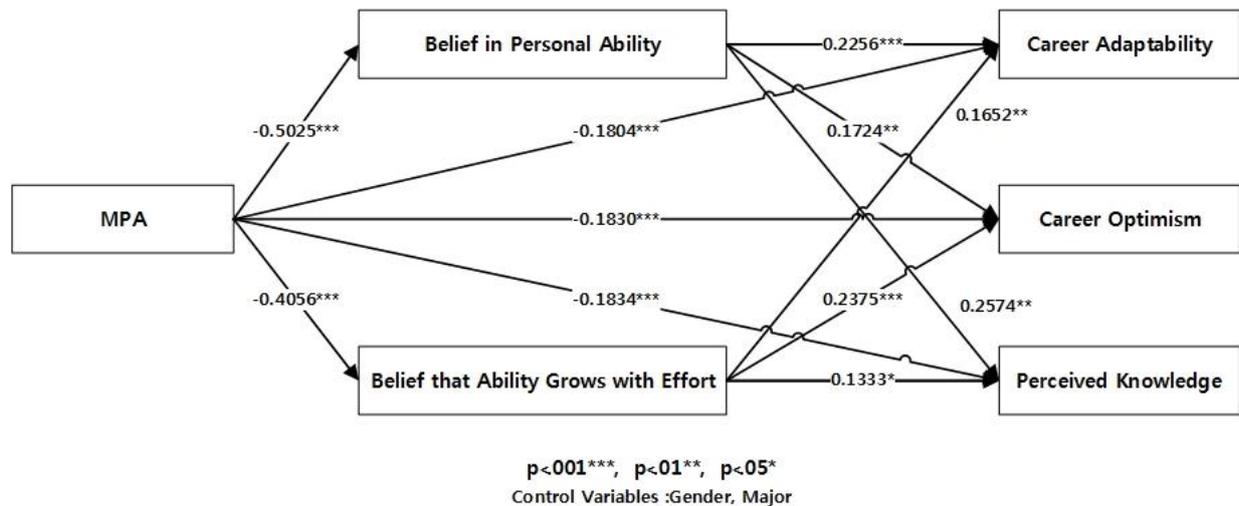


Fig. 2. MPA influence model of self-efficacy and career futures inventory for music students.

## Discussion

In the literature review, extensive studies have examined the implications of music performance anxiety, particularly on the negative side (Kenny, 2009; MacAfee & Comeau, 2020). Using a mixed method, this study investigated the impact of music performance anxiety on students' self-efficacy and career optimism, particularly those majoring in music education and music performance. Music performance anxiety is a complex relationship that is clearly indicated by the findings, which have highlighted the importance of this relationship.

As noted in the first finding, music performance anxiety has a direct negative effect on self-efficacy and career optimism among music students, which causes students to doubt their personal professional ability and lose the confidence that career advancement is possible, even to the point of changing majors. The aspect is consistent with the profile of the influence of music performance anxiety found in the previous literature: students considered abandoning their musical career because of high anxiety levels (Orejudo Hernández et al., 2018). At the same time, this study confirms the association between self-efficacy and music performance anxiety, conversely the previous literature (Gonzalez et al., 2018; MacAfee & Comeau, 2020). In addition, self-efficacy plays a partial mediating role in music performance anxiety and career optimism, which means the increase of students' self-efficacy can enhance their future career adaptability and confidence, and decrease the negative impact of music performance anxiety.

Taken together, this study holds important implications for educational and psychological research on music performance anxiety. It provides support to Kenny Music Performance Anxiety Inventory for Adolescents scale (MPAI-A; Osborne & Kenny, 2005) from different culture contexts. It demonstrated this questionnaire construct, has empirical utility and relevance in an East Asian context. On the other hand, the differential relationships of music performance anxiety and self-efficacy and established specific pathways through which affect career optimism.

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## The Influence of Teacher Emotional Support of Career Optimism in Music Students: Self-Efficacy as a Mediator

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### Abstract

Extensive research has demonstrated that teacher emotional support has a significant positive impact on students engagement and academic achievement. Compared with students studying other majors, music students have a separate tutor who is under a profound influence on the individual students during the undergraduate level. The aim of this study is to investigate in which self-efficacy and career optimism of music students is impacted by teacher emotional support. The research questions are: 1) Does the emotional support of professional tutors has a positive impact on the self-efficacy and career optimism of music students? 2) How exactly does this influence happens? 3) What kind of emotional support do music students need?

Participants were 360 music students majoring in music performance and music education from several regions in China, who had internship experience in related fields (e.g. private teachers, schools or orchestras), completed a set of questionnaires that included Teacher Emotional Support Scale, Self-Efficacy Formative Questionnaire, and the career optimism section of the Career Future Inventory (CFI). Based on the results of the questionnaire, three students with strong teacher emotional support and three who were weak were selected to conduct structured interviews to gain insight into the specific impact of teacher emotional support on self-efficacy and career optimism of music students.

The results show that teacher emotional support has a significant positive influence on music students' self-efficacy and career optimism, which plays a mediating role between self-efficacy and career optimism. Among teachers emotional support for music students, the academic support for students is particularly important.

Teacher emotional support has a significant positive impact on the academic self-efficacy and personal career development optimism of music students. Therefore, teachers' emotional care for music students could be emphasized. Appropriately changing educational concepts, encouraging students more and respecting students' personal development choices are conducive to improving music students self-efficacy and helping them maintain an optimistic attitude towards future career development.

*Keywords: teachers emotional support, career optimism , music students , self-efficacy*

### Introduction

As for music education, teachers have different kinds of dimensions for students. Nowadays, mentors replaced the traditional titles of supervisor or advisor (Leong, 2010), reflecting the multiple roles expected in current research. Teachers focus on tutoring, advising, guiding the mentee, and having a personal relationship that considers the educational, career, and personal development of the students, especially for the music majors. Music education has a long tradition for learning through apprenticeship, for learners are taught by an expert or an expert performer, often in a master-apprentice relationship (Hays et al., 2000). Music studying is always studied on a one-to-one basis in a music studio (Chasins, 2020; Small, 1996).

This paper emphasizes teachers support in music education and its relationship with the three dimensions of students' self-efficacy and career optimism, supported by apprenticeship.

The current study is discussed with recommendations for positive teachers support for improving students' self-efficacy and helping students maintain an optimistic attitude toward future career development in music education and performance.

### **Teachers' emotional support**

Recent evidence suggests the teacher-student relationship has been associated with student learning outcomes (Barile et al., 2012; Wentzel, 2002). Some researchers focused on teachers emotional support and found that teachers emotional support is essential to students (Niemiec & Ryan, 2009). Extensive studies have given that teachers emotional support will contribute to students' actual engagement, including learning, motivation, and achievement. (Reddy et al., 2003; Stroet et al., 2013). For instance, Reddy (2003) found that those students perceiving increasing teacher support showed corresponding decreases in depressive symptoms and increases in self-esteem. Roorda et al. (2011) investigated that positive teacher-student relationships will improve students' school engagement and achievement. These kinds of influences always last a long time across a school transition, which will impact students' social adjustment (Langenkamp, 2010; van der Zanden et al., 2021).

In addition, a considerable amount of literature has been published on teacher support, especially mentor support, which has primarily focused on pre-service teacher education, teacher induction (Butler & Cuenca, 2012; Nguyen, 2013). By contrast, there were a few research focus on music education (Gallo, 2018), and these kinds of literature (Draves, 2017; Nguyen, 2013) focus on peer mentors, which found that peers provided each other with emotional or psychosocial by sharing their ups and downs because of their 'equal position'. However, research that focuses on Teachers emotional support of music students is less common (Cain, 2007; Leong, 2010). Leong (2010) found that students desire their supervision teacher to share their career experiences, help them obtain opportunities, emotional and moral encouragement, provide feedback on performance, and the necessary 'exposure' and 'visibility' in the field of music education.

Knowing that teacher support is an essential aspect of the music education research and that the voices of Chinese students in China have not been the focus of recent research studies, research was designed to examine the perspectives of these students regarding Teachers emotional support in research.

One external social environmental is teachers support, which has been demonstrated to strongly influence students' self-efficacy (Martin & Rimm-Kaufman, 2015). Many studies discussed the mediating role of self-efficacy about the relationship between teachers support and academic ability or achievement (Chong et al., 2018). For example, Chong et al. (2018) examined that self-efficacy and teacher support demonstrated different indirect relationships with student competencies and via different engagement pathways. Teacher support also directly connects with career optimism (Aymans et al., 2020), but few studies were discussed in music education.

Therefore, in this study, we postulated that students' self-efficacy would play an important role in mediating the influences of teachers support on students' career optimism. The questions of the current study were addressed: 1) Does the emotional support of professional tutors have a positive impact on the self-efficacy and career optimism of music students? 2) How exactly does this influence happens? 3) What kind of emotional support do music students need?

## **Methodology**

### **Participants and procedure**

Participants in this study were music students (N=360) from three music conservatories in China. 256 participants were undergraduate students and 104 participants were graduate

students. All of the selected students were instructed to complete one questionnaire, all of the questionnaires were answered anonymously. After excluding 20 students who provided invalid data, 340 (98.29%) students were analyzed. There were 239(70.3%) female students and 101(29.7%) male students, Participation in this study was voluntary. The participants were provided instructions regarding each questionnaire and were informed that some questionnaires would ask for information about sensitive topics. Students took approximately 15 min to complete all of the questionnaires on the website (<https://www.wjx.cn/newwjx/.aspx>) under the supervision of research assistants. After the survey, students received a small gift to thank them for their participation. This study also conduct in-depth interviews with students trying to explore why does teachers emotional support affect students' self-efficacy and career choice from different perspectives. The interview will be conducted in the form of a structured interview. Each participant talking to the researcher online for 20 minutes to half an hour. Before the interview started, we did a brief introduction to this survey (had already sent them the consent form) and a self-introduction.

## **Measures**

### **Student self-efficacy**

Student self-efficacy support was assessed using the 13 items detailed in Self-Efficacy Formative Questionnaire (Gaumer Erickson et al.,2018). In the context of education, self-efficacy refers to perceptions an individual has about his/her capabilities to perform at an expected level and achieve goals or milestones. In short, self-efficacy can be defined as believing in your ability to accomplish challenging tasks and that your ability can grow with effort (Gaumer Erickson & Noonan, 2016). The Self-Efficacy Formative Questionnaire is designed to measure a student's perceived level of proficiency in the two essential components of self-efficacy, which are: Belief in personal ability (8 items; e.g., "If I practiced every day, I could develop just about any skill"). Believe in your ability to meet specific goals and/or expectations (5 items; e.g., "I believe hard work pays off"). Each of these items is rated from 1 (very slightly or not at all) to 5 (extremely). Students can use the questionnaire results to build an awareness of how their perceptions and beliefs about their ability contribute to their academic success. The internal consistency reliability for the for belief in personal ability was 0.872, 0.839 for belief that ability grows with effort.

### **Teachers' emotional support**

The Teachers emotional support was measured using 8 items that were developed by Shu yina (2017). It contains two subscales: Teachers' academic emotional support : (3 items; e.g., My tutor will make a study (or practice) plan for me; My tutor will give me learning advice.) Teachers' life emotional support: (5 items; e.g., My tutor would guide me to have a heart to heart talk to help me know myself and set goals; My tutor would give me psychological guidance to solve my confusion and obstacles; My tutor would encourage and affirm me and guide me patiently). The internal consistency reliability was 0.912 for teachers' academic emotional support, 0.897 for teachers' life emotional support.

### **Career futures inventory**

The career futures inventory was measured using 25 items that were developed by Rottinghaus, P. J.et al.(2005). It contains three subscales: Career Adaptability: The way an individual views his or her capacity to cope with and capitalize on change in the future, level of comfort with new work responsibilities, and ability to recover when unforeseen events alter career plans(11 items; e.g., "I am good at adapting to new work settings."). Career Optimism: A disposition to expect the best possible outcome or to emphasize the most positive aspects of one's future career development, and comfort in performing career planning tasks (11 items; e.g., "I get excited when I think about my career."). Perceived Knowledge of Job Market: Assesses perceptions of how well an individual understands job

market and employment trends (3 items; e.g., “If I practiced every day, I could develop just about any skill”). each on a 5-point Likert scale from 1 (strongly disagree) to 5(strongly agree). The responses were averaged and high scores indicated high levels of outcome expectation. The internal consistency reliability was 0.925 for career adaptability, 0.896 for career optimism, 0.869 for perceived knowledge of job market.

## Results

### **Influence of teachers emotional support on students self-efficacy and career optimism**

For analyzing direct influence of teachers emotional support on students self-efficacy and career optimism, this study adopts two OLS regression models by calculating the proportion of each individual item among total. The survey found that teachers emotional support have positive influence on the two parts of self-efficacy. The items of ‘Teachers academic support ’ (B = 0.191, S.E. = 0.123)and ‘Teachers life support ’ (B = 0.201, S.E. = 0.074),are significant in ‘Belief in personal ability’(p<0.05). The items of ‘Teachers academic support ’ (B = 0.178, S.E. = 0.073) is significant in ‘Belief in personal ability’(p<0.05). The following are the examples of interview contents:

*The teacher will give me support and encouragement in playing skills, which makes me feel peace. (Interviewee A, Music education)*

*The tutor's praise will make me happy for a week, but criticism will make me sad for a long time. The tutor's attitude towards me has a great influence on my understanding of myself. (Interviewee C, Music education)*

*The tutor's guidance and suggestions are very useful to me. In learning, I prefer to hear the teacher's positive response, which will make me more confident. (Interviewee E, Music education)*

The survey found that items of ‘Teachers academic support ’ (B = 0.414, S.E. = 0.072),‘Teachers life support ’ (B = 0.268, S.E. = 0.080),are significant in ‘Career adaptability’(p<0.05). The items ‘Teachers academic support ’ (B = 0.307, S.E. = 0.069),‘Teachers life support ’ (B = 0.313, S.E. = 0.077),are significant in ‘Career adaptability’. The following are the examples of interview contents:

*My tutor is an expert in piano teaching method. We keeping very close relationship with my study and life. I also hope to be a good piano educator like him in the future. (Interviewee C, Music education)*

*My teacher always communicate with me about my professional development things. Our relationship is very harmonious, so I have confidence in my future career and I know where I will go. (Interviewee D, Music performance)*

*Tutor's attitude to teach us is generally encouraging, and I believe what the teacher said. For example, the teacher suggest us go to graduate school, I think I will follow her advice to choose such a career development path. (Interviewee I, Music performance)*

### **Influence of teachers’ emotional support on students self-efficacy and career optimism**

The results of the model with a common latent factor showed a good fit ( $\chi^2$  (N =579,df=15) = 1555.128, p < 0.001; CFI =0.993; IFI=0. 945; TLI = 0.911; and RMSEA = 0.077, which is not a poor fit compared to the measurement model, the Chi-square comparison was not significant ( $\chi^2$  diff(1)=1.708, p > 0.01). In addition, factor loadings of the measured variable to its latent variables did not decrease significantly. Therefore, we concluded that the common method bias does not seem to be a major problem in the current study.

According to the results from the mediation model at Figure 6, there is a significant

positive correlation between students self-efficacy and career optimism and career adaptability. Reciprocally, teachers emotional support has a significantly positive impact on the career optimism and career adaptability. Teachers emotional plays a partial mediating role between the self-efficacy and Inventory, indicating that the more supports students accepted from their tutors, they would become more recognized themselves and be confident in their future career.

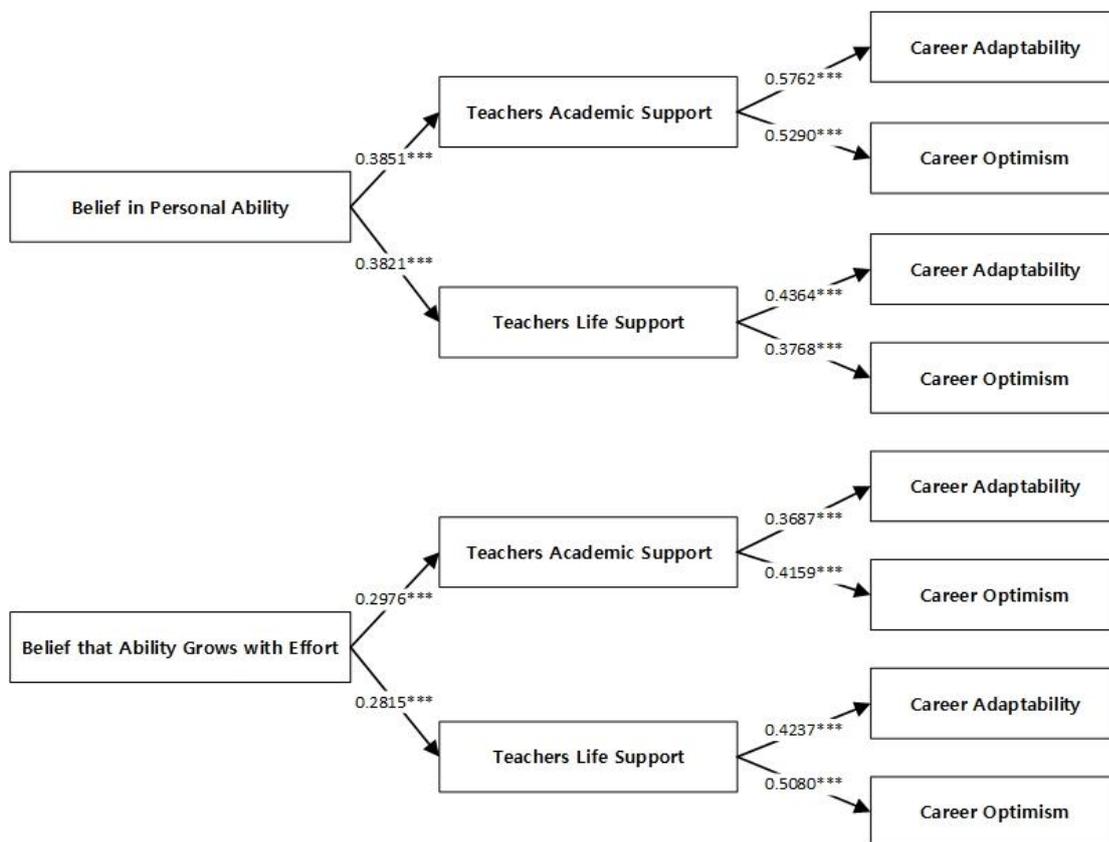


Figure 1. The mediation influence of teachers emotional on students self-efficacy and career optimism

N = 340, \*p < .05, \*\*p < .01

## Discussion

This study has examined teachers' emotional support that influences self-efficacy and career optimism among music students, which major in music education and music performance. Using a combination of questionnaires and structured interviews, we highlighted the complexity of this relationship, which indicated the importance of teachers' emotional support.

As to the question does the emotional support of professional tutors has a positive impact on the self-efficacy and career optimism of music students? The way quantitative and qualitative findings show that teachers' emotional support has a significant positive influence on music students' self-efficacy and career optimism, which plays a mediating role between self-efficacy and career optimism. The finding confirms the results of previous studies that the mediating role of self-efficacy about the relationship between teachers support and career optimism (Aymans et al., 2020), and also widen the scope of previous research.

The first finding shows students desire encouragement emotionally, which can make them feel peace and more confident. The aspect is consistent with the profile of the influence of positive emotion from teachers found in the previous literature: teachers positive emotions had positive influences on perceived students' cognitive factors (Stephanou & Kyridis, 2012).

Therefore, student-oriented settings which focus on emotion of students will help develop encouragement environment (Jacob et al., 2019). In addition, students always believe teachers and will follow the way which the teacher provided. As for the one-to-one teaching model, students tend to focus on the teaching expertise and performance identities from teachers, which is a by-product of their own performance skill (Burwell et al., 2019). Because of the context, the hierarchical relationship between teachers and students is bounded by an accountability bond to a particular institution of higher education and traditional Confucian friendship. Students would like their tutors to share their career experiences willingly and to provide them 'exposure' and 'visibility' opportunities (Leong, 2010). All these findings indicated the multidimensional of teacher concept for music students, a relationship that affects students' self-efficacy and occupational expectation.

Further studies are needed to confirm the current influence of teachers' support. More specifically, according to this study, teachers' life support also plays an essential role in students' development, which means an exhaustive examination would consider more emerging variables. As such, the emotional support from teachers has culturally meaningful for this music students. A model of teachers' support could be useful in students' development, helping music majors develop a positive self-efficacy could sustain them in successfully facing the challenges for future study and career development.

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## **A Participant Observation in “Language Activities”: From the Perspective of “Against Interpretation”**

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### **Abstract**

The purpose of this study is to analyse the use of language in music education. According to a report by the Central Council for Education of Japan (2008), language forms the foundation of intellectual activities, communication sensitivity, and emotion. A previous study in Japan demonstrated that the images and emotions that students want to express are clarified when they are shared through language (Mizoguchi 2016). According to Sontag (1990), Greek philosophy eventually created a separation of ‘form’ and ‘content’ in art, whereby ‘form’ is art itself and ‘content’ is the interpretation of art by language. This move made ‘content’ essential and ‘form’ accessory. However, if excessive stress is placed on ‘content’ that should exist as essence provokes the arrogance of interpretation, the art itself would be silent. A vocabulary for the ‘form’ of music itself is required, rather than a vocabulary for its ‘content’, such as images and emotions.

Therefore, this study poses the following research question: what type of vocabulary do students need to describe music? To clarify how students use language, a participant observation method was employed at a junior high school in Japan. The students attempted to create music that did not adhere to the functionality of harmony or coordination. The students created a group of six or seven and created one graphic score by superimposing their graphics. The author analysed ‘language activities’ based on the two categories of ‘form’ and ‘content’.

The results from this study demonstrated that all the students paid attention to musical ‘form’, such as structure, although each one felt and thought differently about the music. In particular, the students in the first group were engaged in ‘language activities’ closely related to musical ‘form’ without being biased towards musical ‘content’. However, in the second group, the students were more ‘content’-oriented, tending to imitate sounds from physical objects such as an airplane and running sounds. Based on these results, two considerations can be presented. First, by focusing on musical ‘form’, such as timbre and dynamics, ‘language activities’ can be utilized to focus on music itself rather than on images or emotions. Second, music teachers should precisely clarify the purpose and method of ‘language activities’.

*Keywords:* Form; Content; Language Activities

### **1. Introduction**

European metaphysics based on Greek philosophy attempted to pursue the universal principle of every phenomenon through language. The Greek philosophers considered art to be one of those phenomena, mimetic and an imitation of reality. For example, art was neither particularly useful nor true for Plato because he considered ordinary material things as mimetic objects; hence, art would be no more than an imitation of an imitation. In contrast, for Aristotle, art was medicinally useful in that it aroused and purged dangerous emotions. Although they

preached imitation theories from different perspectives, both attempted to explain art by 'language'. Sontag (1990, pp.3-4) states

It is at this point that the peculiar question of the value of art arose. For the mimetic theory, by its very terms, challenges art to justify itself. [...]. The fact is, all Western consciousness of and reflection upon art have remained within the confines staked out by the Greek theory of art as mimesis or representation.

Greek philosophy eventually created a separation of form and content in art. European logos, which have been developed with a focus on language, naturally tended to emphasize content as signified. As a result, form itself as a signifier was forgotten. Sontag (1990) argued that this separation was also applied to art.

## **2. Background**

### **2.1 Interpretation in Art**

What exactly is interpretation in art about? Sontag (1990, p.5) states

Directed to art, interpretation means plucking a set of elements (the X, the Y, the Z, and so forth) from the whole work. The task of interpretation is virtually one of translation. The interpreter says, Look, don't you see that X is really—or, really means—A? That Y is really B? That Z is really C?

A familiar example is the interpretation of Beethoven's Symphony No.9 in D minor. Some consider the symphony as depicting Beethoven's struggle to overcome the devastating blow of his deafness. In this case, Beethoven's deafness is seen as an interpretive advantage (Cook 2000). In such an interpretation, the following two patterns can be seen historically. In the following sections, the classical and contemporary interpretations are discussed.

### **2.2 Classical Interpretation**

Interpretation first appeared in the culture of late classical antiquity, when the power and credibility of myth had been broken by the 'realistic' view of the world introduced by scientific enlightenment. Sontag (1990, p.6) states

Once the question that haunts post-mythic consciousness — that of the seemliness of religious symbols — had been asked, the ancient texts were, in their pristine form, no longer acceptable. Then interpretation was summoned, to reconcile the ancient texts to 'modern' demands.

For example, the Jewish philosopher Philo, who was active in Alexandria, interpreted the historical narratives of the Hebrew Bible as an allegory of the individual soul's emancipation,

tribulations, and final deliverance (Sontag 1990). Regarding the conditions of how such an interpretation occurred, Sontag (1990, p.6) states

Interpretation thus presupposes a discrepancy between the clear meaning of the text and the demands of (later) readers. It seeks to resolve that discrepancy.

In other words, a divergence arose between these mythical powers and the realistic worldview, and as a result of attempting to eliminate the divergence, classical interpretation first occurred.

### **2.3 Contemporary Interpretation**

Interpretation in the twentieth century, however, was even more complicated than that in the classical era. Classical interpretation was a way to bridge the gap between reality and myth. In contrast, contemporary interpretation sought to provide psychological and sociological views to interpretations, that is, 'true meaning'. Sontag (1990, pp.6-7) called this presumptive true meaning 'sub-text'.

The most celebrated and influential modern doctrines, those of Marx and Freud, actually amount to elaborate systems of hermeneutics, aggressive and impious theories of interpretation. [...]. For Marx, social events like revolutions and war; for Freud, the events of individual lives (like neurotic symptoms and slips of the tongue) as well as texts (like a dream or a work of art) – all are treated as occasions for interpretation.

Sontag (1990, p.7) also states

According to Marx and Freud, these events only seem to be intelligible. Actually, they have no meaning without interpretation. To understand is to interpret. And to interpret is to restate the phenomenon, in effect to find an equivalent for it.

For both Marx and Freud, understanding the work of art meant finding sub-texts behind them. Conversely, they argued that it would be impossible to understand a work of art without finding the sub-texts. Sontag (1990, pp.13-14) states

Once upon a time (a time when high art was scarce), it must have been a revolutionary and creative move to interpret works of art. Now it is not. [...]. What is important now is to recover our senses. We must learn to see more, to hear more, to feel more.

In short, content needs to be reduced as much as possible so that the form itself can be seen transparently.

### **2.4 Enhancement of Language Activities**

According to a report by the Central Council for Education of Japan (2008), language forms the foundation of intellectual activities, communication sensitivity, and emotion. The

term 'to enhance language activities in each subject' was also included, emphasizing the development of language-related abilities.

In 2017, the Japanese Ministry of Education published the 'Commentary on the Curriculum Guidelines', a supplement to its recent education reform initiative guidelines, where the basic course of study concept was changed from content-based to competency-based. This can be considered a guideline, proposed based on the trend in educational reform seen commonly among developed countries. It focuses on special changes in terms of a knowledge-based society: the development of AI, progress of globalization, and so on. The concepts of 'active, interactive, and deep learning' (active learning) have also been advocated.

Active learning is a learning method for realizing high-quality learning in school education and the continuation of learning activities throughout life. To realize this method, it is necessary to examine the type of language activity to be undertaken by thinking according to the characteristics of each subject.

### **3. Problem**

According to the 'Commentary to the Curriculum Guidelines' (2017), language activities are expected to be handled all throughout education, including music. Mizoguchi (2016, p13, [translation mine]) states

The images and emotions that students want to express are made clear by sharing their images and emotions using language.

However, music activities differ fundamentally from those of language activities. If language activity is limited to recognizing, empathizing, or judging the value of images and emotions, it would emphasize the content derived from it rather than the form of music itself. In short, 'music' is nothing but a 'tool' for sharing images and emotions with others. Imada (2015, p.31, [translation mine]) states

If music can exist only as a concept of 'music' valued by logos, the grain of the music itself as sonorous of air will be lost. If music is tamed by language, the music will definitely die. Music education is necessary to avoid the loss of music.

If excessive stress on 'content' that should exist as essence provokes the arrogance of interpretation, the art itself would be silent. Considering this in terms of Sontag's argument, which is described in the previous section, a vocabulary for the 'form' of music itself is required rather than a vocabulary for 'content', such as images and emotions. Therefore, this study poses the following research question: what type of vocabulary do students need to describe music? To clarify how students use languages, a participant observation method was employed.

### **4. Methods**

A participant observation survey was employed at Sakae Junior High School in Misato City, Japan, on the 2 November 2018. The survey subjects were 32 third grade students. Some students were familiar with music. They had played the piano or participated in the

school's concert band. However, the majority of the students usually did not listen to music or play any instruments.

## 5. Curriculum

In order to cultivate students who can feel the richness and beauty of music and pursue better creative expressions, the students created voice works from their own graphic scores. Theme of the class is "Classes that Connect Appreciation and Expression ~ Graphic Score and Creative Activity ~"

Music consists of sound, while musical expression uses sound as a medium. Therefore, it is important to know about sounds in music education. Sensitivity to music naturally differs for each person. However, when it comes to conveying sensitivity to others by expressing music, some knowledge and performance techniques for expressing music are necessary. Accordingly, in this class, the students attempted to create music that did not adhere to the functionality of harmony or coordination.

As homework during the summer vacation in 2020, the students performed a soundwalk and drew graphic scores through their experiences of listening to soundscapes. After listening to 'Epitaph for Moonlight', the students created a group of six or seven and created one graphic score by superimposing their own graphics. The purpose of this class was to express the sounds using their own voice and body by communicating the characteristics and elements of the sounds using a graphic score. Therefore, emphasis was not placed on expressing images or emotions (musical content) but on devising the elements of music such as timbre, dynamics, and structure (musical forms). The main flow and stages of this class are 1. Reviewing the previous classes, 2. Final rehearsing, 3. Performance, and 4. Discussion.

At the beginning of the class, the previous classes were reviewed in stage 1. After final rehearsals in stage 2, performers performed neither their intentions nor ideas in stage 3. Then, in order to focus on form, the audience listened to the performance while looking at the graphic score rather than the performers. Afterwards, the students criticized the following perspectives in stage 4: how graphic scores could be read; how graphics were performed; how the performances were elaborated, and so on.



Figure 1. Graphic Score of the First Group



Figure 2. Graphic Score of the Last Group

The author analyzed the language activities based on the first and last groups, focusing on stages 3 and 4. To divide the students' comments on the language activities into form and content, underlining was used. The comments on form are underlined like this, the comments on content are underlined like this, and the comments on both form and content are underlined like this.

## 6. Results

After the first group's performance, the audience thought that the graphic score was read from left to right, and the performers said, 'You are right'. Regarding the discussion about how graphics were performed and how the performances were described, the audience said, 'The lines on the left side sounded like crescendo (dynamics)'. 'Many lines on the right side are represented by alternating voices (structure)'. 'The red graphics of the center are expressed in unstable voices (timbre)'. A student performer responded: 'The lines on the right side and the left side sounded like crescendo (dynamics)'. 'As someone said, the red graphics of the center indicates instability (timbre)'. 'The three red graphics on the rightmost side were indicated by hand claps (timbre)'.

After the performance of the last group, the audience thought that the graphic score was read from right to left. On the other hand, the performers said, 'The center of the graphic score is my position. The graphics drawn on the upper side of the paper indicate the sounds from the front. The graphics on the lower side of the paper indicate the sounds from behind. We started reading the score from the lower left, and then changed the reading direction to clockwise'. Regarding the discussion about how graphics were performed and how the performances were described, the audience said, 'The small dots of the center were performed by the hand claps'. 'The purple lines on the right side were played by the boy's low and long voices (timbre, pitch), and the pitch had been getting higher gradually (pitch)'. 'The graphics, like the whorl, were played by repetitive sounds (structure) like the cawing of the crow'. In response to these opinions, the performer said, 'The graphics of the center indicated the closest sounds, so we expressed them with loud sounds (dynamics)'. 'The purple lines on the right side indicated the thickness of the sound (timbre, dynamics)'. 'The sound of the plane was drawn upwards, and the graphics on the upper left side indicated the running sounds of the elementary school students, and the wavy lines indicated footsteps in the graphics'. 'The difference in line height expressed the differences in the pitch of the sound (pitch)'.

## 7. Discussion

The results of this study demonstrate that the students all paid attention to musical 'form', such as structure, although each student felt and thought differently about the music. Specifically, the students in the first group were engaged in 'language activities' closely related to musical 'form' without being biased towards musical 'content'. However, in the last group, the students were more 'content'-oriented since they tended to imitate sounds from physical objects, such as an airplane and running sounds.

Based on these results, two considerations can be considered. First, by focusing on musical 'form', such as timbre and dynamics, 'language activities' can be utilized to focus on music itself rather than on images or emotions. Second, music teachers should precisely clarify the purpose and the method of 'language activities'. Music teachers should instruct students that graphic scores differ fundamentally from pictures. Thus, students should themselves try to draw their listening experiences of the soundscape to pay more attention to

musical form rather than simply utilizing and visualizing physical objects as their resources for creative music making.

## 8. Conclusion

In this study, the separation of 'form' and 'content' in a creative music making class was analyzed based on students' language activity. Pursuing the 'content' of music makes students forget how to create their own music based on musical 'form'. Meanwhile, language activities can be considered an effective tool for creative music making, especially when students collaborate with each other towards their own work of music.

In order to develop a creative and productive relationship between music and language, the 'New Realism' by Gabriel will be examined in future research.

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## The Curriculum of Music Education and the Actual in Wales

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### Abstract

The United Kingdom of Great Britain and Northern Ireland, the UK, established education systems prior to the rest of the world. The UK is the foremost country in the research field of education along with the United States and has also produced many pedagogies. In Japan, there can be seen many pieces of academic research regarding education in the UK. However, Few of them have taken into consideration the differences between four constituent countries: England, Wales, Scotland, and Northern Ireland. Especially, in the field of music education, there has been no research focusing on Welsh system.

The purpose of this research is to clarify the history of music educational curriculum in Wales which has been overlooked in Japan. Specifically, I researched how music education in Welsh schools began and has continued until the present day and how the current curriculum has been put into practice, both of which has revealed the uniqueness of music education in Wales.

Firstly, I described the transitions of school educational systems and music education in Wales. Educational system in Wales has developed in parallel with that in England. However, there were some factors behind its independent development; (1) there was a time in England when negative views on Welsh society were widespread, (2) Welsh National Curriculum was enacted because Wales alleged the necessity of cultural and historical differences from England and demanded musical curriculum including Welsh songs.

Secondly, I translated Welsh National Curriculum into Japanese and considered its differences and characteristics in comparison with English one. It can be said that Welsh National Curriculum has many detailed and specific descriptions compared with English one. In addition, in the curriculum, we can see the word “Wales” or “Welsh” quite often, which indicates that the whole schools are trying to protect, develop and shape Welsh society.

Furthermore, the lectures I took from a professor at Bangor University has clarified several things; (1) music education is to teach and learn music, (2) many Welsh folk songs are selected as teaching materials at schools and (3) schools closely cooperate with events held in the local area.

Lastly, I offered some implications for music education in Japan; how music appreciation and Japanese traditional music classes should be, and what “music education” itself should be.

*Keywords:* music education, Wales, the United Kingdom, music educational curriculum

### Introduction

The United Kingdom of Great Britain and Northern Ireland, the UK, established education systems before the rest of the world. The UK consists of four countries: England, Wales, Scotland, and Northern Ireland. Each country provides education based on its own National Curriculum. Also in Wales, it is already clear that Wales has different practices from England (Métais, Andrews, Johnson and Spielhofer 2004).

However, in the field of education in the UK, Wales has been treated the same as England in Japan. Especially in music education, there has been no research in Japan that focuses on the Welsh system. I wondered that Welsh uniqueness has been overlooked so far.

## **Purpose and methodology**

The purpose of this paper is to consider the uniqueness of music education in Wales by clarifying the contents and the characteristic of the current curriculum of music education in Wales in comparison with the one in England and revealing, how the curriculum has been put into practice.

First, the paper focuses on how school education has been developed mainly by references and prior works in Wales. Second, I overview the National Curriculum for Wales and reveal Welsh uniqueness by comparing it to England. Furthermore, I describes real school music classes in Wales based on lecture and interview investigation. I took Gwennant Pyrs's Roberts' online lectures from 27 April 2020 to 19 May 2020. Prof. Roberts is a professor at Bangor University in Wales and an expert on music education.

## **Background of Welsh education**

### **Negative views on Wales**

This section describes the transitions of school educational systems and music education in Wales. Roese says that the Educational system in Wales "has developed in parallel with that in England" (Roese 2003, p.5). However, there were some factors behind its independent development.

In the middle ages, Nobody could afford to get an education without upper-class people in Wales. By the 16th century, upper-middle class also wanted to educations. Therefore, a number of grammar schools were established. Thomas Gouge who is pastor launched a foundation to establish Welsh language schools (PDHD 2010) and created Welsh Trust which aimed to publish books that are used as textbooks at Welsh language schools.

At half of the 18th century, the Circulating School was founded in Wales. The Circulating Schools are "a pupil takes over the school and plays a role in a teacher after teachers teach literacy to pupils and teachers move to next place and make a new school" (Matsuyama 2015, p.27). Griffith Jones who was from Penboyr in southwestern Wales launched this system.

In the 19th century, the country and government start to be involved in educations. At this time, negative views on Welsh society were widespread. For example, the Blue Book was published. It is a report that three English people investigated Welsh educations. The Blue Books included not understanding Welsh language but rather to see as a problem.

Furthermore, the Code of Regulations; Revised Code was issued in 1862. The payment-by-results is introduced in the Revised Code. Webster (1991) indicates that the Revised Code is a cause of exclusion of Welsh language. The reason is that subsidy was paid for schools depends on pupils' skill of not Welsh but English literacy.

While the 20th century, Welsh education developed as well as in England. The Welsh Department was established as a part of the Board of Education. The National Curriculum came into existence after the Education Act 1902, the Education Act 1944 and the Education Reform Act 1988.

In 1991, the temporary new curriculum was suggested by the Working Group. The Welsh insisted on the historical and cultural music differences from England and required an active music curriculum. Finally, the Curriculum Council for Wales insisted upon that children should be taught Welsh music in music classes. Thus, the Music in the National Curriculum for Wales was legally recognized in 1992.

## National Curriculum for Wales

### Wales-specific description

Subjects which are set in National Curriculum are different between Wales and England. In the National Curriculum for Wales (NCW), there is a subject of “Welsh”. Plus, we can find Wales-specific descriptions. For example, the beginning of the NCW shows that the education environments which protect Welsh cultures and ethnicities should be set and this is the responsibilities of schools. We could guess that not teachers but whole schools work for building Welsh society because all sentences’ subjects are “schools”.

The NCW says what kinds of activities are required to achieve these aims. For instance, these sentences are included in “Curriculum Cymreig (7-14) and Wales, Europe and the World (14-19)”:

*In Music, learners perform and listen to the music of Wales, from the past and present. This includes music from the classical tradition, folk and popular music, and other traditions and cultures, which represent the communities of Wales. Composing activities may be based on extra-musical stimuli (WAG 2008, p.8).*

From the above quotation, we could guess that Welsh music should be chosen from a wide range of genres regardless of era. It is even more persuasive by specifically listing, for example, classical tradition and folk and popular music, rather than simply describing, for instance, a wide range of genres.

## Music in the National Curriculum

### Comparing Wales and England

By comparing National Curriculum for Wales and England, it is clear that there are huge differences between them. These are volume and concreteness of sentence.

For example, In the NC in England, both “Purpose of study” and “Aims” have only three sentences. On the other hand, the NCW describes the purpose and necessity of music education in terms of developing thinking, communication and ICT, a background of history, personal and social education and careers. These include detailed descriptions and amount to four pages.

Next, in the “Subject content” of the NC in England, points which pupils should be taught to is indicated in each Key Stage. For example, in the sentences of Key Stage 2, music skill genres — singing and playing the instruments, for example — are not classified. Furthermore, a lot of abstract words — “great” or “a range of” — are used. On the other hand, the purpose of studies is set at each Key Stage in the NCW. Furthermore, the programme of study is divided into “Skills” and “Range”. “Skills” and “Range” are also divided into “Performing”, “Composing” and “Appraising”. In “Performing”, “Composing” and “Appraising, there are detailed descriptions of opportunities which pupils should be given and activities which pupils should do during each Key Stage.

### Curriculum protecting Welsh culture

How can Wales practice its own music education that is different from England and other countries? This section focuses on the parts of appearing the word “Wales” or “Welsh” in the National Curriculum for Wales.

In Generally, music can make contributes to get familiar with and understand the land of Wales for children. Studying not only songs but also many kinds of music allows pupils to understand the background of the music and make it their own. The background includes these things about who makes the piece, what kind of environment the piece was composed or how the piece has been handed down. Pupils can have “opportunities to develop and apply knowledge and understanding of the cultural, economic, environmental, historical and linguistic characteristics of Wales” (WAG 2008, p.8). In this way, the NCW makes environments that children can experience the cultures of Wales.

### Actual practice in Wales

This section focuses on that how music education has been practised in Wales. This is described based on Prof. Roberts’s lectures.

#### Appraising lesson in Primary school

In Wales, most classes focus on singing lessons, introducing Welsh folk songs, Sea Shanties, as well as World music. Furthermore, some appraising is expected. An example of Roberts’ lesson for younger children is shown below.

At beginning of the class, a teacher shows several onomatopoeic words. Pupils try to make these sounds with their voice.

Figure 1. an example of showing onomatopoeic words



(provided from Prof. Roberts)

After this activity, the next focal point is the texture of sounds. A teacher shows words that express speed, emotion, and atmosphere. Pupils try to make these sounds as before and listen to friends’ sound to understand differences in sound textures.

Next to these introduces, pupils work on a game which is called “Dynamic game”. Pupils pass around cards that show onomatopoeic words or actions; scrap, rattle, scratch and so on while singing a song. The song is a parody of “London Bridge is Broken Down”.

In the latter part of this class, pupils play instruments. A teacher shows some instructions — for example, “Play loudly” or “Play angrily” — and pupils try to play following

the subject. When they use instruments, it is more difficult to express their emotions. This activity allows children to experience difficulty and enjoyableness of expression.

### Performing lesson in Secondary school

This section introduces an example of Performing lessons in Secondary schools. Especially, class ensembles can provide an opportunity to play an instrument, sing or follow notation to all children. These are a series of eight popular class ensembles, which can be used in Key Stage 3 or 4: (1) Ar Hyd y Nos, (2) Llwyn Onn, (3) Hen Wlad Fy Nhadau, (4) Mi a glywais fod yr Hedydd, (5) Ton ton ton, (6) Sipping Cider through a straw, (7) Auld lang syne, (8) Y ferch o blwy Penderyn.

(1), (2), (3), (4) and (8) of the above table are based on Welsh folk tunes, the other songs are based on English and Scottish. Especially, (3) is extremely familiar by reason of Welsh national anthem.

The main aim of the ensembles is to motivate the pupils to experience and enjoy performing together in the classroom. However, as the ensembles are learnt, opportunities to get to grips with a number of other aspects are also afforded. For example, an opportunity to perform the melody or another solo part, singing with the ensembles or singing and playing in turn, an opportunity “evaluate” their own work and the work of their peers.

### Welsh culture and education

Eisteddfod is unique to Wales. The definition of the word Eisteddfod is a gathering of people competing against each other, in areas such as singing or playing an instrument. Today the competitions have evolved into drama, dance, recitation as well as musical competitions. The original Eisteddfod focused on performing and creating poetry and performing on ancient harps. This is because the harp is considered to be the “Welsh National Instrument”.

From 1929, a new Eisteddfod has been held specifically for the youth of Wales to compete against each other. This is called “Eisteddfod yr Urdd”, which roughly translates as the National Youth Eisteddfod. Today most schools in Wales are involved in preparing for this Eisteddfod. Most of the preparations for these competitions are considered to be extracurricular, that is, the rehearsals take place outside of classroom lessons, and are held at lunchtimes, or after school.

The NCW includes all aspects of Welsh culture. Along with other world cultures, the music of Wales is an integral part of the NCW including the study of traditional folk tunes “Cerdd Dant”, contemporary Welsh composers and popular Welsh music. Mostly in the 20<sup>th</sup> century, duets, ensembles and choirs performed Cerdd Dant, and the parts of the harp and vocal counter melodies were written down, as more classical trained musicians took to the skill.

This large scale event has developed to be one of the most important annual festivals in Wales and has a long tradition and history.

### Conclusions and Discussions

It can be said that the NCW has many detailed and specific descriptions compared with the English one. In addition, the curriculum indicates whole school is trying to protect, develop and shape Welsh society and which makes a clear distinction between Welsh curriculum and English one. Judging by these points, music education in Wales is completely different from in England.

## Implications for Japanese music education

In Japan, it is popular that pupils sit at the table and listen to music quietly at appraising classes. On the other hand, in the above example of Wales, pupils always take physical action and let out their voice. This finding causes a stir in how Japanese appraising lessons should be. It is not enough just to listen is appraising music. Prof. Roberts says that the use of “the elements map” will encourage pupils to appraise.

Figure 2. an example of “the elements map”

<p>The Dynamics are Piano Forte Crescendo Diminuendo Other</p>	<p>The Tempo is Presto Andante Moderato Adagio Other</p>	<p>The Beat is 4 3 2 Other</p>	<p>I can hear Ostinato Repeat</p> 
<p>I hear the instrument... At the beginning In the middle At the end</p>	<p>What's playing? Orchestra Brass Band Rock Band Other</p>	<p>One voice A Choir A trio Other is singing</p>	
<p>The music sounds like Film, Concert Other music</p>		<p>The title of the piece is ?  The name of the Composer is?</p>	<p>The mood is  Lively Sad Other</p>
<p>The <b>type</b> of music is Ballet Opera Other</p>	<p>I like the music because I don't like the music because</p>	<p>The music is in the style of Pop Classical Other</p>	

Furthermore, a number of Welsh songs are used in performing classes in Wales. However, it does not always mean pupils use Welsh traditional instruments just because they study Welsh music. Right now, Japan places great emphasis on “Japanese music” education. Also, playing Japanese musical instruments has been compulsory in junior high schools since 2014.

However, playing Japanese music instruments as a required subject contains a hazard. In other words, the misunderstanding which is “teaching Japanese music” = “playing Japanese music instruments” will spread in school education due to the implementation of Japanese music education by playing Japanese music instruments. However, instruments are not just music. The difference in the colour of scales could be recognized by playing the piano or recorder.

Plus, this paper offered some implications for music education in Japan. In Japan, the purpose of music education is “to bring up children’s music-loving feeling, enrich children’s sensitivity to music, develop musical basic skills, promote a better understanding of music cultures and nourish rich emotion through a wide range of activities of expression and appraising” (MEXT 2008, p.7). Ogawa criticizes this purpose for “dealing with music as “object” of music-loving” (Ogawa 2015, p.7).

Prof. Roberts says “music education is teaching and learning music.” In Wales, children learn Welsh cultures through this “doing music” education. This means it literally

and to be expected. However, that is not an obvious thing in Japan. From this fact, Japanese educator should consider what “music education” itself should be.

This paper remains only that I do participant observation of music lessons at schools in Wales directly. From now on, I try to gain new insights by participant observation and reveal to the more accurate actual of Welsh music education.

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## Development of Music Teaching Materials and Teaching Plans for Cultural Diversity in Japanese schools

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### Abstract

In the last three decades, an increasing number of children with foreign roots and multiple linguistic and cultural backgrounds have entered Japanese schools. It is impractical to consider education based on the assumption of a single language and culture. This study focuses on the development of music teaching materials and teaching plans that assume cultural diversity in Japanese schools.

We first drew important points of the argument following a review of theoretical and practical research on intercultural or multicultural music education in the United States and Germany. The former is a multi-ethnic nation, while the latter has accepted many immigrant workers. Three discussion points were derived from this review.

The first is how to associate the learning of music with the historical, cultural, and social background of music. In order to address this, we set the condition that the learning of music and the learning of the cultural background are compatible and linked.

The second is how to define one's own culture, different cultures, and determine the boundary between them. We believe that understanding "other music" in the light of one's "own music" enables us to capture the diversity of music culture as being related to ourselves. Accordingly, we set the condition that children proceed with learning while going back and forth between their own and different cultures.

Thirdly, we view the "musical culture" of individuals as complex and variable due to the diverse environment surrounding them, including school, home, mass media, and social media.

Based on these three points, we attempted to develop music teaching plans for cultural diversity that could be applied to Japanese schools. For a conceptual model of teaching plans, we chose several themes of the type "X and music" such as "play and music," which relate to music alone and the cultural background of the music. Considering these relationships, children are expected to discover similarities and differences between multiple music cultures while going back and forth between their "own culture" and "different cultures," and to understand the diversity of music alone.

In this presentation, we provide teaching plans based on two themes. One is "play and music," which focuses on children's play songs, and the other is "life/events and music," which is associated with community life.

*Keywords:* cultural diversity, culturally relevant education, culturally responsive teaching, multicultural education, intercultural education

### 1. Introduction

The proportion of children with foreign roots has increased in Japanese schools in the last three decades. In response, we conducted research on the development of music teaching plans that assume cultural diversity in Japan.

At the outset, we do not regard cultural diversity in Japanese schools as a "problem," but as a "right" for individuals and a "resource" for our society.

We first drew important issues from the review of theoretical and practical research on intercultural or multicultural music education in the United States and Germany. The former is a historic multi-ethnic and immigrant nation, while the latter has accepted many immigrant workers after the Second World War and refugees in recent years. Second, based on the review, we clarify the philosophy of music education for cultural diversity and attempt to develop music teaching plans that could be applied to Japanese schools.

## **2. Multicultural music education in the United States based on CRE theory**

Multiculturalism has been a recurrent theme in education in the United States during the twentieth century. The "culturally relevant education (CRE)" theory was raised by American multicultural education researchers since the 1980s. Fundamentally, "culturally relevant pedagogy (CRP)" by Ladson-Billings (1995) and "culturally responsive teaching (CRT)" by Gay (2010) have contributed toward the development of research in subject teaching (Kodama 2018).

In the study of music education, Campbell et.al have published various theoretical and practical studies and collections of teaching materials incorporating music from around the world (Campbell 2004, Anderson & Campbell 2010, etc.). In recent years, the perspective of social justice has been added to studies on music education (Campbell 2018).

However, it has been pointed out as a problem that items of the National Standards for Music Education closely related to CRE theory are often overlooked in actual teaching in schools (Dekaney & Cunningham 2011).

In contrast, Lind and Mckoy incorporated CRT theory into music education and published the results for music teachers (2016). Lind and Mckoy say that there is no "quick fix" for teachers looking for ways to develop and incorporate culturally-responsive teaching strategies. Therefore, "teachers must critically examine all aspects of teaching and learning, including content, process, and classroom environment, while considering the individual needs of their students" (p.34). Consequently, it is important for teachers to understand how their students' cultural background influences their musical experiences.

In order to understand the musical experience of students, Lind and Mckoy (2016) discuss the relationship between students' own culture and their music, using the concepts of two types of musical identity: identity in music (IIM) and music in identity (MII). Racial/ethnic identity is associated with how much an individual feels an affinity toward his/her racial or ethnic background and how important and essential he/she considers it (pp.46–48). Specifically, racial/ethnic identity is not a given condition, but a projection of how each student perceives himself/herself. In this regard, we should bear in mind that a person moves back and forth between several cultural identities, that is, an individual's musical identity is "fluid."

Based on the above, Lind and Mckoy (2016) present the following three points: (1) getting to know your students, (2) creating a supportive classroom environment, and (3) making programs and curricular choices that are culturally responsive (pp.83–95).

Racial/ethnic, cultural, linguistic, and religious diversity has increased in the United States. Furthermore, it has been predicted that diversity will continue to grow in the future (Banks & Banks 2020). The CRE or CRT theories are conceived from awareness of "injustice in education," which is concerned with the redistribution of learning resources.

Meanwhile, cultural diversity in Japan has advanced. In Japanese schools, the greatest consideration is given to the above-mentioned (2) "creating a supportive classroom environment," that is, redistributing "relational resources." Meanwhile, (3) "making program and curricular choices" (redistribution of "physical resources" and "cultural resources") tends to be neglected. Since "equality" such as "every child is the same" is important for Japanese teachers (Nukaga 2003), "injustice in education" is less noticeable.

### 3. Outline and recent trends of intercultural education in Germany

In 1983, Merkt devised an “interface method (*Schnittstellenansatz*)” of intercultural music education for children from various cultural backgrounds to enable them to learn together, while teaching music to German and Turkish children (Merkt 1983).

Germany has historically accepted many immigrants as “*Gastarbeiter*” since the 1950s. In this method, the children first experience common musical activities through simple melodies, rhythms, talk, and play that are comprehensible to children from different cultural backgrounds. After the children feel empathy through the activity, they learn about the social background of different cultures. Stroh (2005) advocated and practiced an “expanded interface method” that directs this work as a physical act, where intellectual learning is integrated into the process of acting.

However, since the late 1980s, as the cultures of second- and third-generation immigrant children have diversified and globalized, criticisms have arisen against connecting specific ethnic cultures to individual children. Consequently, cultural comparison-type music education has been advocated since the 2000s, which helps learn about different cultures by comparing the music of these cultures, dealing with themes common to all worlds, such as festivals, birthdays, love, and friendship.

Meanwhile, the “interface method” continued to be adopted in a big city with immigrants, in particular, Turkish immigrants. The reason for this is that the greater the proportion of a particular ethnic group in a region, the stronger the tendency for native cultures to be preserved within the group. Another reason may be that young people have transformed and inherited their culture of origin.

Intercultural music education in Germany has entered a new phase with the mass acceptance of refugees from the Middle East since 2015. Educational and support activities for refugee children have been activated through music. They are classified into the following three categories:

(1) Songs for refugee children were collected and quickly published.

The songbook contains play songs and folk songs from the country of origin of the refugees in two languages: their mother tongue and German (Erche & Jansen 2017, 2018). The concept of the book is essentially the same as that of the interface method.

(2) A new intercultural music lesson model that considers the existence of refugees has been developed and proposed.

Stroh is a leading advocate of the new teaching models. For example, the development of the online “Song Map,” school visits by musicians from the country of the refugees, soundscapes by collecting audio materials in conflict areas, and learning about new musical styles created by Jewish and Turkish immigrants.

(3) "Support for promoting language acquisition" through music

Academic research and practice have been carried out on this project at several universities, municipalities, and public music schools in Bohum.

It should be noted that children’s play songs of migrants or refugees were quickly collected, documented, and used as teaching materials in Germany. In just a few years, a large number of teaching materials have been developed and put into practice.

However, it is difficult to say that music teaching materials and music education practices for “newcomers” who are already second or third generation immigrants have been sufficiently developed in Japan.

## **4. Three issues drawn from the reviews**

### **4.1. Learning music alone or learning the cultural background of music**

It is always an important issue whether we should emphasize the learning of music alone or on understanding the historical, cultural, and social background of music. It is necessary to focus on the latter from the standpoint of promoting multicultural music education. In the United States, it seems necessary and appreciated that there is a shift to the latter.

Although the latter perspective is also important, we would like to say that learning music alone should not be taken out from the core of the learning content. Specifically, we should pursue how to connect the learning of music with the learning of the historical, cultural, and social background of music, and not discuss whether to adopt the former or the latter.

### **4.2. The definition of one's own culture and other cultures**

The second issue is how to define one's own culture, different cultures, and the boundary between them. The problem of isolating one's own culture from others is that it may result in forcing a divide between oneself and others. In addition, while education based on cultural relativism has the advantage that students do not deny or exclude cultures different from their own, it might go no further than "that's it."

Therefore, we have to develop a teaching plan that encourages students to perceive cultural diversity as something related to them. Correspondingly, we suppose that understanding "other music" in the light of one's "own music" enables us to capture the diversity of music culture as being related to ourselves. Accordingly, we set the condition that children proceed with learning while going back and forth between their own and different cultures.

### **4.3. Learning as a multi-layered and dynamic "now and present" culture**

We perceive the music culture of individuals as complex and variable owing to the diversified environments surrounding them, including school, home, mass media, and social media. The musical identity of each individual is multilayered and changeable. Characteristically, it is "fluid" (Lind & Mckoy 2016).

This fact has also been suggested by the questionnaire and interview surveys conducted by Sugie and Miyamoto on the music culture of *Nikkei* newcomer children and their parents, prior to this study. These studies hypothesized that newcomer children are forced to frequently move between two or more cultures such as "school and home" or "friends and family" (Sugie 2013, 2015). Many of the *Nikkei* Brazilian newcomers have sung Brazilian songs for their children in the process of child-rearing, and in their home, family members sing and listen to Brazilian music, including music delivered on the Internet (Sugie 2017).

## **5. Development of teaching plans that take advantage of cultural diversity**

In response to the aforementioned issues, we set the following three prerequisites for developing teaching plans for Japanese schools.

- (1) To link and balance the learning of music alone and learning the cultural background
- (2) To go back and forth between one's own and another unfamiliar culture
- (3) The premise that children's musical identities are multilayered and variable

### **5.1. Conceptual model for the development of teaching plans**

As conceptual models for music teaching plans supposing cultural diversity, we considered three models following: "dynamic multiculturalism" by Elliott (1989), "learning of musical synopses by composing a theme" by Takizawa (2003), and "connecting model" by Shimazaki & Kato (2013). In the models of Elliott and Takizawa, it would be expected that students could understand cultural diversity by comparing the music of different

countries/regions, or various genres based on a common topic or theme. Shimazaki and Kato aim to connect the learning of music alone and the learning of the cultural background.

The Shimazaki-Kato model (2013) is the most applicable for satisfying our first prerequisite. However, in order to fulfill the second and third prerequisites, we need to have a perspective on how students are able to recognize the connection and relationship between music learning at school and "their own music culture." Accordingly, Elliott (1989) and Takizawa (2003) provide useful ideas in that the common topic or theme for music learning could be chosen closer to students' lives.

Consequently, for a conceptual model of teaching plans, we chose several themes "X and music" which relate to music alone and the cultural background of the music (**table1**). Considering these relationships, students are expected to discover similarities and differences between multiple music cultures while going back and forth between their "own culture" and "different cultures," and to understand the diversity of music.

In this paper, we present teaching plans based on two themes: "play and music" and "life/events and music."

## 5.2. "Play and music"

In this plan, we selected play songs that Japanese children are easily able to recognize as their own culture and play songs from other countries/regions with similar play as teaching materials. The class session starts with the activity of singing, playing, and finding the commonality among these plays. Children's play has commonality and universality, while being influenced by the historical and cultural backgrounds of each country/region. Accordingly, students are able to feel "fun" by singing and playing with the songs familiar to them and similar play songs from other countries/regions. This leads to students having "empathy."

On the premise of such "fun" empathy, it is expected that children catch the musical features of each play songs, and understand how the features connect with elements such as rhythm and melody, and so on.

Here, we take up <*Hiraita Hiraita*> from Japan, <*Abra a roda Tin do lê lê*> from Brazil, and <*Kangan Surure*> from South Korea. The repeated rhythm in <*Abra a roda Tin do lê lê*> is a rhythm that includes syncopation. This rhythm pattern is often found in Brazilian children's songs, and is a typical Brazilian music rhythm pattern. <*Kangan Surure*> is sung on the rhythm divided into three, which is a characteristic rhythm of Korean music. We found a similar rhythm pattern with three divisions in Korean classical dance. It is a rhythmic pattern that, if written in Western notation, is a combination of quarter notes and eighth notes that gives us a feeling of floating or bouncing in the air.

Depending on the characteristics of each rhythm (**Figure1**), even if we perform the same movement of walking along with the song, in the case of <*Hiraita Hiraita*>, we would step on the floor firmly by equal beats. In the case of <*Abra a roda Tin do lê lê*>, the steps are like a raised heel and bouncy. Furthermore, in <*Kangan Surure*>, the step may be something that floats up softly after stepping on the floor with the first beat of each of the three-division rhythms.

The purpose of this plan is to associate the learning of music with children's play, which is a cultural aspect of music. Consequently, in the case of lower and middle grades of elementary school, the activities up to this point are sufficient to complete the learning.

In the case of higher grades, it is possible to learn about the culture, history, and climate of the country/region where the song originated, associating with social studies.

## 5.3. "Annual events and music"

When creating a teaching plan that links annual events with music, we would like to emphasize the importance of starting learning from the students' lives.

Annual events for people living in Japan include traditional events such as *Shogatu* (New Year), *Setsubun*, *Hinamaturi* (Peach Festival), *Hanami* (Cherry Blossom Viewing), *Tanabata*, *Bon* Festival, Mid-Autumn Moon Viewing, and Autumn Leaves Viewing, which are associated with the changing seasons. Additionally, there are many foreign-origin events, such as Christmas and Halloween.

Accordingly, it is possible to devise a teaching plan in which students learn about the culture and history of each country/region while comparing the annual events in Japan with those in other countries/regions. Students are expected to understand that music is closely linked to people's lives in each country/region by exploring how music, including songs and dances, is used in annual events.

In this plan, we chose annual "festivals" as teaching materials. "Festivals" are easily introduced as a learning theme for multicultural education. However, it has been criticized as one of the 3Fs (fashion, food, festivals) that tends to fall into superficial learning. We suppose that this is because learning activities end up being only "just watching/listening."

Therefore, in this plan, students learn by listening, singing, and dancing while comparing the local festivals familiar to them with the festivals of other countries/regions. We would like students to consider what these annual festivals mean to the people of the community, including the students themselves and their families, and to understand that similar festivals exist in other countries/regions and that music and dance play an important role in them.

## 6. Conclusion

Japan has accepted many foreign workers from South America since the 1990s, and it has recently become more multicultural. Therefore, it is necessary to consider Japanese-style music education that supports cultural diversity, which incorporates the ideas of both German-style intercultural education and American-style multicultural education (CRE or CRT theory). As a starting point, we need to collect children's songs from countries that are major labor force providers, and to develop and provide teaching materials that have a bilingual composition of the mother tongue and Japanese as soon as possible.

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Table1. Examples of common themes for development of teaching plan

Themes	Example of learning contents	Related fields
Play and music	<ul style="list-style-type: none"> <li>• Play songs and how to play</li> <li>• Drawing song</li> </ul>	<ul style="list-style-type: none"> <li>• Movement</li> <li>• Words</li> <li>• Game/Dance</li> </ul>
Story/fairy tale and music	<ul style="list-style-type: none"> <li>• Song in the story</li> <li>• Story song</li> <li>• Anime song etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Words</li> <li>• Theater</li> </ul>
Instruments and music	<ul style="list-style-type: none"> <li>• Shape and color</li> <li>• Materials of instrument</li> <li>• Mechanism of sound</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturing</li> <li>• Plastic arts</li> <li>• Nature/climate</li> </ul>
Life/events and music	<ul style="list-style-type: none"> <li>• Lullaby</li> <li>• Festival music</li> <li>• Annual events and music</li> <li>• Music in school life</li> <li>• Work song</li> </ul>	<ul style="list-style-type: none"> <li>• Living</li> <li>• Work</li> <li>• History</li> <li>• Religion</li> </ul>
Nature and music	<ul style="list-style-type: none"> <li>• Seasons and music</li> <li>• Climate/weather and music</li> <li>• Landscape and music</li> <li>• Animals/plants and music</li> </ul>	<ul style="list-style-type: none"> <li>• Natural science</li> <li>• Geography</li> </ul>

Hiraita Hiraita  $\frac{2}{4}$   
 Hi - rai ta hi ra i ta na - n no ha na ga hi ra i ta

Abra a roda  $\frac{2}{4}$   
 A-braa ro-da tin do le le A-braa ro-da tin do la la ~

Kangan Surure  $\frac{12}{8}$   
 Ka - n ga - n su - ru re ka - n ga - n su - ru re  
 Ga - ng ga - ng su - l - lae ga - ng ga - ng su - l - lae

Figure 1. Examples of rhythm pattern

## **Development of New Textbooks for Transmission of Local Folk Music and Culture in School Education: A Case Study in Shunde, China**

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### **Abstract**

Shunde is a region in the city of Foshan, Guangdong Province in south China. Folk music of Shunde in China is characteristic in terms of their relevance of the working lives of farmers and fishermen. However, the musical genre has not been well transmitted to the new generations. While compulsory school education is an effective channel to promote and transmit the local culture at an early age, the local government of Shunde, Guangdong Province of China has been collecting local folk music of Shunde and develop new textbooks for school teaching.

This presentation reports the development of a textbook series entitled “Local folk music of Shunde” for school music education. We record the rationale and characteristics of the textbooks, and report the situation of how the textbooks were used in schools. A number of songs and folk music were collected. We invited various artists and senior people in the region to demonstrate their music making for our recording and transcription. The contexts of these songs were investigated and connected with the musical elements for thorough understanding of the pieces. We involved various artists to teach school teachers to learn to sing and play for their teaching. While schools have different teaching focuses, we incorporated those schools which are eager to transmit local culture to the students in this project. Exemplary music classes were recorded for promotion and demonstration for popularization. Application of the textbook series has effectively promoted students’ understanding and encounter of the local folk music in the cultural context. The book series has been adopted for primary 1 to 6 as a kind of regional music in the country.

The project is impactful in various aspects. Local schools in Shunde have developed their own teaching and curriculum characteristics; they were invited to present their experiences in various national events. Cantonese, the local dialect, has been fading away since many teachers come from other provinces who do not speak the dialect. Through this project, Cantonese was promoted to the other parts of China, in which the local culture of south China is well known. The project was commended by the academics since it helps in promoting and transmitting the local culture to the younger generations, while music could be subsumed in people’s daily life.

*Keywords:* education policy, folk music, music education, music textbooks, transmission

### **Introduction**

Shunde folk music is a type of regional folk ballads developed and passed down from generation to generation in Shunde. Due to rapid development of society, more and more younger generations are no longer familiar with this type of fine traditional art. As a music educator in Shunde, I believe we have the obligation and responsibilities to collect local folk music in Shunde and transmit them in written forms to pass them onto the next generation. We should also introduce Shunde folk music to schools to help students learn to appreciate the influence of their local culture and recognise the importance of culture heritage. This will contribute to further promotion and inheritance of Shunde’s art and culture.

This article introduces the development and application of a textbook series for Shunde folk

music. The specific methods used in introducing folk music into school curriculum and their corresponding impacts in culture transmission are demonstrated and discussed.

## Development and Application of a Textbook Series

### ***Rational and characteristics of textbook development***

In recent years, the inheritance and development of traditional culture have received great attention from governments across all levels and people from all walks of life. The national education plan, “National Education Reform and Development Plan in Medium and Long Term 2010-2020”, issued by the Ministry of Education in 2010, has called for “full implementation of all-rounded education, inheritance and promotion of fine traditional arts and culture of China”. Shunde government has taken this policy direction seriously and has provided full support for the development of local teaching materials. The department responsible for music education in Shunde schools officially initialized the development of “*Local Folk Music of Shunde*” and relevant research work in 2013. The development team consisted of leading music teachers from all primary and middle schools in Shunde.

In the past several years, we have visited sites such as Shunde Museum and Arts and Culture Development Centre, and conducted systematic studies on large quantity of local documents, to gain a comprehensive understanding of materials about Shunde local folk music. In this process, we collected and sorted a diverse range of folk music with distinct canal town characteristics and culture background, including salt-water songs, pastoral songs, dragon boat singing, gongs and drum cabinet, lion dance, dragon boat racing, Cantonese opera, and Shunde nursery rhymes. In addition, we have also documented contemporary music with strong Shunde characteristics composed by current musicians from Shunde.

Taking into consideration of characteristics of teaching materials for music education, we divided the book into seven sections: Canal town charm, Shunde nursery rhyme, Fishmen songs(Cahnteys), Shunde Gongs and Drums, Dragon Boat songs, Amazing Voices in Shunde, and New Voices in Shunde. In addition to introducing students to knowledge on Shunde folk music through “Tips” sections, the contents listed above are taught to students through four main aspects: Expression Appreciation, Performance Appreciation, Creation and Composition, Demonstration and Discussion.



Figure 1. Visiting and interviewing with elder folk artists about the origins of the local folk music

Finding sheet music or audiovisual materials of traditional folk music in Shunde is a challenging task because traditional folk music is, by nature, transmitted orally, and most folk artists have very limited literacy skills to record the folk music they know of. For better transmission of Shunde folk music, we collected available records and invited these folk artists to perform and recorded their performance in the form of audio and video. With post-

processing of recordings, we were able to complete notation of these songs and disseminate these songs in the form of audio recordings (e.g. MP3).

### ***Application of teaching materials and related activities***

After long period of writing, discussion and revision of the content, “*Local Folk Music of Shunde*” (see Figure 2) has been officially approved by Guangdong Province Education Authorities and made available as teaching materials for Grade 1-6 in primary schools across Shunde.

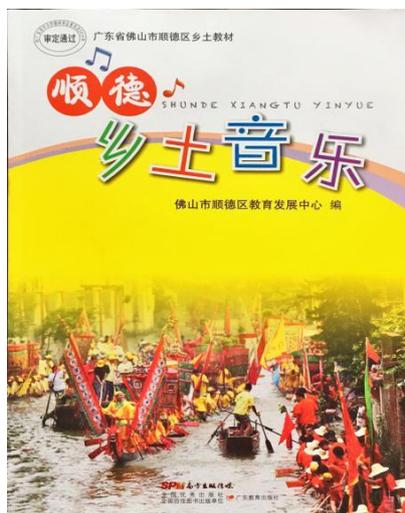


Figure 2. Cover of *Local Folk Music of Shunde*

Since 2016, we have organized promotion of adaptation of “*Local Folk Music of Shunde*” in all primary schools in Shunde. To improve teaching, we have invited experts and folk artists from city and wider Guangdong province to providing training and guidance to music teachers on the application of the teaching material. In addition, we have advised schools to localize folk music education by considering their local context, regional folk music culture characteristics, and available resources in the school and the community to plan and decide their teaching focus and activities. For example, Daliang Xishan primary school has always advocated for dialect learning, with continuous research on reading classical Cantonese traditional art. The school has incorporated “*Local Folk Music of Shunde*” with its existing teaching material to further improve the Cantonese learning experience of pupils by introduction of local music. Another example is Ronggui Southern Primary School, where Cantonese opera has been a main focus. The Cantonese Opera Clubs in the community have also actively supported the transmission of Shunde folk music by providing free tutoring for the school’s Cantonese Opera Club.

### **Impact of Promoting and Applying “*Local Folk Music of Shunde*” in Teaching**

#### ***Enhancement of pupils’ understanding of and familiarity with fine traditional culture***

To encourage interactions among schools that have adopted “*Local Folk Music of Shunde*” in their teaching curriculum, we have held competitions of demonstration classes, recorded lectures, mini-classes and teaching cases across Shunde. Through learning and performing Shunde folk music, students have gained more confidence for their regional culture. This is especially true for students from remote areas in Shunde who typically lacked opportunities to showcase themselves before the adoption of folk music education. They are now the shining stars not only at school performances, but also at events and competitions across local, provincial, national and even international. As the schools had successfully developed they

unique folk music teaching, students have grown fond their regional musical culture. The students' performance of Shunde folk music has also become a signature of Shunde folk culture. For example, Daliang Fengxiang Primary School performed salty water songs at Shunde's Folk Culture Festival in 2016; the performance of Cantonese opera by students from Longjiang Huadong Primary School was broadcasted by China's national television CCTV in 2017; The Cantonese Opera Club of Beijiao Chengde Primary School made it to Shunde Youth Festival in 2018.

To promote Shunde culture and cultivate culture confidence of students towards Shunde Folk Music culture, Beijiao Central Primary School composed a choir song cycle with distinctive local characteristics for Dragon Boat Festival and Dragon Boat Race.

### ***Widespread recognition and praises***

An excellent example lesson on "Dragon Boat Songs" based on this textbook was presented at China's National New-Normal Teaching Seminar and Competition, allowing more public exposure of the textbook series. The audience were attracted by Cantonese dialects and unique rhyme brought by the lyrics of folk music "Dragon Boat Songs", a State-Level Non-Material Cultural Heritage. This example lesson won the first prize at the competition and gained highly positive feedback from the judge committee for its unique topic choice and creativity of the teaching methods based on authentic teaching materials. Many educational experts stated their wishes for folk music culture education to continue and improve further.

In December of 2016, at the Seminar for Creation of Teaching Material of Music Class in Middle and Primary Schools of Guangdong Province, the Shunde folk music performance by students, example lesson from teachers and experience sharing of text book development from us were well praised by experts such as Professor Li Zheng from Capital Normal University.

Professor Pei Liu of Chinese Conservatory of Music kindly wrote the preface for "*Local Folk Music of Shunde*" and stated that: "Children in Shunde will definitely inherit the excellent "genes" of fine traditional culture from Shunde folk Music. I hope we and artists can conduct in-depth thinking about how learning methods can be used in our curriculum and teaching material to make music an indispensable part contributing to student growth, their understanding of local music and development of a sense of belonging to their hometown.

### **Limitations and Advices for Application of the *Local Folk Music of Shunde***

Upon reflection of our 3-year journey of promoting and adopting "*Local Folk Music of Shunde*" teaching materials in Shunde, we have found several challenges and issues which require more efforts. They are:

1. There have been increasing numbers of non-Cantonese speaking teachers and students. They are not familiar with Shunde's local culture, and therefore have less interests in learning about Shunde folk music.
2. Shunde folk music is a product of artistry, history, and creativity. For provide better guidance to students to master leaning content, a deeper understanding of Shunde's history and culture is required.
3. "*Local Folk Music of Shunde*" is informative and we face the challenge of integrating the contents of local teaching materials with national standard teaching materials based on characteristics of students.

In the coming process of promotion of this textbook series, we need to be more rigorous in improving the quality of this teaching material with more passion. We will encourage schools can use diverse teaching methods and digital tools, explore different approaches in classroom teaching and extracurricular activities to cultivate students' interest and achieve better learning outcome. We will also encourage schools to focus on understanding the teaching material and

generating teaching reports promptly with teaching records in diverse forms (e.g. words, photos and videos) and reflection on teaching contents. We plan to involve more front-line teachers to participate in the upcoming development of following teaching material to further improve the application of this textbook series.

To make further progress, with supports from leaders, experts and all the teachers, we will work together even more closely and pay more attention to practicality. We will keep in mind that “only when one that is traditional, one belongs to the nation; Only when one is ethnic, one belongs to the world”. We will endeavor to maximise the value of local culture education through “*Local Folk Music of Shunde*” and to enhance the soft strength of the culture. We will persevere to make progress whilst continuing to reflect and improve, to make “*Local Folk Music of Shunde*” available to more students from Shunde and Greater Bay area of Guangdong for better transmission and development of Chinese traditional culture.

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## Exploring the Inclusion and Equity in Music Education

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### Abstract

As Edward Said (1991) argues, European music's autonomy and hegemony have been believed and taken for granted for at least a century. At the very moment when the avant-garde or contemporary music of the West challenged European tonal music tradition and looked to the non-Europe for a way out of its impasse, music education in Japan found itself inscribed with the framework of the superficial or counterfeit nineteenth century musical traditions of the West along with an aspect such as a major or minor key function. Presupposing the audience, many music teachers have valued music composed by professional composers above anything children could achieve themselves, and failed to understand the value of music beyond concert and competition. The purpose of this paper, therefore, is to develop a new music education curriculum in order to bring inclusive education into music classroom, based on the concept of soundscape and universal design. The research question was: how can music teachers develop all the children's creativity at nursery, elementary, secondary and special needs schools? In order to answer this question, the authors undertook an action research at secondary and special needs schools as well as semi-structured interviews with junior college students in the department of early childhood education in Aomori, Japan. The action research showed that all students from secondary and special needs schools were able to collaborate and create their own music without valuing foreign music and music composed by others. What should be noted here is that the junior high school students learned most from the special needs students (children with pervasive development disorder; down syndrome; autism and so on) in terms of musical flexibility and creativity. After the class, a junior high school student commented: "Not knowing what to do, his (a special needs school student) moves let me know a model." Through the concept of soundscape as a tool towards universal design in music education, there must be a way for all the students from the nursery, elementary, junior high and special needs schools to work together at some point. The interviews with junior college students, at the same time, showed that many students in the nursery department have blind faith in European tonal music. Based on the above, the authors also attempted to propose a new curriculum design in order to bring the inclusion and equity into the music classrooms, referring to Rashomon Approach as a social constructive evaluation.

Keywords: Soundscape, Universal Design, Rashomon Approach

### Background

The Canadian R. Murray Schafer (2005) indicts today's music education. Foreign music, which implies European classical or tonal music, is valued above some indigenous sound cultures in the non-Europe, for example. This can be considered as a significant viewpoint since Schafer argues as a Canadian composer. Schafer continues that music composed by others is valued above anything children achieve themselves. Since the introduction of European tonal music at the end of nineteenth century, European music's autonomy and hegemony have been taken for granted among many music educators in Japan. At the very moment when the French composer Claude Debussy, for example, challenged European tonal music tradition and looked to the non-Europe for a way out of its impasse, music education in Japan found itself inscribed with the framework of the superficial or counterfeit

nineteenth century musical traditions of the West along with an aspect such as a major or minor key function. After World War II, the Japanese Ministry of Education produced an official guideline for public music education, one that still in effect, called the Course of Study (hereafter, COS). During that period, the American composer John Cage, for example, had already deconstructed European tonal tradition taking advantage of an ancient Chinese divination text *I Ching* as well as Japanese Zen. The COS, however, focused and has still continued focusing on European tonal music as these were developed mainly in the eighteenth and middle of nineteenth centuries, (Imada, 2012). Because of this European classical tradition, which excessive high techniques are always demanded, Schafer points out (2005) that many students become discouraged or are forced to give up the pleasures of music making, and failed to understand the value of music beyond concert and competition. We music educators should ask ourselves whether there is room for children with pervasive development disorder; down syndrome; autism and so on to make their own music, for example, in this type of music education Schafer indicts above, or not. Shuhei Chiba (2020) points out that college students those who study in the nursery department, at the same time, have struggled with practicing the piano, and sometime forgo the pleasure of music making. Schafer, further on, makes a sharp indication to music education as currently being taught that music as a subject has no contact with the environment, as well no strong opinion on the entertainment industry. Schafer (1977, p.6) argues that music education has been monopolized by the Dionysian concept of music, which views music irrational, emotional and subjective: "it is the musical expression of the romantic artist, prevailing throughout the nineteenth century and on into the expressionism of the twentieth century. It also directs the training of the musician today. The purpose of this paper, therefore, is to develop a new music education curriculum in order to bring inclusive education into music classroom, based on the concept of soundscape and universal design. The concept of universal design, which was proposed by the American architect Ronald Mace, has the following seven principles (Centre for Excellence in Universal Design, 2018): 1) Equitable use; 2) Flexibility in use; 3) Simple and intuitive; 4) Perceptible information; 5) Tolerance for error; 6) Low physical effort; 7) Size and space for approach and use. Needless to say, it has a high affinity with the indictment by Schafer: high technical demands in music education cannot guarantee equitability and flexibility in music education, and compel students a high physical effort. In the case of preparations for competitions, many music instructors consequently become intolerance for students' error. The research question was: how can music teachers develop all the children's creativity at nursery, elementary, secondary and special needs schools? In order to answer this question, the authors undertook an action research at secondary and special needs schools as well as semi-structured interviews with junior college students in the department of early childhood education in Aomori, Japan.

### **Semi-structured Interviews with Junior College Students**

Chiba conducted semi-structured interviews with his students in the department of early childhood education at Aomori Akenohoshi Junior College. The interviews with junior college students showed the following findings:

- 1) Many of them have blind faith in European tonal music.
- 2) For them, European tonal music means the so-called J-pop they are familiar with.
- 3) Many of them are aware that music (like J-pop) always functions to tell and convey being moved.
- 4) Many of them have no experience in creating and achieving their own music.
- 5) Many of them have no experience in contacting with natural sounds for crating and achieving their own music.

Chiba brought his students into the soundwalk, which is a specific listening activity initiated by Schafer. The students moved through a local public park named Gappo Park without talking, focusing on their listening on every sound around them. The Canadian composer Hildegard Westerkamp (2006, p.84) explains:

Inherent in the act of going on a soundwalk is the assumption that the environment is worth listening to during every second of the soundwalk. Or, to put it another way, that it is worthwhile to devote a certain time span to the act of listening, no matter what may meet the ear. In that act the walking listener potentially develops a conscious relationship to the environment.

After the soundwalk, these students at the junior college draw their own graphic scores in order to reveal how they responded to sounds, what they felt while listening, what draw them in and what discourages them from listening. And then, the students were divided into a couple of groups and made their own music using the graphic scores. Various percussion instruments as well as some empty cans and bottles were provided for their own compositions. The following is a conversation between Chiba (hereafter, C) and a student (hereafter, S) after the session:

C: Have you ever learned piano before?

S: I practiced piano from when I was 4 till when I was 6. It's a kind of requirement of my kindergarten, so every kid was alternately playing the piano taking advantage of our naptime. But I quit it upon graduation.

C: So, you've started learning the piano since your entrance to the college, right? How do you feel like when you play the piano?

S: It is hard. I can't keep my palms in the right position, and my index and little fingers are always uncontrollable.

C: It's all about relaxation, I guess. Getting rid of useless strain of the muscle is not easy for everyone. By the way, you probably listen to soothing music. What kind of music do you listen to?

S: I like listen to J-pop such bands as Mrs. GREEN APPLE<sup>i</sup> and Official HIGE DANdism<sup>ii</sup>, for example. I am also interested in the so-called BGM. It is fun to find background music on TV shows and games, and checking them out on YouTube.

C: Do you remember soundwalks that we've done a couple times on campus as well as the Gappo Park before? Can you tell me how those two (listening to music and environment sound) are different?

S: Natural sounds don't have scales like any popular instrumental music has. I think that musicians express a thousand feelings in just their songs, so sometimes their intentions are concrete. But when I listen to natural sounds, I have to use my own intention to feel something.

C: Based on your experience of the soundwalks, you draw some graphic scores, and then you performed them in small groups. You played various percussion instruments including some empty cans and bottles. Can you tell me the different between playing the piano and the percussions and some daily materials?

S: I can't compose my own piano piece but in terms acoustic environment, I can try to find my own scale, and then share with everyone. I just learned that there was no correct answer in performing the graphic score.

C: You have to read music first when you play the piano, right?

S: When I play the piano, I try to reach the correct answer based on a musical score. So, playing the piano, in a sense, is much easier to understand of what music actually says. But performing the graphic score can bring me a broad sense of music. I can feel plenty of space for my own soundscape composition since there is no correct answer.

C: Is performing the graphic score easier for you?

S: The use of environmental sounds is not easy since no constant rhythm and tempo. But I feel more freedom on graphic scores drawn by myself. I have to practice hard to complete a piano piece so I can't feel freedom at all since any information such as rhythm, tempo and notes are fixed in advance.

C: What will you do if you become a kindergarten or nursery teacher two years later on? Would you like to give children lessons in piano, or just play with them in natural sounds? I mean, which is more creative, the playing the piano or making their own music based on natural sounds?

S: I want to go for natural sounds because I thought a lot when I was making music in group. So, the same thing applies to small children, I guess.

The series of activities from the soundwalk, drawing the graphic scores to making their own music, had an effect on the student's listening perception like no other experience in her musical life. The unusual format alone, all exercises and practices of regular nursery department lectures, heightened her listening attention and created alertness musical findings in herself. It, to listen beyond J-pop and beyond the often-rigid patterns of classical piano lessons, created a sense of creativity. It can possibly replace standard junior college music education based on playing the piano and singing ready-made child songs into a larger environmental and musical context. Music education in nursery department, in a sense, should go beyond and forget insulated musical world where only those "talented and celebrated musicality" are believed to be "real."

## **Action Research at Secondary and Special Needs Schools**

Koeda teaches students with pervasive development disorder; down syndrome; autism and so on at the Hirosaki University Special Needs School. Regarding a tendency of music at special needs schools, Koeda points out that teachers often expect their students to explain music in words and practice to improve their technical skills. The students, in a sense, have to deny themselves of today in order to grow to manhood in the future. Thus, any music activities are expected to contribute to the students' problem-solving, improving sociability, and acquiring adaptive capacity. As a result, the disabled students have to deny their own identities first, and then, attempt to improve their disabilities in order to get closer to so-called non-disabled, even though in music classrooms. These classes easily develop such dichotomy as adult/ child, teacher/ student and disabled/ non-disabled and so on. What is more problematic, however, is that these dichotomies above can be considered as binomial oppositions based on the relationship between superiority and inferiority. In order to transfer the process of self-denial to the process of self-affirmation, Koeda brought his students into the soundwalk. His students used to be instructed how to sing for audience in school ceremonies and events. These songs for them were, however, very much simplified comparing to songs for regular junior high school students usually sing. According to Koeda, his students were somehow aware of their "musical" ability, gave up to sing like those non-disabled students achieved and eventually internalized their own helplessness. The soundwalk, however, gave them an opportunity to open their ears to soundscape, to listen beyond those school songs. They found their own footsteps on manhole lids, plastic bags swayed by wind far away and then concentrated on listening to a profound silence. After the soundwalk, they undertook an instrumental improvisation based on their soundwalk experience. This session was held on July 2017. Each student picked up their favorite instruments such as the xylophone, the Cajon, the tambourine, the ukulele, the drum, the koto and so on. This is because some students had extreme directivity for a particular sound. In order to enable students to create their own sounds, some hand signs and gestures were instructed by Koeda (he referred to the Japanese composer and multi-instrumentalist Yoshihide Otomo's method). The students along with their own instruments made a big circle and a leader (conductor) designed by computer application went the center of the circle to give them hand signs for their own instrumental improvisation. Those simple and intuitive movements and sounds created by the students gradually swept away the dichotomy between disabled and non-disabled. This was actually verified in the next session: a joint class with a junior high school. On October, 2018, a joint class with special need schools was taken place at Hirosaki University Junior High School, instructed by Koeda and Motoko Saito (music teacher at the Hirosaki University Junior High School). Both special need and junior high school students picked up their favorite instruments such as the hand-bell, the guiro, the shaker and so on. Once again, the students along with their own instruments made a big circle and a leader (conductor) designated by computer application went the center of the circle to give them hand signs for their own instrumental improvisation. The session was quite successful since they had already learned how to listen, move their bodies and response to others through the previous excises. What should be noted is that the junior high school students learned most from the special needs students in terms of musical flexibility and creativity. After the class, a junior high school student, who was a designated conductor, commented: "Not knowing what to do, I made his (a special needs school student) moves a model." Through the concept of soundscape as a tool towards universal design in music education, there must be a way for all the students from the elementary, junior high and special needs schools to work together at some point, (Imada, 2018, 2020).

## **Rashomon Approach as a Social Constructive Evaluation**

Tsukahara analyzes that in these two activities by Chiba and Koeda, what the learners acquired are: 1) Realization of others with different ideas; 2) Rediscovery of themselves according to the realization of others. Thus, these cooperative activities such as the soundwalk, drawing graphic scores, making and improvising their own music with physical

movements gave the learners some knowledges, which were imprinted on their memory like a physical sensation. What is more important is that the learners' internalized knowledges as their learning outcomes would not have been anticipated or supposed prior to practicing these activities, that is to say, teachers could not have instructed them intentionally. When music teachers function as a facilitator, they, needless to say, should not attempt to control their students totally. Music teachers' anticipations and plans should leave blanks for their students. Each student, at the same time, can possibly reach his or her own synchronic musical goal. If so, how can we music educators possibly evaluate music the students could achieve themselves? Tsukahara, therefore, argues that the concept of social constructionism should be brought into curriculum design in public music education. In the soundwalk, drawing graphic scores and improvisation, the learners paid attention to the environmental sounds, the instruments including a couple of daily materials and their classmates as others, and then, they started communicating with them (the soundscape; the instruments and others) to identify themselves. Thus, the students interactively and effectively received much information rather than being directionally and unilaterally instructed by teachers. Their learning views are constructed by socio-cultural conditionings such as the culture, environment, community, gender, social class, and location and so on. As educational objectives as well as evaluation are focused, the so-called Rashomon-approach (Ministry of Education, 1975) can be considered more implicative and suggestive than adopting the technological approach. Junichi Tanaka (2018) explains:

In the Rashomon approach, the general goals are set first. After that, however, the teacher fully understands the general goals, utilizes the experience and technological expertise of individual teachers, and engages in creative learning activities to realize the goals. In such learning environments, the learner's behavior is evaluated based on various aspects to see whether the set goals were achieved. The point of emphasis is an "improvisational activity" performed by the teacher. However, to improvise in a particular way, the teacher must have the ability to understand the content and facilitate effectively to benefit the student. Therefore, the importance of teacher training is emphasized.

It is quite unfortunate that music as a subject for public schools has a tendency to be technologically and quantitatively measured based on the standard evaluation as being used for all subjects. In terms of such creative and cooperative musical activities such as the soundwalk and the improvisation, music should be qualitatively evaluated.

With the points above considered, the goal and evaluation for music education based on inclusion and equality should be designed according to the following principles:

- 1) The evaluation should not be applied to individual ability since his or her knowledge is developed based on the framework for a communal society.
- 2) The evaluation should be discussed and decided by learners themselves.
- 3) Teachers should evaluate according to the seven principles of Universal Design and Schafer's indictment against contemporary music education.

## **Final Thoughts**

Precisely, what is music? Though we live in what is called post-modern world, the musical universals still matter. In fact, many ethnomusicologists and music psychologists such as Blacking (1973), McAllester (1971), and Harwood (1976), simultaneously, have gone off in quest of the universals of music, paying attention to musical commonalities such as some sense of the tonic; some kind of tonal center as well as structural principles such as the use

of mirror forms; theme and variation; repetition; binary form, and human behaviors such as perception of pitches and so on, in music across many different cultures. However, in the case of cultural products like music, counting commonality does not directly connect a “universal” as post-structuralists argue. Thus, we do not yet know the answers toward the universals of music (e.g., Imada, 2020). Then, should “music” be taught as the gift of great composers of the past? If we take the whole world of sounds or soundscape as our orchestra, children can possibly design their own equitable, flexible, simple and intuitive music in their music classrooms, as Schafer (2011, p.9) sees: “The time has come for us all to open our ears to the world!”

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<sup>i</sup> Mrs. GREEN APPLE is a Japanese rock band debuted in 2015

<sup>ii</sup> Official HIGE DANdism is a Japanese pop band debuted in 2012

## The Importance of Using Sound Education for Japanese Children with Hearing Impairment

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### Abstract

Music education at schools for the deaf in Japan has a tendency to teach children based on visual information, because it is believed that hearing impaired children cannot listen to the sounds at all.

Previous studies demonstrated that many teachers believe music education are difficult for hearing impaired children (Tonosaki, 2017; Sakuta and Yuasa and Kato, 2018). For example, in singing classes, music teachers present the hands as the pitch of each notes (Tonosaki, 2017). According to a quantitative research by Isaka and Shichi (2017), many music teachers think that deaf children have little creativity, therefore, teachers do not expect any musical activities at deaf schools. My previous research found out that many children at the deaf school can actually listen to sounds by using the cochlear implants and the hearing aids (Tonosaki, 2017). However, there are little researched about practices that allows hearing impairment children to actively listen to sounds.

This paper, therefore, attempts to prove that deaf children have the hearing ability and use it to create music through practice of *A Sound Education* by the Canadian composer R. Murray Schafer. *A Sound Education* is effective developing listening and creativity for disabilities children (Koeda, 2016; Imada and Koeda and Kanazaki and Tonosaki, 2019). An ethnography was taken at as a research method. The reason for using observation is to compare the action and remark before and after practicing *A Sound Education*. I observed the daily life of children with hearing impairment outside of the music class. Two children in elementary school were selected. Child A is a boy and age of 9, child B is a girl and age of 12. Those students practiced some exercises based on *A Sound Education* such as soundwalk, using a sheet of paper as an instrument and sound diary. Through these exercises, children with hearing impairment could listen to the sounds by wearing hearing aids and cochlear implants, and came to play with the sounds in the daily life. For example, child A played with the sounds of blackboard, wall and his own voice. Child B was interested in differences of her footsteps.

As a result of this research, I found that deaf children can interact sounds through *A Sound Education* outside of the music class and develop to their ability for listening.

**Keywords:** Sound Education, deaf children, ethnography, creativity

### Introduction

This research examines the problems posed by visual information practices in music education at schools for the deaf in Japan, and it is based on the author's observations of how children with hearing impairment interact with sound in their daily lives beyond the classroom.

A school for the deaf is a school for children with hearing impairment. The children wear hearing aids or cochlear implants to hear sounds. Hearing aids can amplify the volume of sound, and they can wear hearing aids to hear sounds even when they are far away from the source. However, when hearing aids are removed, it is difficult for people with hearing impairment to hear even loud voices. In comparison, children with cochlear implants have even more difficulties in hearing. This is because they have electrodes implanted in the part of the inner ear that send electrical signals of sound and stimulate the nerves that receive the signals. While they can hear words in a quiet place, it is difficult for them to discern voices in

a noisy place. Most students enrolled in schools for the deaf across the country wear cochlear implants (Onuma, 2004).

## Problems

Music education at schools for the deaf in Japan is delivered to children via visual information. For example, music teachers often use Japanese onomatopoeia to help children connect words with sounds.

According to a questionnaire survey on music education for children with hearing impairment at schools for the deaf, Japanese drums are often used in instrumental classes because children with hearing impairment have difficulty in hearing. Although many schools practice singing and playing instrumental music, the rate of creative music making is low. The following are the reasons cited in the existing literature regarding this phenomenon: children with hearing impairment have difficulty listening sounds, they lack creativity, they cannot concentrate, and they cannot understand the structure of a song (Shichi & Isaka, 2017).

Many teachers also feel the need for association with musical activities, independent activities, and Japanese language studies. The association with independent activities enables children with hearing impairment to learn correct pronunciation and speech, intonation, mouth shape, and tongue position when pronouncing words, and to adjust the pitch of their voice. In the case of language arts, reading lyrics helps students understand the meaning of the words (Sakuta et al., 2018). The notion that “deaf children cannot use their ears to listen to the sounds” is incorrect, and is based on socially constructed categories. In addition, in the education of children with disabilities in Japan, educational goals and contents for children with special needs are clearly stated in the Courses of Study for Elementary and Junior High School of Special Needs Schools and the Courses of Study for Senior High School of Special Needs Schools. However, for children with the other five disabilities (visual impairment, hearing impairment, physical disabilities, and mental disabilities), the purpose is to provide education equivalent to that provided in general elementary, middle, and high schools. “Equivalent education” is intended to be education that guarantees children with disabilities the educational goals and content specified in the Courses of Study for general elementary, middle, and high schools. However, in the field of education, there is a tendency for educational practices for children with disabilities to “follow” existing art activities based on people with a normal education, which are used as teaching materials in elementary, middle, and high schools, rather than educational goals and contents. This simplified practice of the art of the people with a normal education has been criticized for its sole purpose of approaching the “correct example” set by the teacher, and for neglecting to nurture children’s inherent creativity (e.g., Koeda, 2016). The “right example” creates a dichotomy of *can-do/can't-do*. Children who fail to follow the example are labeled as “unskilled.” In other words, this is a system of meritocracy, wherein the “merit” is based on the ability of a child to follow the “right example.” It has also been pointed out that practices that focus on completing the “right example” can cause children to lose their motivation to engage in artistic activities (Schafer, 2003/2018). As stated in the objectives of the Guidelines for the Course of Study, the purpose of the curriculum should be “To encourage pupils to cultivate their sentiments, fundamental abilities for musical activities, a love for music as well as a sensitivity toward it, through music-making and appraising” (Ministry of Education, Culture, Sports, Science and Technology, 2017, p. 9). Practices that do not require advanced performance skills, are tolerant of errors, and allow students to listen carefully and actively engage with sound are considered to be the best for children with hearing impairment. *The sound education* method developed by Schaeffer (2003/2018) is considered to be highly effective. This method of music education uses everyday environmental sounds as the subject matter to raise awareness of creativity among children based on the relationship between oneself and the environment (Schafer; Imada, 2009).

Therefore, the author introduced the *sound education* exercise at School A, a school for the deaf, in Aomori, Japan, where the author worked from April 2015 to March 2018. Consequently,

the children began to notice the sounds around them and talk about how they listened to the sounds, revealing highly individual ways of listening to sounds. By touching, looking at, and smelling materials such as “shoes,” they were able to distinguish between different sounds and discover that sounds can be heard differently depending on movement. The children perceived sounds by using various senses. In other words, they listened to sounds with the help of hearing aids and cochlear implants (Tonosaki, 2017).

Based on this, this study put the *sound education* method into practice a second time at School A, and analyzed and discussed the results of observing how students interact with sound in their daily lives before and after the practice.

## Methodology

In this study, qualitative research using ethnography was conducted as the research methodology. Oda (2010) defines ethnography in the following manner: the investigator joins in an activity and observes the behaviors of people involved in it. The author adopted ethnography to investigate the behaviors of children in the music class at school A, a school for the deaf, in Aomori, where the author has been working for 2 years. In addition, ethnographic investigation was conducted. Two elementary school students were selected as participants of this research, who practiced exercises based on the *sound education* method. The participants differed with respect to their hearing ability. Child A, a 9-year-old boy, wore hearing aids in both ears. The hearing levels with hearing aids were 75 dB at 500 Hz, 100 dB at 1000 Hz, and 65 dB at 2000 Hz. He found it easier to hear the high-frequency range compared to the low-frequency range. In addition, he seemed to hear women’s voices better.

It was observed that when called out from behind, he wasn’t able to hear the call. Child B, a 12-year-old girl, had a cochlear implant in her right ear and a hearing aid in her left ear. The hearing levels with hearing aids were 20 dB at 500 Hz, 30 dB at 1000 Hz, and 20 dB at 2000 Hz. She reacted well to the sounds around her. For example, when she was in class and heard an airplane outside, she said, “I hear an airplane from over there.” When the teacher whispered something related to child B, she responded, “Did you just call his name? I heard XX.”

In elementary school, the music class is held twice a week, with one being a class for all grades and the other being a class for individual grades. Students practiced some exercises in terms of sound education, such as soundwalk<sup>1</sup> and creative music-making, using sheets of paper<sup>2</sup> and a sound diary<sup>3</sup>.

## Results

### Child A

During the first listening walk in April, the child did not seem to actively listen to the sounds, perhaps because of the difficulty in hearing. When he walked on the grass, the author asked him, “What does it sound like?” He replied, “zaku zaku.” He replied that he was mimicking the sound of walking on grass. In addition, he did not demonstrate any behavior that would indicate an interest in sound.

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<sup>1</sup> The soundwalk is an exploration of the soundscape of a given area using a score as a guide. (Schafer, 1994, p. 213)

<sup>2</sup> Take a sheet of paper and try to pass it around the room absolutely silently. It is harder than you think. As soon as your fingers touch the paper, they make a sound (Schafer & Imada, 2009, p. 46).

<sup>3</sup> Here are some questions to begin your diary: What was the first sound you heard this morning on waking? What was the last sound you heard last night before sleeping? What was the loudest sound you heard today? What was the most beautiful sound you heard today? Try to answer these questions for each day in your sound diary (Schafer & Imada, 2009, p. 25).

However, during the second listening walk in May, the moment he stepped outside, he opened his arms and mimicked the sound of the wind, saying “woooooo” as he felt the wind on his whole body. He also touched a leaf on a tree and said, “It’s rough. The sound is silky. How did it sound to you?” He was also interested in the differences in the way he heard the sound from others.

In the exercise of creative music making using sheets of paper, at first, he only found enjoyment in tearing paper. However, gradually, he shook and rubbed the papers gently. He smiled when he learned that the papers could make many different sounds. Later, he started making music with his friends by moving the papers up and down.

For the exercise including a sound diary, child A lost his notebook and was consequently unable to practice the exercise.

The following are the observations about child A’s statements regarding sounds outside of the music class. In April, when he started the exercises, there was no mention of sounds outside the music class. However, by late May, he started playing with things around them to make sounds. For example, during the school lunch on May 26, 2020, he made a sound by inflating and deflating a milk carton. He smiled and said, “How does that sound? I am popping, popping, and popping.” On May 28, 2020, when the author went to his classroom during recess, he clawed at the blackboard and made a noise. When the author did not like the sound, he smiled mischievously and said, “I don’t like the squeaky sound either.” After that, he tried to make noises with his nails on desks, shelves, and whiteboards, and noticed that while some of his actions made noises, others did not. Subsequently, focusing on the texture of the materials, he said, “I wonder if this desk makes noise because it’s rough.” He continued to make sounds by scratching his nails on objects, and discovered that the sounds differed depending on the material and the way the material was scratched.

## Child B

During the first listening walk in April, child B often listened to the sounds of the author’s friends’ footsteps. She commented, “It was interesting to hear the sounds of walking and running.” In the second exercise, she was interested in the sounds of footsteps as well. Additionally, she discovered that the sounds differed depending on where she was walking.

In the exercise of creative music making using the sheets of paper, child B, similar to child A, only enjoyed tearing the papers at first. When she tore the paper, she said with a laugh, “This is fun.” Subsequently, she listened to the sound, tearing small pieces of paper next to her ear, moving them quietly.

For the exercise of a sound diary, she often wrote about the sound of walking on the grass and the voices of friends.

The following are the observations about child B’s statements regarding sounds outside of the music class. Similar to child A, child B did not talk much about sounds outside the class when she started the exercise in early April. By the middle of the month, she talked more about the sounds. For example, on April 16 in the class daily diary, she wrote, “I thought it was a good sound because I could hear the sounds of birds, cars, and wind. I thought it was interesting that there were so many different sounds. I thought it was interesting.” In addition, on April 24, she discovered that footsteps sound differently depending on the person and material. When someone walked down the hallway, she said, “XX is walking. It’s like a thud.” Subsequently, her interest in footsteps continued to grow, and she observed the way people walked past her, listening to their footsteps and saying, “XX’s footsteps are wonderful” and “I can’t hear XX’s footsteps. I can’t hear X’s footsteps.” She often talked about the footsteps. She also wanted to hear her own footsteps, and while walking, skipping, and running, she stated her observation, “If you change the way you walk, the sound will be different.”

In May, during the cleaning time, she stood still near the garbage dump, and watched people who came to dump their garbage. When the author asked her what she was doing, she said, "I heard footsteps."

## Discussion

Comparing the behaviors of the two children before and after practicing the *sound education* method, it was observed that they were more interested in the sounds around them and actively created music on their own after practicing *sound education*. In addition, child A began to compare the way he and others sounded, and child B began to compare the differences between the sounds produced by her and others. Both children smiled when they noticed the differences, and Child A asked the same question again and again with other sounds, "What about this sound?", and child B began to observe more of the way others walked. From these behaviors, it can be seen that by practicing sound education, the children became actively involved in sound and found it interesting to hear the different ways of hearing and the different sounds.

The notion that "hearing-impaired children have difficulty in hearing sounds" is prevalent in schools for the deaf in Japan; therefore, visual information-centered teaching practices dominate the instruction of music. Music curriculum in schools for the deaf is strongly connected to independent activities and Japanese language studies, which focus on teaching hearing and language. It has a strong aspect of training to help students acquire correct pronunciation, speech, and language. However, the practice of *sound education* brings children the opportunity to experience the joy of listening to sounds and the joy of creative music making. It can also be said that this method has achieved the goal "To encourage pupils to cultivate their sentiments, fundamental abilities for musical activities, a love for music as well as a sensitivity toward it, through music-making and appraising" (Ministry of Education, Culture, Sports, Science and Technology, 2017, p. 9),

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## A Study on the Design of Music-Centered Integrated Class Based on the IB PYP

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### Abstract

The purpose of this study is to design music-centered integrated class based on the IB PYP (International Baccalaureate Primary Years Programme). For this purpose, the characteristics of IB PYP were examined, and the scope and sequence, and learning contents on music subject in IB PYP were compared with those in Korean curriculum. Then an outline of the music-centered integrated class based on transdisciplinary themes was designed spirally throughout grades and lesson plan was exemplified. The conclusion of this study are summarized as follows. First, the main characteristic of IB PYP is to integrate subjects on transdisciplinary themes and to help students form their own knowledge through inquiry learning. Second, strands of music in IB PYP are reacting and creating, and the overall expectations, conceptual understanding, and learning outcomes for each strand are presented. It is worth noting that the IB PYP emphasized understanding of the key concepts of each subject. Third, based on the transdisciplinary theme of IB PYP, an outline of the music-centered integrated class that are arranged in a spiral from 3<sup>rd</sup> grade to 6<sup>th</sup> grade was devised, and lesson plan for 6th graders was exemplified, focusing on key concepts and questions for inquiry.

Keywords: IB PYP, transdisciplinary themes, music-centered integrated class, inquiry learning, conceptual understanding

### I. Introduction

The modern society characterized by globalization, diversification, informatization, and variability requires talented person with an open mind and the ability of thinking holistically to explore various issues. Accordingly, the Korean curriculum (2015 revised) emphasizes the ability to inquire into and solve problems on one's own, and the ability to integrate various subjects beyond the acquisition of fragmentary knowledge in each subject. In particular, it is a very important task to nurture students to inquire into something and think integrately at the elementary school.

The IB PYP (International Baccalaureate Primary Years Programme), an internationally accredited elementary curriculum, has great implications for the implementation of these educational tasks.<sup>1</sup> The IB PYP, which is composed of integrated subjects focusing on six transdisciplinary themes and is conducted through active inquiry learning by students, can expand the horizon of discussion and practice of Korean Curriculum that also emphasizes inquiry learning and integrated class.

In Korea, while researches about IB has been mainly conducted focusing on general-level curriculum (Baek & Min. & Hong, 2008; Kang & Shin, 2020; Lim, 2015; Lim & Kim & Ahn, 2018; Park & Kim & Hong, 2014), there have been relatively few researches on the PYP, especially researches in the view of music subject was relatively small (Choi, 2020; Choi, 2021).

In this context, the purpose of this study is to design the music-centered integrated class based

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<sup>1</sup> IBO, a non-profit educational organization headquartered in Geneva, Switzerland, started to provide and manage curriculum to help international students learn in 1968. Currently, they are developing and operating IB, a globally standardized curriculum. IB is divided into PYP, MYP (Middle Years Program), DP (Diploma Program), and CP (Career-related Program).

on the IB PYP. To this end, we will examine the characteristics of PYP, explore the connection to Korean music curriculum, and then design a music-centered integrated class and exemplify lesson plan for 6th graders.

## II. Theoretical background

### 1. Characteristics of IB PYP

The main characteristics of IB PYP are as follows.

First, The key to the design of the IB PYP is to conduct the structured inquiry on following transdisciplinary topics (IBO, 2009): ‘Who We Are?’ ‘Where We Are in Place and Time?’ ‘How We Express Ourselves?’ ‘How the World Works?’ ‘How We Organize Ourselves?’ ‘Sharing the Planet’. In the IB PYP, the subjects (language, social studies, mathematics, science and technology, physical education, arts) are learned, and then each subject is integrated to explore six transdisciplinary themes. In the PYP, transdisciplinary themes are commonly inquired throughout all grades, deepening in a spiral as the grade goes up.

Second, ‘inquiry’ emphasized in the learning process is one of the learner profiles<sup>2</sup> pursued by the IB, acting as a basis for driving others.

Third, Concepts have relevance inside and outside of the subject area and enable in-depth understanding and transfer, and understanding of concepts is highly emphasized in IB. While understanding the concept of each subject through inquiry, it focuses on linking each subject on transdisciplinary themes, leading to a deeper level of knowledge.

### 2. Essential elements of IB PYP

The IB PYP prescribes a curriculum framework of essential elements—knowledge, concepts, skills, attitudes, and action— for learning six subjects and transdisciplinary themes. The knowledge encompasses knowledge about subjects and transdisciplinary themes, and the rest provides a structured and intentional framework of inquiry for learning them. The essential elements of the IB PYP and its contents are as follows (IBO, 2009).

- **Knowledge:** subjects, transdisciplinary themes
- **Concepts:** form, function, causation, change, connection, perspective, responsibility, reflection
- **Skills:** communication, self-management, thinking, research, social
- **Attitudes:** appreciation, commitment, confidence, cooperation, creativity, curiosity, empathy, enthusiasm, independence, integrity, respect, and tolerance
- **Action:** responsible and contextually appropriate behavior that demonstrates the extension of learning and social impact

### 3. Scope and sequence of music in IB PYP and Korean curriculum

The IB is in line with Korean curriculum in that it emphasizes the development of learners' competencies and the connection between subjects. The philosophy and direction pursued by the IB are not very different from the educated person, core competencies, and educational goals presented in Korean curriculum. However, there are differences in how the scope and contents of subject are arranged, and how and to what extent the subjects are integrated.

The strands of music in the IB PYP are divided into responding and creating, and those in Korean curriculum are divided into expression, appreciation, and daily life. Responding in the PYP corresponds to the appreciation, and creating to the expression in Korean music curriculum. These strands are concept-driven and have been designed to interact with each other.

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<sup>2</sup> The learner profile pursued by the IB is as follows: Inquirers, Thinkers, Communicators, Risk-Takers, Knowledgeable, Principled, Caring, Open-Minded, Balanced, Reflective (IBO, 2017). On the other hand, Korean curriculum presents “Vision of educated person” as follows: Independent person, Creative person, Literate person, Cooperative person (Ministry of Education, 2015).

The PYP arranges and presents the content to be taught and learned in the order of the overall expectations, conceptual understanding, and learning outcomes.<sup>3</sup> The overall expectations and the conceptual understandings could be matched with the key concepts, the generalized knowledges, the content elements, the skills in Korean curriculum. The PYP emphasizes the learning about concepts as a basis for inquiry learning, and for this purpose, shows sample questions to help students explore and understand the concepts.

The learning outcomes of the PYP correspond to the achievement standards of the Korean curriculum. The learning outcomes are composed of specific content that guides musical inquiry, and serve as standards for inquiry learning.

### **III. Design music-centered integrated class**

#### **1. Principles of design for integrated class based on transdisciplinary themes**

Integrated class based on transdisciplinary themes should support students to gain a deeper understanding of knowledge, ultimately human being and the world. In this study, music-centered integrated class was designed with reference to the principles of developing a transdisciplinary programme of inquiry suggested by the PYP. Principles can be summarized as follows (IBO, 2012).

- A programme of inquiry will be constructed to support students' understanding of the particular transdisciplinary theme it is connected to, and should challenge and extend students' prior knowledge.
- Each central idea should be written so as to promote conceptual development supported by the PYP key concepts.
- Listing the concepts (key concepts and related concepts) on the programme of inquiry will help to make Inquiry-based learning possible. However no more than three PYP key concepts should be selected to focus on in any one unit of inquiry.
- Each unit of inquiry will contain three or four lines of inquiry. The lines of inquiry, as a set, should define the scope of the inquiry and help to focus student research.

#### **2. Music-centered integrated lesson based on transdisciplinary themes**

What should be noted in PYP is that it is structured to spirally inquire into one theme from 1st to 6th grade. In this study, "how we express ourselves" among the six transdisciplinary themes was chosen, which is closely related to the music subject. The lessons for this theme were designed to spirally learn for students from the 3<sup>rd</sup> to the 6<sup>th</sup> grade who officially learn 'music' subject in the Korean elementary school. In addition, based on the PYP framework, the contents were detailed according to central idea, lines of inquiry, key concepts, related concepts, skill, subject area, learning outcomes of music in PYP, and the achievement standards of music in Korean curriculum.

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<sup>3</sup> Expectations and conceptual understandings are presented that apply across the different art forms in line with the philosophy of IB that emphasizes integrated learning, and the learning outcomes are presented as independent art content according to the characteristics of each art form.

Table 1. Example of transdisciplinary unit throughout grades

grade	3	4	5	6
<b>Transdisciplinary theme</b>	<b>How we express ourselves:</b> An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; appreciation of the aesthetic.			
<b>Central idea</b>	Music creates images of stories and events.	People communicate their feelings and ideas in a variety of art forms.	The media uses a variety of strategies to influence our ideas and choices.	Art is used to express our own culture and identity.
<b>Lines of inquiry</b>	-Genre of music -Work that combines music and story -Same story can be expressed in different ways	-Various forms of art -How artists express their ideas, feelings and thoughts through art -Expressing as art/ Responding to art	-Purpose of advertising -Examine the types, styles and locations of advertisements -Devices that create advertising effectively and influence choices -Relationship between advertising and its target group	-How culture is expressed through art -Artworks and cultural features of different parts of the world -Identify the cultural characteristics of music from different countries -World music performance
<b>Key Concepts</b>	form, function, perspective	form, function, reflection, perspective	function, connection, perspective, reflection	perspective, form, causation
<b>Related Concepts</b>	connection, change	interpretation, opinion, expression	communication, role, relationships, networks, opinion, prejudice	change, reflection
<b>Skill</b>	thinking, self-management	self-management, research, thinking	thinking, social skill, communication,	research, thinking, communication,
<b>Subject</b>	Music, Korean, Visual Arts	Music, Visual Arts, Korean, Dance	Music, Korean, Social studies, Visual Arts	Music, Social studies, Visual Arts, Dance, Korean,
<b>PYP Learning outcomes</b>	Responding <phase 2> -create a musical composition to match the mood of a visual image. -explore individually or collectively a musical response to a narrated story.	Responding <phase 3> -analyze different compositions describing how the musical elements enhance the message.	Responding <phase 3> -discuss music that relates to social issues and/or values.	Responding <phase 4> -explain the role and relevance of music in their own culture, its uses and associations through place and time. Interpret and explain the cultural and/or historical perspectives of a musical composition
	Creating <phase 2> -explore vocal sounds, rhythms, instruments, timbres to communicate ideas and feelings. -express one or more moods/feelings in a musical composition.	Creating <phase 3> -create and record a composition focusing on form, structure and style to give more meaning to their message	Creating <phase 3> -create a musical composition expressing their own ideas and feelings on a social issue	Creating <phase 4> -present, in small groups, innovative musical performances on a selected issue
<b>Korean achievement standards</b>	Appreciation (grade 3~4) -listen to music that expresses a situation or story and express feelings about the music.	Appreciation (grade 3~4) -listen to music that expresses a situation or story and express feelings about the music.	Expression (grade 5~6) -express a scene or situation in a story through music.	Expression (grade 5~6) -listen to music from various cultures and present the characteristics of music.
		Daily life (grade 3~4) -find and present Korean traditional music used in daily life.	Daily life (grade 5~6) -present on the effects of music on mental and physical health.	Daily life (grade 5~6) -discover and present the musical cultural heritage handed down in our region.

### 3. Practice of music-centered integrated class

<Table 2> shows the detailed plan of the 12 sessions for 6<sup>th</sup> graders among the above design plans. The key concepts mentioned in II-2 and questions for inquiry were presented in the composition of the integrated lessons centered on transdisciplinary themes so that students could deepen their conceptual understanding and promote their inquisitive thinking.

Table 2. Lesson plan for 6<sup>th</sup> grader

Session	Key concepts & questions for inquiry	Contents	Related subjects
1	<b>Perspective:</b> How does someone's culture influence the work they produce? <b>Causation:</b> How does the environment impact on artworks?	* Find out how the cultures of different countries/regions around the world are expressed * Discover how culture is expressed through art	Social studies, Visual Arts, Music, Dance
2~3	<b>Causation:</b> Why do you think this work has been made? <b>Causation:</b> How does the environment impact on artworks?	* Explore the geographic, cultural and religious features of different parts of the world * Explore works of art from different parts of the world * Understand the relationship between culture and art	Social studies, Korean, Visual Arts, Music, Dance
4~5	<b>Form:</b> What makes a song a folk song from that country? <b>Form:</b> What makes this dance unique? <b>Function:</b> What sounds can you make with this instrument?	* Explore songs and instruments from different countries * Identify the cultural characteristics of music	Music, Social studies
6~7	<b>Form:</b> What makes a song our folk song? <b>Form:</b> What makes this dance unique?	* Explore Korean songs and instruments * Identify the cultural characteristics of music	Music, Social studies
8	<b>Perspective:</b> Which instruments would you choose to play this pattern or song, and why? <b>Form:</b> What is the story/message in this performance?	* Listen to world music performances * Plan and design a world music performance	Music, Social studies, Korean, Visual Arts
9~11	<b>Function:</b> What sounds can you make with this instrument?	* Practice and prepare to play world music	Music, Visual Arts, Korean
12	<b>Perspective:</b> How does this music make you feel?	*World music concert presentation *Mutual evaluation *Self-evaluation	Music, Visual Arts, Korean

### IV. Conclusion

In this study, a music-centered integrated class on the transdisciplinary themes of IB PYP was designed and presented. The contents of this study can be summarized as follows.

First, the main characteristic of IB PYP is to integrate subjects on transdisciplinary themes and to help students form their own knowledge through inquiry learning.

Second, the strands of music in IB PYP are reacting and creating, and the overall expectations, conceptual understanding, and learning outcomes for each strand are presented. It is worth noting that the IB PYP emphasized understanding of the key concepts of each subject. To learn transdisciplinary themes, music can be a lens for exploration of them. Therefore, music-

centered lesson plan should be developed with authentic connection while maintaining the integrity and essential nature of music.

Third, we designed a music-centered integrated class that can be applied to the Korean curriculum, based on the IB PYP. To this end, a transdisciplinary theme of PYP was adopted, outline of music-centered integrated class is structured so that one theme can be deepened in a spiral throughout grades with central idea, lines of inquiry, key concepts, related concepts, skill, subject, learning outcomes of music in PYP, and the achievement standards of music in Korean curriculum. In addition, lesson plan was exemplified for 6th graders, focusing on key concepts and questions for inquiry according to each content.

IB PYP suggests that the curriculum should focus on fostering the ability to think in an integrated way by linking various subjects and the ability to conduct the inquiry learning in a modern society that requires learners' agency and adaptability to change. Afterwards, the music curriculum should focus on understanding the key concepts of the music subject through inquiry learning, integrating it with other subjects, and helping to understand human being and the world more deeply.

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## **Visualizing the Soundscape by Sonography: Implementation of Creative Activity in Junior High School**

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### **Abstract**

Music education in Japan, in many classrooms, musical activities have been monopolized by “Singing,” “Playing the instruments” and “Appraising” (these three categories are provided by the Course of Study: governmental curriculum guideline) based on Euro-American tonal music. Creative activities have been gradually progressing since the introduction of “Creative Music Making” after 1980s. Many music teachers, however, have a tendency to avoid undertaken creative music making in comparison with other activities since the staff notation in European classical music is treasured in Japanese music education. In the Course of Study, those activities need to be carried out evenly without being biased towards specific activities. Moreover, those activities unfortunately try to meet high technical demands. The Canadian composer R. Murray Schafer (1977) argues that music, which was originally inseparable from the natural soundscape, has already been forgotten today. Schafer points out the gap between musical expression based on the staff notation separated from the acoustic environment and sonography which attempts to describe the acoustic environment.

The purpose of this paper is to develop a brand-new pathway between acoustic environment and musical expression which can be utilized in music classrooms. Sonography is used as a tool to describe acoustic environments visually in soundscape research. In this paper, I, however attempted to use the concept of sonography as a graphic notation in order to make a connection between musical expression and acoustic environment.

A qualitative research including observation as well as interview surveys was taken as a method. Some music classes undertaken at the Hirosaki University Junior High School were observed. The music classes consisted: 1) sound listening as “Appraising;” 2) making graphic score as a connection between “Appraising” and “Creative Music Making;” 3) creating students’ own works of music using graphic score as “Creative Music Making.” After the observation, I interviewed the music teacher. The interview contents were analyzed by KH coder, and the characteristics and effectiveness of the practice were derived by Co-occurrence Network analysis.

As a result from both observation and interview, it was found that this series of activities could be easily undertaken intuitively even with little musical experience. The author certains that the concept of sonography proposed by Schafer can play a significant role to make a linkage between acoustic environment and musical expression.

*Keywords:* soundscape, sonography, graphic score, creative music making.

### **Introduction and Purpose of This Research**

In music education in Japan, there are many vision-based activities, including watching videos in music appreciation activities, reading textbooks, and reading music scores during singing and other performance activities. In this context, the use of "music scores" is much discussed. Shuji Morishita (2009) argues that instruction on the use of music notation "should be based on an understanding of its important intentions and inevitability" (p. 25). Progress in the process of creating a musical performance is greatly affected by whether or not music notation is used. Measuring music notation’s efficiency for use in music education is connected to Morishita’s "inevitability." In addition, Hiromi Hatanaka (2009, p.36 author

translation) argues that notation is both a blueprint for practice and performance of a musical composition and a record of it, and is thus useful to children studying music:

(1) Notation as a blueprint for a piece of music: To read the information presented and use it as a blueprint for reconstructing and expressing your images and thoughts, in the process of deepening your expression.

(2) Notation as a record: Students can record their compositions in written form so as not to forget them. Notation can also be used as a piece of common information allowing others to play the composition.

However, most of the studies on music notation have been one directional, e.g., either from "listening" to "seeing" or from "seeing" to "creating," and there have been no proposals for activities that connect them. This is because music education in Japan has long made extensive use of Western music notation (staff notation). With that in mind, consider Schafer's (1977, p.124) description of the relationship between staff notation and sounds:

The dilemma of conventional musical notation today lies in the fact that it is no longer adequate to cope with meshing of the worlds of musical expression and the acoustic environment...

Moreover, Schafer (1977, p.40) points out that "man echoes the soundscape in speech and music," arguing that true music, which was originally inseparable from the natural soundscape, has already been forgotten today. Schafer's "dilemma" suggests the divergence from sonography that attempts to describe the natural soundscape itself to staff-based musical description, which is detached from the natural soundscape. That is, staff notation represents a divergence from Schafer's idea of the true nature of music.

Staff notation is a tool for directing and suggesting our musical expression, but its usefulness for describing the sound environment is limited, and few people have ever attempted to use it for that purpose. To begin with, how have attempts to visually represent sound, which is an auditory fact, been made so far in the field of sound? Schafer (1977) classified them into three areas: acoustics, phonetics, and music notation, and then further divided them into two indexes.

Acoustics and Phonetics: descriptive, describing sounds that have already occurred  
Musical notation: prescriptive; a specification of the sound that will be played.

The descriptive notation system used in acoustics and phonetics involves multi-dimensional construction, that is construction based on precise quantitative measurements of the amplitude, time, and frequency of the sound using measuring instruments. In contrast, normative staff-based notation serves as an index for our performance. Notation in these three domains is autonomous and the domains are mutually inviolable.

Schafer proposes sonography in soundscape research as a notation system for connecting the worlds of musical expression and sound environment. The term sonography has discipline-specific meanings. For example, medical sonography, the use of quantitative sound measurements in the diagnoses and treatment of diseases and the sonography invented by Charles Barbier, an artillery captain in the French army as a cipher for transmitting commands at night (Hirose 2010), are well known forms. Schafer's sonography includes "isobel countour map," influenced by topographical maps, and "sound event maps," visual mappings of the distribution and frequency of sounds around us. Through these, one can attempt to describe the sound environment, but they do not lead to musical expression.

In recent years, efforts to include activities derived from soundscape research in have increased in music education in Japan. However, only a few proposed activities move practitioners from the sound environment to the description of it to musical expression. The key here is "graphic notation," which has been used less and less in the context of

contemporary music. This concept of sonography, also known as "the graphic score," involved attempts by American composers (e.g., Morton Feldman, John Cage, etc.) to promote focus on "sound itself" rather than distinguishing between musical and non-musical sounds. Their works, on which few format and performance restrictions are placed, reflect this attempt. This lack of constraints has led to the creation of various performances with the same working title and has promoted the free interpretation by performers. We believe that the freedom of interpretation inherent in graphic notation can be applied in various fields and is effective in music education as well.

From this perspective, I observed the practice of graphic notation based activities that connect the sound environment with musical expression. I also conducted interviews with a music teacher, and we discussed the effectiveness of these activities and the influence of graphic notation on music education in Japan.

## Methodology

Interviews with teachers using musical notation in their practice at a junior high school were conducted and analyzed. The interview content was converted to text, and the analysis was conducted using KH coder software. Koichi Higuchi (2014) has pointed out challenges in using qualitative data in social surveys compared to quantitative data. Content analysis, which is a method suitable for analyzing social survey data and deals with qualitative data such as text and voice quantitatively, requires a long period of time before the results of the analysis become clear, and the analysis procedure itself is difficult, despite the large number of analysis procedures. In contrast to content analysis, text mining has been attracting attention as a research method in recent years. This method is "the automatic extraction of words from data by computer and exploratory analysis using various statistical methods" (Higuchi, 2014, p.1). Higuchi acknowledges that advances in PCs, natural language processing, and statistical analysis in the context of text mining cannot be ignored. He also argues that the known problems with content analysis should be taken into account when considering text mining. In that vein, "Quantitative Text Analysis." Higuchi (*ibid.*, p.15 author translated) was devised and is defined as follows:

Quantitative text analysis is a method of organizing or analyzing text-type data using quantitative analysis methods to conduct content analysis. In the practice of quantitative text analysis, the appropriate use of computers is desirable.

The "organizing or analyzing" aspect is to avoid neglecting the context of content analysis and to join quantitative and qualitative assessments of the data. Why are quantitative indicators for qualitative matters needed as a background for this analysis? This is due to the "ambiguity" of the calculation results in the analysis of qualitative data. According to Higuchi (*ibid.*, p.6), qualitative data analysis has been discussed from the perspective of the degree to which calculated results can be said to be objective and reliable. Quantitative methods have come to be used to improve the objectivity and reliability of qualitative analysis.

KH Coder has been increasingly used in various research fields. For example, Hideki Suzuki et al. (2015) analyzed nurses assignment reports with KH Coder to evaluate their early training experiences. Yoshiaki Yamada et al. (2019) conducted a free-response questionnaire survey with elementary school arts and crafts teachers in the "plastic arts play" field to clarify differences between curriculum content guidelines and the content as they understood it. Quantitative text analysis methods make it easier to see the whole picture that a large amount of qualitative data paints. KH coder is easier to operate than other similar software, and this meets the above condition.

KH coder includes a variety of analysis tools, among them "co-occurrence networks," which is what I use in this study. The co-occurrence network analysis tool automatically

illustrates patterns of word co-occurrences in a network-like diagram, taking into account the utterances, sentences, and context of the analyzed data.

## Practice and Analysis

The practice activity conducted at the junior high school was a crossover between Schafer's Sound Education and Robert Walker's "Sound projects," an example of using graphic notation in music education activities. The Sound Education is an element of the concept of soundscape designed as an exercise to develop "Clairaudience." Schafer's book (e.g., Schafer 1992) contains 100 exercises that are not systematically ordered but can be done freely according to the needs of the situation.

Schafer's exercises and Walker's program both allow children to perform activities intuitively, and Walker (1977, p.28) states the following:

One should see this work as an opportunity to grasp abstract principles of organization and interpretation, free from the shackles which musical illiteracy or lack of experience imposes upon some children.

Activities based on tonal music, even when simplified to suit the subject matter, may require the acquisition of certain skills, such as knowledge of staff based musical notation. Therefore, the quality of the activities depends on individual musical ability, leading to what Walker calls "musical illiteracy" and "lack of experience imposes upon some children." On the other hand, in graphic notation activities, we can intuitively grasp the structures of the figures, such as their shapes and proportions. Since there are few strict specifications in the process of expressing sound through shapes, it is an effective method music education tool.

The following is the general practice procedure.

- 1) Conduct a sound walk/listening walk (These are exercises in the Sound Education).
- 2) On a white sheet of paper, draw the forms and impressions of the sounds heard in the activity in 1).
- 3) Perform using the score children created.

In the next section, I analyze an interview with the music teacher who has practiced the exercise with students frequently.

## Interview survey and Analysis using KH coder

The interview survey was conducted based on the following outline:

Survey target: the Music Teacher (:TS)

Date: 2020/9/8

Pre-prepared interview questions.

- (1) What made you decide on the activity using graphic notation, and what was your impression of it?
- (2). What is the content of the practice, i.e., background, trial and error involved in planning the lesson structure, and improvements to consider.?
- (3) What are your impressions of graphic notation and what changes did you observe in your classroom after you began the practice?
- (4) How would you describe the children's behavior during the activity?

I first established the co-occurrence network from all of the words that appeared in the full interview. The network is illustrated (figure.1) as follows:

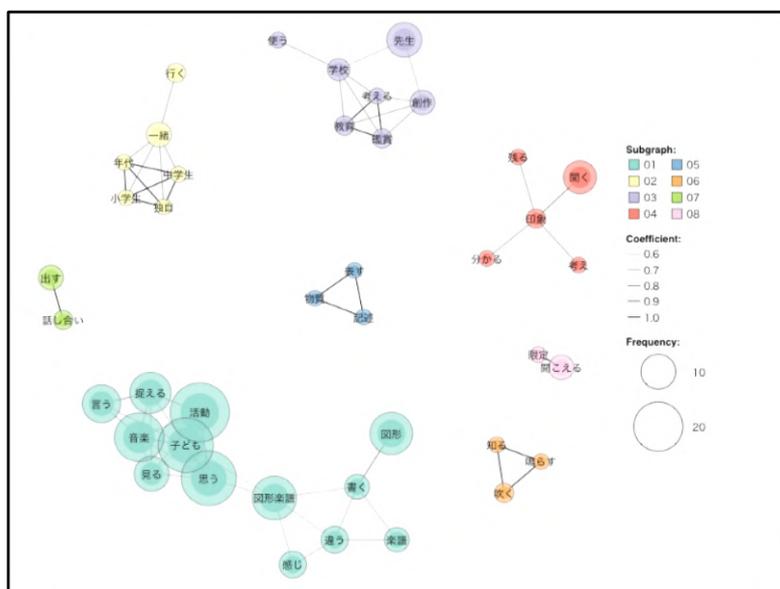


figure. 1 Co-occurrence network of the whole interview

In this study, we analyzed the data from one interview conducted with the teacher, TS.

TS knew about graphic notation but had never used it as a teaching material in her classes. The verb "to think," which expressed TS's own thoughts was used 25 times in the interview, suggesting that she saw the activity positively. For example, "I think that this activity can be used even by children who have not studied music in public schools since early childhood," indicates that the activity was well received in actual educational settings.

On the other hand, "When teachers of other subjects, for example, see this activity, they may wonder if this is music," indicates that the activity is not well-known in Japanese music school education. Accordingly, she observed, "I think we have to do it steadily. I think people will probably think we are doing something out of the ordinary at first."

Regarding the children's reaction to the activity, she said, "There were no students who said it was not interesting, but there were some who said they did not understand what we were doing, so it is difficult to say whether it was popular among everyone." As this activity is not a familiar one in school music education, children were also unfamiliar with it. At the same time, the activity promoted fresh experience. The word "perceive" appears in the lower left corner of the diagram. In regard to this, she said, "It was interesting to look at the graphic notation and make its sound, because each person has a different way of understanding it. [...] Since we were doing everything with our voices, some children perceived the sound and the graphic notation in terms of lines, while others perceived it in terms of cutting through the middle of the shape." This clarifies that the activity effectively promotes each child's way of thinking and ensures diversity of expression.

The word "graphic notation," in addition to being used in a variety of ways, also highlights the difficulty of the process. She said, "It's difficult to make a graphic score out of sound. Many children simply make a graphic score of the things that make the sounds they hear, so it ends up as a painting." For example, a child hears the sound of a bird singing. They are to write depict the characteristics of the sound, such as its swell and intensity, but the children draw birds. TS solved this problem by taking the opposite approach, i.e., interspersing the activity of "sounding out" the figure with the subsequent activity of drawing the sound.

In the upper left of the figure, co-occurrences of "elementary school," "junior high school," "original," "age," and "together" are illustrated. These appeared in the dialogue but were not formal interview topics. TS conducted a similar practice at the elementary school attached to the junior high school. Junior high school students tried to play a graphic score written by elementary school students. TS observed the following: "It can be done with people of any developmental stage, maybe even of any age. I think it's actually interesting that children, parents, and grandparents can work together."

## Result

Graphic notation is still unfamiliar in music schools in Japan, and few descriptions in textbooks and practical examples are available. However, teachers who included the graphic score activities in their practice have observed a degree of responsiveness and, that children are able to explore their own ways of perceiving and expressing music more fully. It was also clear that the graphic score activity could be easily used by people of other ages .

It was also found that improvements to the activity procedure need to be developed. For example, adaptations to ensure students do not draw the origin of the sound (e.g., a bird) rather than their impression of the sound are needed.

## Final Thought

This graphic notation activity links "listening," "seeing," and "creating." Existing sonography in soundscape research has never been connected to musical expression. By treating sonography as graphic notation, it can find a new role in music education. The educational effectiveness of this activity is that it allows music students to actively engage with sound itself without being confined to the visual information in staff notation. In addition, it allows for different age groups to work together in a collaborative activity.

Integration of graphic notation can positively impact music education in Japan due to the ease of conducting the activity and the novelty of the experience. As it is difficult to experience sound in conventional music education, graphic scores allow us to experience the flows of listening, seeing, and creating music by ourselves in a straightforward process.

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## Community Music Design in Music Education

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### Abstract

In many traditional music activities, both those conducted in schools and communities, the relationship between instructor and learners or participants is prescribed in a unidirectional manner. This study proposes the concept of community music and explores a new activity design that allows for a freer relationship between instructor and participants.

Although the concept of community music is still being discussed and not shared, there are various activities as community music activities in the UK and North America. It aims not only to participate in music activities, but also to encourage the development and improvement of life of the community, the development of the music culture of the community and the dissemination to other communities (Community music Activity Commission (CMA)). In addition, active music-making is being carried out in collaboration with facilitators and participants. On the other hand, after advocating soundscape, Schafer continued to be involved in music education in a broad sense and developed an activity called "community music" (Wakao, 2011). We will relativize the conventional community music and consider community music in music education from Schafer's community-oriented educational idea.

This study focuses on "community music" as proposed by Schafer. Wakao (2001) states that Schafer's community music suggests a way of music education in which the hierarchies of service provider, recipient, teacher, and child are dissolved, and the resources of each are shared on an egalitarian basis. The purpose of this study is to analyze how equal relationships among participants are specifically realized in Schafer's community music activities.

In clarifying community music, it seems that the word music should have an element of community in the first place, but I think that there was some background to the fact that it was intentionally named "community music". To be First of all, I will clarify what it is and what kind of role community music is and what role it has.

From the institutionalization of "community" and "music" pointed out by Schafer (2006) and Yano (1988), the "community" that relativizes music with the existing community and designs music at the same time as the new community. Propose "Music Design". In addition, we will clarify "community-thinking music education" shown by Schafer and conduct qualitative research on community relationships in music education.

Then, through this research, music activities by community music design will be an alternative music practice in future music education.

*Keywords:* community music, R. Murray Schafer, acoustic community, design

### Introduction

In many traditional music activities, both those conducted in schools and communities, the relationship between instructors and learners or participants is prescribed in a unidirectional manner. It seems as if, like the relationship of one-way communication from performer to audience in appreciative Western classical music (Hayashi 2009), music education is also often seen as a one-way activity from teacher to children. In recent years, however, participatory activities have taken place in various places in schools and communities, and are understood and widely undertaken as new learning activities that go beyond traditional rigid learning (Sasahara 2017).

Wakao (2017) describes participatory music as "music in which there are no professionals, no matter how good or bad they are, but in which anyone can participate to and in which the greatest value is placed on the success of that participation." However, Wakao (2017) goes on to say that a fundamental contradiction arises because music education is a product of Western culture, which is primarily based on performative music. While participatory learning activities are increasing in today's education, as Wakao states, the relationship between staged music and participatory music in music education seems to be twisted.

Therefore, this study focuses on the relationship between community and music, proposes the concept of community music and explores a new activity design that allows for a freer relationship between instructor and participants.

Although the concept of community music is still being discussed and not shared, there are various activities as community music activities in the UK and North America. Higgins (2012) describes three kinds of ways of thinking about community music: (1) music of a community, (2) communal music making, and (3) an active intervention between a music leader or facilitator and participants. The Community Music Activity Commission (hereafter, CMA) states a core concept is that community music activities do more than involve participants in music-making; they provide opportunities to construct personal and communal expressions of artistic, social, political and cultural concerns. The CMA (2021) also states that "community music activities do more than pursue musical excellence and innovation; they can contribute to the development of economic regeneration and can enhance the quality of life for communities and contribute to economic regeneration." This shows that community music as practiced in the UK has social, political, cultural, and economic purposes and functions.

In the next section, I will focus on R. Murray Schafer's work on community music and discuss on community music from an educational perspective.

### **Schafer and Community Music**

The purpose of this study was to analyze how equal relationships among participants are specifically realized in Schafer's community music activities.

After advocating the concept of soundscape, Schafer continues to be involved in music education in a broad sense and developed it into an activity called "community music," (Wakao.2011, p.77). Schafer (1980) states that "there are no teachers anymore, only a learner community" as one of the "norms for educators". Schafer (1990) thinks that the first thing to learn in order to teach creatively is to close your mouth. Thus, a teacher has to give up his to her role as a teacher. And then, he or she becomes a learner and observes what others are creating and learn from it. As a result, the teacher can learn by him or herself. In this case, since the teacher has more experience, he or she can direct and help the children. Of course, this is a new principle for teachers and not easy, as it helps teachers to forgive and shape their freedom, rather than simply saying, "do this or don't do this"

Schafer's idea of community music suggests a way of music education in which each person shares his or her own resource from an equal standpoint where the hierarchy such as providers / beneficiaries, or teachers / children is eliminated, (Wakao.2011). In short, Schafer's idea of community music provides many suggestions in order to break down the rigid relationships of the community and creating a place for more free and creative musical activity. Therefore, this paper attempted to examines community music in music education, relativizing traditional community music through Schafer's community-oriented educational philosophy.

### **Community Music Design**

In clarifying community music, it seems that any music was developed based on various aspects of different communities in the first place. If so, we should rethink the reason why one needed to name community music intentionally. This paper, therefore, attempted to clarify

what community music is; what kind of role community music plays; and what it functions. Schafer (1977, p.215) describes community as follows.

Community can be defined in many ways: as a political, geographical, religious or social entity. But I am about to propose that the idea community may also be defined advantageously along acoustic lines.

The Japanese political scientist Toru Yano (1988) points out that music is institutionalized by the following five fact: 1) political power; 2) Social structure or communal framework; 3) economic mode of production; 4) mythological system and 5) inspiration from other cultures.

Political power is symbolized, for example, by the Brahmas of South India who, based on the caste system, became a monopoly class in music, separating "public" music from "private" music. It is the sound of the "public" that has been institutionalized in response to authority. As for the social structure or communal framework, Yano gives the example of folk songs in Yunnan Province, China. For the economic mode of production, Yano illustrates music that is inextricably linked to the form of the mode of labor, especially rhythm, such as labor songs, and for the mythological system, Yano illustrates music influenced by civilizations with religious characteristics such as religious songs. The influence of other cultures can be seen in the music of Japan, which has created and institutionalized its own musical culture while being strongly influenced by Chinese culture (Yano.1988).

Yano's point about the "institutionalization" of music can also be applied to communities themselves. What Schafer and Yano's ideas of community have in common that they are communities that already exist. And as Yano points out, music has always had a close relationship with a particular community, whether Western or non-Western. In other words, it can be said that music has always been produced and enjoyed within a pre-existing community.

Although music has always existed together with community, why was the concept of "community music" proposed, and why was the prefix "community" given to "music"? Here, we can see the intention of the proponents to relativize the community itself and to construct a new community. At the same time, music, which has been bound by community, needs to undergo a new change.

Claire Bishop (2012) cites the inclusion of education as one of the key words in community art as one of the reasons why community art has not penetrated people's minds. It goes without saying that education in the narrow sense has always been tied to the system. It is understandable that the institutional, social, and restrictive nature of education was not accepted by the artists when designing a new community and creating new music.

However, as long as we renew the community, that is, construct a new community while relativizing the system itself as Yano points out, an alternative window should be opened to education. because a new look at the system and a critical perspective should be proposed only from education. Thinking about participatory music and community music in music education will lead to the creation of new groups: communities and new music, and this will also lead to the creation of new education.

In the past, music education has focused on group activities such as chorus and ensemble, and I believe that music has been constrained by schools, for example. It is not a bad thing to conduct musical activities in a community. It is also well known that musical activities with a large audience are attractive to both professionals and amateurs. However, does "music" that is limited by the deprivation of collectivity represent the totality of music? Thus, I would like to liberate the space done by gathering in the same room with the idea of community music design. It is not music that is done by gathering in the same room. We can think of it as an opportunity for musical activities that can be done alone. Of course, leaving the space

of the music room is not the only way to liberate oneself from the community. The most important thing that has been cut off until now in the group activities bound to the place of the music room is the individual body. The individual body, or the state of being "alone," is the place where one can fully immerse oneself in what only one knows and what one really wants to hear before sharing it with the community. A community that emphasizes working together is one way of being a community, but it is not the whole of a community.

In the Middle Ages, Schafer (1977, p.215) referred to the area within which church bells could be heard as an "acoustic community. If we rethink the acoustic community in the modern age, the listening of a particular local soundscape by one person can be shared with others in the acoustic community. In Schafer's sound walk, the sound space of one person is important. While this sound space is the ontological listening of one person, it actually forms an acoustic community of many people. The music instructor who engages in this practice takes on the role as a facilitator and engages in alternative music practice, or community music design. This practice is an example of a direction for the creation of a new perspective of his or herself, in community as well as music. By deconstructing the community, new communities and new musical possibilities will open up. Music education, therefore, should contribute to the development for the new community and new musical possibilities.

## Conclusions

This presentation discussed on community music for the creation of alternative music activities in the future. In the midst of various participatory music activities, by designing community music, the relationship between community and music will be reexamined, and by seeking participatory music in music education, a new design of music education will be possible in the future.

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## Process Leading Up to a One-Year- Old Singing a Song That They Like

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### Abstract

F (a one year old) was at the developmental stage of the transition from pre-speech (babbling) to speech. It was thought that a musical-training intervention performed at that time would improve F's sensitivity to sounds and speech. The purpose of this study was to clarify the process of F at the age of one from the discovery of a musical tune she liked until the time when he himself began to sing the tune, through the involvement of her mother. Test subject F was observed from age 11 months, with his mother singing to him 10 minutes daily using an illustrated children's book for one-year-olds with songs and text (stories), accompanied by movements/gestures, until the time when F began to sing the song herself using words. Regular video observations were made, and the mother kept a daily journal of her impressions. At first, F would close the book and merely move her body to the tune. Gradually, she came to open the book to a page with a tune she liked, pointing to the page while looking at her mother to tell her that she wanted her to read that page. At age 1 year 10 months, even when the book was absent, F came to make gestures, and sing "Twinkle, twinkle, little star" to himself. The process of beginning to sing a liked song involved elements of activities other than those specific to the song lyrics: the involvement of her mother in the song, the characteristics of the illustrations on the page with the song, a rhythm and tempo that made the song easy to sing, the ease of making accompanying movements/gestures, etc. The integration of songs and illustrations promoted self-initiated movements/gestures and singing. The fusion of songs and illustrations expands the "worldview" of songs for one-year-old children and could be developed into creative musical activities.

*Keywords:* picture book, singing, one-year-old children, musical activities, songs

### Introduction

Children get an opportunity to start singing in their daily lives. Singing involves speaking words. Singing requires not only words, but also musical rhythm and mastery over melody. Therefore, in this study, we try to capture a process in which a one-year-old child begins to sing daily by listening to songs from the picture book. When a person comes across a song, the ideal way at the starting point of a person's singing is derived by clarifying the process by which the song permeates the child.

In this study, a child close to the author, F (girl, age is between 0-4 months to 2-2 months), is chosen as the subject of study, and picture books are read and sung out loud.. Children are easily stimulated by the colors and shapes in picture books, and it is easy to imagine scenes and expand their imagination. Picture books containing songs and stories featured in this study obtains information simultaneously through hearing and sight, and you can become familiar with songs together with pictures. In addition, it also leads to the development of perception, language development, and development of sense of pitch.

Now, in a previous study of the process in which children begin singing, from the study of Endo, which observed the development of physical expression in accordance with music from 1 year and 2 months to 2 years and 1 month of age, which revealed that they could move while singing by listening to one person(Endo, 1999), and which encouraged them to voluntarily enjoy the development of play in early childhood, and clarified the effectiveness of play(Endo, 1998). Children can listen to music and play with their hands, etc. on their own.

Studies on the acoustic analysis of the onomatopoeic speech of infants and toddlers record and analyze the play scene with the mother every month from 1 month to 24 months of age.

The picture books covered are onomatopoeic picture books, and the importance of listening well to sound, expressing sound abundantly, and guaranteeing free expression is stated in (Sakai, Nakano, Shimura, 2020). Though the study was conducted by acoustically investigating the utterance of children, it is common to the viewpoint of the beginning of song of this research in the viewpoint of focusing on the way of speaking words in infancy. Ota describes the effectiveness of combining pictures and songs, in which children can expand their imagination through picture books, so that they value the importance of many picture books, and when songs are added to picture books, the imagination can be easily expanded (Ota, 2017).

According to the on "Effects of Listening to Picture Books in Childcare Situations," there are three types of picture books that use songs: a work that expresses text in a picture book through songs, a work that expresses a picture book by reading and singing aloud, and a work that uses songs and children's songs as picture books. However, the works that are covered in this study do not apply to any of these types (Ishida, 2021).

The purpose of this study was to clarify the process until 1-year-old F starts singing by picking a song of her choice through the relation with the mother.

## **Methodology**

### **1) Observational and Analytical Methods and F's Involvement**

During the developmental stage, Subject F was observed for 1 year and 11 months starting from July 2019 (4 months after birth), to May 2021 (till she was 2 years and 1 month old), when the child began to be interested in her body at the developmental stage. F has a distinct taste for things and has a sensitive and nostalgic personality. She listened to music even when she was in her mother's tummy since she was a fetus, and she was familiar with toys such as a piano's sounds, merry and drums that produces music, ever since she was a month old.

From the time F was 4 months old, she used a picture book and sang and listened to songs almost every day for about 10 minutes with her mother's own choreography. The author observed the F's involvement with picture books and recorded the observations in a diary and periodical video shoots. A specific time was not set for F to sing along and rather went with the flow of the day spent by F, and recordings were taken when F was spending time calmly and in between the mother's work.

The mother made entries in her diary about her daughter F ever since her birth and also recorded events that were not just related to reading picture books. Videos were taken from an angle that was not noticed by F, but at times, she would become aware of the video.

The analysis was carried out from three viewpoints, namely, change in facial expressions and movements, change due to involvement with music, and change due to involvement with mother. The mother tried to adjust the height so that it would be easy for herself to sing, as a way of listening to the songs in picture books, and put intonation so that there would be no deviation in melody, pronounced the words clearly, and sang expressively according to the content.

### **2) Developmental Stage around 1 year old of age**

Approximately one year of age is generally the time to shift from babbling to spoken words. Music intervention at that time can facilitate the acquisition of words and sense of pitch.

Boysson-Bardies says, " A child extracts linguistic information from a variety of phonetic, prosodic, syntactic, and contextual sources in everyday life. All these information help to understand the meaning of a word. A child has already learnt how to express himself/herself. It helps adults communicate with adults and express their emotions many weeks or months prior to when an adult recognizes that it is a word. It uses a series of actions and a unique form of colloquial expression. (omitted) By around eight to nine months, a child can see that words begin to be recognized as a chain of speech associated with a particular circumstance (2008)." As Boysson-Bardies says, there has been a process in which language information

has been obtained in order to begin recognizing the chain of speech in words in eight to nine months. Words that seem like words appear around the age of one. So performing the activity of singing and listening to picture books during this period has a good influence on the acquisition of words as well.

According to Ishikawa, "There are many children who start singing things like existing songs in fragments from the latter half of one year of age to two years of age, overlapping with the development of words. (Omitted) The songs around this time are often played so as to repeatedly reproduce the "state of singing (2016)." Davidson et al. show that children aged 12 months to 18 months had a single breath song rather than a different song, but they began to have a pitch by 19 months (Davidson, McKernon, Gardner, 1981).

### 3) Picture book details

The picture books used in this study were "0 sai no Uta To Ohanashi (Songs and Stories for 0-year-old )" (2019) with 6 songs and 2 stories, and "1 sai no Uta To Ohanashi (Songs and Stories for 1-year-old) " (2019) with 13 songs and 10 stories. The reasons for choosing these among the many picture books containing songs were that the real picture books were drawn with an insatiable and colorful touch, not only attracting children's interest but also the mother's preference, and that the stories were short and easy to read. And also, it was considered to be familiar to children in the developing stage of comprehension of words and as popular animals and fruits appeared, Mothers' desire to give their children an environment in which they can become familiar with music is also included.

"The songs listed are ""Choucho (Butterfly Song)"" , ""Zosan (Little Elephant)"" , ""Tonton tonton Higenjisan (TENGU Song)"" , ""Bunbunbun (Buz, Buzz, Buzz)"" , ""Kirakiraboshi (Twinkle Twinkle Little Star)"" , ""Itoma no Uta (Wind the bobbin up)"" , ""Denshagokko (Play Train)"" , ""Genkotsuyamanotanukisan (Baby Racoondog of Genkotsuyama)"" , ""Tewotatakimasyo (Let's Clap Our Hands)"" , ""Matsubokkuri (Pine Cones)"" , ""Musude Hiraite (Open Shut Them)"" , and ""Okasan (Mother).""

## Result

Table 1. Record of the Singing Process

<p><b>Video recording at 4 months, 26 days (6 minutes)</b>                  As the mother began to read the story of "Okaonikoniko (Smile on your face)," she moved the corners of her mouth, leaned a little forward and smiled. She looked at the picture in the picture book at the place of "crackling". When she turned over the page, she saw the following page as she followed with her eyes. As the mother began to sing the song of " Okina Taiko(Big Drum), " she looked at the picture of the drum drawn in the picture book, while pressing the back and back of his hands against her mother, and occasionally smiled. In the "Tulips" song, she moved her eyes away from the picture book midway, but she turned his eyes back to the picture book again in the 'Korokoro-chan' story. In the song " Osenbeiya Ketakana (Did you bake the rice crackers?), " she saw her mother turn her palm up and down. There was a movement in which both hands were raised up by bending the elbow, and the existence of the mother was sometimes confirmed.</p>	
<p><b>Video recording at 8-months (35 seconds)</b>                  In line with the "Tewotatakimasyo " from Mary, she entered the walker and swung her body left and right in a standing position to match the rhythm. As the walker was caught by the Mary and did not move, she looked at the foot and attempted to move the walker.</p>	
<p><b>Episode recording at age 11 months 25 days</b>                  When a picture book of " Uta To Ohanashi (Songs and Stories for 1-year-old)" was given for the first time, she closed the book halfway and moved her body as per the tune. She was interested in the pictures, and often saw the pictures. "Uta To Ohanashi" is one of the nearly 40 picture books. Lately, F goes to the picture book corner and plays by throwing the picture books behind her. The mother is desperate to clear up the pile of picture books thrown around.</p>	

**Video recording at 1 year, 0 months, 21 days (1 minute, 25 seconds)**

She was delighted to see herself as mirrored on a dark screen on a TV without anything. At first, she was about 1 meter away from the TV, and she is confirming her appearance, either because she wanted to get closer to her appearance, or because of the walk she has recently started, she is staggering with her hands clapping together toward the screen, bending and stretching her legs, or stretching her hands on the screen on her toes.



**1-year-old, 4-month, 6-day video recording (1 minute)**

In the course of rounds, F picks out and brings the relevant picture books from around 40 picture books by herself. Gradually she raised both hands upwards to make a twinkling gesture, in the place of "♪twinkling♪," and both hands are lowered from top to bottom like drawing a large circle in the place of "♪ sky ♪". She is mimicking her mother's moves. When she sang "Open Shut Them " without a picture book, she swung the upper body side to side and enjoyed the music. When "hands were made into a fist and opened up while singing""♪Open Shut them♪, F would keep her palms open. She continued looking at the movement of hands. As the mother continued to sing the beginning of the song, she began to move her entire body while standing up this time.



**Video recording at 1 year, 5 months, 18 days (9 minutes)**

When the usual picture book was shown to F, she laughed, clapped hands and said "Yay." She was delighted. She herself opened the page up to "Twinkle Twinkle Little Star", and as the mother began to sing, she raised and lowered her hands up and down. Halfway through the song, she stood standing while watching the picture book, and swayed her body in tune with the music and danced creatively. Creative dance involves shaking one's body sideways or clapping one's hands while waving sideways. At times, she would turn towards her mother who was singing. Around the end of the first lyrics, she uttered "Oh!" in a joyful voice, pointing the picture book with her right hand toward the picture book, raising and lowering her hands in small notes, and was happy. When her mother tried to open a different page, she said "Hmmm" and asked her to go back to the previous page, and then she sang again and looked at her mother like she wanted to. And, she sang the second part of "Twinkle Twinkle Little Star." Then she opened a different page with her hand at where the second stanza began at "Up Above."The mother began to read the story on that page. Then she took away the picture book, opened the page of "Twinkle Twinkle Little Star" by herself again, and offered it to her mother. The mother immediately started singing "♪ Twinkle Twinkle Little Star♪" Then, she stepped back a little from the picture book while seeing the book, raised both hands up, moved her body, and bent her feet a little, and put her body weight alternately on both legs to dance to the music. "When the mother expressed "shining"" in sign language, "♪"shining♪""", she stared and clapped her hands." When the mother tried to draw a circle in front of her chest while she placed her palm when "♪in the sky♪", F noticed the video recording and enjoyed dancing to the music while opening up her hands to the video. "At the end of the first stanza, "♪ in the sky♪""", she laughed at the video saying, "Aha!" Then, when the mother stopped singing and tried to open a different page, and F made her mother to go back to the previous "Twinkle Twinkle Little Star" page. The mother began to sing the first stanza of the song in response to F's request, thinking she would sing again.

After singing, when F began to read different pages again, F returned to the "Twinkle Twinkle Little Star" page. When the mother began to sing the first stanza, she moved her body from side to side with a smile.

Again, halfway through, she started touching the cushion, so the mother stopped singing and closed the picture book. Then she babbled ' Ya ~ ' and turned the page of the picture book, and this time, opened the page of ' Let's clap hands ', and signaled her mother using her eyes requesting to sing. Then she watched her mother's facial expressions and movements. Then, as soon as he finished singing the first stanza, she lifted his hands up and began to mimic the laughter, "♪ Ha ha ha♪." "Oh, it's interesting♪" At that point, the mother held F's cheek with her forefinger, and bent her leg in a standing position and stretched it out, happily said "Ah!".



**Episode Records on Day 1 Year, 7 Months, 0**

She danced in tune with her mother's voice while standing, but her expression was so serious that she had a serious look. The mother began to sing and play songs on the piano that F liked in the picture book Then she flexed or shaken his body in tune with the piano. she brought his favorite percussion instruments (bells, handbells, and maracas) and began to ring herself. The words were not clear. When she went to a different page and started reading that page, she stopped with her hands and returned to the page with her favorite song. This question and answer was repeated several times.

She sang herself to sleep on her own, or babbled while holding a rubber figurine of a rabbit.

**Episode recording at 1 year, 9 months, 24 days**

Recently, people have chosen a picture book called " Uta To Ohanashi " as a picture book. When the mother sang " Twinkle Twinkle Little Star" when there was no picture book, she uttered a voice for each first beat, with the flat of her hand flattened back and forth as if to express the sparkle with her hand. Sometimes the beat lyrics could be pronounced at the same timing as the mother, and sometimes they did not fit at all. Sometimes a page of a song that she liked in a picture book is offered at least three times in a row. She refers to known animals on the pages of songs such as "Oh, it's a dog" and "Zou-san ". She took the rhythm while seeing the picture book, rocking the upper body to her mother's voice, putting the bottom down from the knee to the floor, sitting and stretching and shrinking the buttocks and waist.



**Episode Record, 1 Year, 10 Months, 3 Days**

Even when there are no picture books, she wags and sings" Twinkle Twinkle Little Star. " When she is in a good mood in the bath, she spends time with her mother and father, sings while riding in a car on child safety seat, etc., and usually has a flashing shake on her hand.



**Episode Record, 1 Year, 11 Month, 10 days**

She went to bed to sleep, but could not sleep so much that she stood on the bed, sat down, hit over and turned around. Suddenly the movement stopped, and she began to say loudly, "Twinkle Twinkle Little Star." After singing two choruses of the first lyrics, in about five minutes she began to move before her usual sleep, with her blanket slipping on her skin.

**Episode recording at 2 years, 1 month, 0 days**

"Twinkle Twinkle Little Star" has become a special song for F." It is the song that she sings best without seeing anything. When she is bored in the car, or when relaxing in the bathroom and playing with her toys, or when she can't sleep before going to bed, when playing with a piano, when playing with a stuffed toy, when having a bath, and so on, and hums at key points. The lyrics of "Twinkle Twinkle Little Star" are changed to "Oh" for "Ho" and "Everyone" for "So," but the pitch can be almost accurately obtained. She is trying to feel at ease or enjoy herself by singing. It is as though the song has seeped into her and she hums very naturally. She sings the second stanza only a few times and then she shifts to another favorite song (" Itomaki no Uta, " "Let's Clap Hands" Zo-san" and so on).

**Episode recording at 2 years, 1 month, 20 days**

In the morning, she looked at a rotating drum-type washing machine, and suddenly sang with her hands in a rotating gesture, alternately rotating in the vertical direction, and singing with "♪ Ito Maki Maki Ito Maki Maki Hiite Hiite Ton Ton Ton♪." At night, she happened to see the stars through the window, and she told "That's the star." F saw the stars with the naked

eye for the first time. "At that moment, while the usual palms and stars were moving again, she sang, ""I'm watching everyone's shining "It is more common to sing while shaking one's body and listening to the words. Earlier, she would sometime sing alone, but she was happy to listen to her mother's voice and sing along with her mother. She replaced her own name to the place where the name of a person is sun in the song" Happy Birthday to you. "

## Discussion

When the child is 4 months old, she sits on her mother's lap and sometimes stretches her arms to her mother with a sense of security that is close to her mother's back to confirm the mother's presence. Her eyes scarcely move away from books, and she listens to people reading picture books and smiles at pictures from time to time. F is getting accustomed to the act of books being read out to her.

When the child is 8 months, there is a remarkable movement to shake the body in accordance with music. There is no bowl movement, such as rolling the upper body, but the body is able to swing left and right. She was not able to control the movements according to the song as the timing of moves and melody hardly matched, but she had an awareness of music.

When she was 11 months and 25 days old, a new picture book for one -year-old child was given, and she immediately looked at the picture as she liked it. She became absorbed in throwing picture books during this period, and moved herself to the picture book corner, and threw picture books backwards many times. She preferred to throw books and left the other objects untouched.

When the child was 1 year and 21 days old, she cannot be seen singing in this situation, but is happy to see her reflection on TV and mirrors, and expresses joy by bending and stretching legs, etc. This shifts to singing while watching herself singing and dancing on the reflection of the black screen on the TV.

When the child was 1 year 4 months and 6 days old, she is more absorbed in dancing than singing. She creatively dances to her mother's improvisations, and can dance to the tune of Kirakira Hoshi " with bigger steps using palms and arms, but she does not sing much. While she hardly smiled when dancing, it was probably because she was absorbed in dancing to the tunes of the song

When the child was 1 year 5 months and 18 days old, she was able to shake her body or wave her arms in tune with the music, and choose and open a page she likes. She gradually continues to mimic her mother's song. When the mother held out the past that F wanted to sing, she began to sing the song from the page that was opened accordingly without any resentment, and when a different page was opened midway, she stopped singing, and sang the song from the newly opened page. F asks her mother to sing her favorite song over and over again, and only when she hears what she knows, she hums along to match the timing of her mother's voice. She continues to wave her hands and dance without any hesitation. Occasionally, she looks at her mother while dancing to show her, and continues to be happy from beginning to end.

When the child was 1 year and 7 months old, she is enthusiastic about bringing out her favorite percussion instruments such as bells, maracas, and handbells from the instrument corner and dancing while singing. Now she can decide her favorite song, recognize the page of that song with pictures, and quickly chose the pages.

When the child is 1 year 9 months and 24 days old, she immediately begins to shake her body when the mother begins sing a song from a picture book without having the book. She is particularly fond of " Kirakira Hoshi, " and waves her palms and shows stars through actions. She sings while shaking her body by alternating her body weight on both feet. She always points out to animals that she recognizes on the song page, and tells their names. The way she sang was to imitate the lyrics uttered by her mother, but she could not say the consonants well, and in many cases, she imitated only vowels and said words. It can be assumed that the

mother's singing voice and the child's singing voice are assimilated, and the child gets an illusion that she is singing accurately when her mother also sings together.

When the child was 1 year 10 months and 3 days, she began singing by herself even when there were no picture books. She could not say the consonants clearly, but could sing melodies with almost accurate pitch. She is often happy while singing or when around people. She can now gradually use spoken words and she knows about six songs in which she remembers the first few portions of the lyrics.

When the child was 1 year 11 months and 10 days old, she began singing loudly when she could not sleep, and after singing several times, she would prepare herself to bed when sleepy, and wait to go to sleep. The song repertoire increases further. "Happy Birthday To You" is sung at the birthday party held regularly at the school to which she belongs and that song becomes familiar to her.

When the child was 2 years and 1 month, the words are not accurate, but she begins to hum the song in various situations. Words from the "Ma" and "Ya" column were difficult to say, but her mother did not try to deny the mistakes in particular, even if she could not say them well. In addition to earlier situations, she began to sing when she was relaxing or bored. There is an improvement in dancing to "Let's clap hands," and she sings in a self-assertive manner.

When the child was 2 years 1 month and 20 days, she sings a song that she is able to associate with an actual thing. She "rotates" her hand when she shows the "rotating" washing machine to her mother, and tries to convey "stars", and she is able to associate "stars" with "Twinkle Twinkle Little Star." This can be seen as having an imaginative power as she associated with two songs published in the picture book. When she sings "Happy Birthday To You," she puts her name in the part her name.

## Conclusions

The process in which F began to sing her favorite song included the following steps from 1 to 7. 1: Move body to suit the melody. 2: Dance freely even if it doesn't suit the music. 3: See herself dancing to the music. 4: Listen to the favorite songs repeatedly, choreograph them to match the song, and partly imitate the segments of lyrics. 5: Songs of picture books are choreographed even in places without picture books. 6: As the number of spoken words increases, the repertoire of songs increases and lyrics can be largely mimicked. 7: Take the pitch accurately and the lyrics penetrate to associate songs from words.

The process of beginning to sing a favorite song was related to elements of musical expression activities other than lyrics such as the relationship between mother and song, characteristics of pictures, ease of singing (rhythm, tempo), ease of swinging, etc., and the integration of songs and picture books encouraged singing and moving around with one-year-old children. This implied that the fusion of songs and picture books in music education could inflate the world view of songs of one-year-old children and develop them into creative musical activities.

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## SPA-222

# Pitch Memory in Musicians and Non-Musicians

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### Abstract

Pitch memory refers to the ability to memorize pitch correctly, including recognition and memory of pitch. There is a certain relationship between different pitch memory characteristics and different musical sense. Previous studies found that absolute pitch (AP) and relative pitch (RP) have different memory mechanisms and different pitch processing methods. The processing of absolute pitch is different from the processing of relative pitch in the brain. Absolute pitch activates the brain regions of long-term memory, while relative pitch activates the brain regions of working memory. The research on the memory of pitches mainly focuses on musicians, but few on non-musicians. This paper mainly summarizes the pitch memory characteristics of musicians and non-musicians with different pitch sense, comparing the similarities and differences of pitch memory between the two groups, so as to prepare for the further study of the formation process and characteristics of non-musicians' pitch sense. This study provides an empirical basis for the teaching of music score reading, music theory and solfeggio in primary and secondary schools and universities.

*Keywords:* pitch memory, absolute pitch, relative pitch

### Introduction

Pitch memory refers to the ability to memorize pitch correctly, including the recognition and memory of pitch. Studies on pitch memory mainly involves the study of pitch memory retention, influence factors, pitch memory characteristics and neural mechanism of listeners with different pitch sense. In terms of pitch memory retention, some listeners can keep the memory of pitch for a long time, which often shows absolute pitch sense, that is, they can report the name without reference; however, other listeners can only keep the memory of pitch for a short time, which is often expressed as relative pitch sense, that is, to judge the pitch with the help of a given pitch as reference.

The subjects of pitch memory studies at home and abroad are mainly musicians, while the research on non-musicians is relatively less. When listening to a pitch, the musicians with absolute pitch sense, their long-term memory are activated, while the musicians with relative pitch sense, their working memory are activated. This shows that the neural mechanisms of these two kinds of pitch sense are different, the ways of identifying pitch are different, and the ways of pitch memory are also different. The study also found that the formation of different pitch sense is affected by genetic factors, early music education, mother tongue (tonal language and non tonal language), solfeggio teaching methods and playing musical instruments. However, most of the studies on non-musicians used memory related tasks to test whether they have absolute pitch sense. Therefore, the relationship between pitch memory strategy and brain mechanism and pitch perception of non-musicians needs to be studied.

This study focuses on the pitch memory characteristics of different homophonic listeners of musicians and non-musicians, which lays a foundation for the study of non musicians' pitch memory.

### Methodology

In this study, we collected the studies on pitch memory, absolute pitch sense and relative pitch sense, and analyzed the similarities and differences between musicians and non-musicians in pitch memory and pitch sense.

## 1. Pitch memory of musicians

### 1.1 The features of pitch memory

The research on pitch memory of musicians at home and abroad involves brain mechanism and cognitive characteristics. For people with long-term memory of pitch, namely absolute pitch sense, posterior dorsolateral frontal cortex of left brain and inferior frontal cortex of right brain are activated when identify pitch (Zatorre et al., 1998); in contrast, those with short pitch memory, those with relative pitch sense, showed significant activity in the area of the right frontal lobe (Zatorre et al., 1998). In terms of syntactic structure processing, the existing research results are inconsistent. Some researchers believe that absolute pitch sense is not conducive to tonality perception (Miyazaki, 1995); however, some researchers have proved (Jiang Cunmei et al., 2010) that people with absolute pitch sense have advantages in pitch relation recognition of tonal music; some scholars believe that people with multiple pitch senses have more advantages in tonal perception. Schlaug, Jancke, Huang and Steinmetz (1995) studied the brain structure of absolute pitch sense, and the results showed that the brain structure of musicians with absolute pitch sense was different from that of ordinary people.

Absolute pitch memory is related to the critical period of language acquisition. According to the investigation of musicians, it is found that absolute pitch sense is usually formed when children started musical training before 6 years old. The results of studying brain injury patients also show that the key period of language acquisition is before the age of 7.

The experiment of Deutsch, Henthorn and Dolson (2004) studied the tone language users in the process of speech processing, and showed that the subjects had absolute pitch sense, and the memory representation of tone language users and non tone language users are different in nature. The research of Deutsch et al. (2004) shows that the proportion of absolute pitch sense in tonal language (Vietnamese, Chinese) countries is higher than that in non tonal language (English) countries. Lenneberg (1967) pointed out that the acquisition of pronunciation and language in critical period is different from the acquisition of absolute pitch sense in the way and nature of second language acquisition of adults and children. Second language acquisition in adulthood requires hard training.

### 1.2 Influence factors

The influence factors of absolute pitch mainly include the starting age of early music education, the types of learning instruments, the types of mother tongue, teaching methods, etc.. Sergeant (1969) investigated 2717 students and found that the average age of those with AP ability to receive music education was 5.4 years old, while those without AP ability was 7.9 years old. A survey of more than 2000 students and musicians in music education colleges shows that many professional musicians have started early music education before the age of 7. More than half of them have absolute pitch. Baharloo et al. (1998) surveyed more than 600 musicians. The results showed that 72 of them received music education before the age of 4, and 40% had absolute pitch sense; 160 people aged 4-6 received music training, and 27% had absolute pitch sense; 161 people started to learn music between the age of 6-9, and 8% of them had absolute sense of sound; among 9-12 years old, 104 people began to learn music, and 4% of them had absolute pitch; 112 people began to receive music education after 12 years old, and 2.7% of them had absolute pitch.

Chinese researchers also have studied the influencing factors of absolute pitch. Li Xiaonuo and Yu Jiakuan (2014) conducted an experimental test on the absolute pitch of music majors, and found that early music education has an important impact on the formation of absolute pitch. In the experiment, the subjects were divided into three groups: the starting age of music training was under 5 years old, the age was between 6-9 years old, and the age was over 10 years old. In the case of allowing and not allowing chromatic error, the statistics showed that the starting age of music training was highly significant when not allowing chromatic error and allowing chromatic error. As the age of the three groups increased, the accuracy rate was gradually decreased.

In the study of pitch memory of music majors, many factors affect their pitch memory.

Researchers have tested music majors through experiments and found that early music education and critical period of language acquisition will affect the formation of absolute pitch memory. In music majors, the memory processing mechanism of the brain regions with absolute pitch sense is active in long-term memory, while that of the brain regions with relative pitch sense is active in working memory.

## 2. Pitch memory of non-musicians

The research on pitch memory of non-musicians is limited to some extent, because non-musicians have not received professional music training, and it is difficult to identify the corresponding relationship between pitch and name. Therefore, in the experiment of pitch memory, researchers test the pitch memory of non-musicians more indirectly, such as the subjects' music preferences, listening habits and so on. The formation of absolute pitch sense of non-musicians is mainly affected by the critical period of language acquisition and the phonetic features of their mother tongue (tonal language and non-tonal language).

Drayna et al. (2001) showed that, compared with musicians, non-musicians could not report any tone or interval, but non-musicians could still recognize familiar melody and pitch level presentation, and could notice that the music is wrong. This proves to some extent that non-musicians have implicit memory of tonal relations. Deutsch (1991) found that even people without music training may have the ability of absolute pitch memory. Levitin (1994) compared the pitch differences between familiar songs sung by non-musicians and the original recorded versions of songs. The study showed that they had absolute pitch memory. Levitin (1996) further found that the subjects also had memory of melody speed.

Alexomanolaki et al. (2007) conducted an experimental study on music memory with advertisements. The average scores of trained musicians and non-musicians were similar, indicating that their overall memory and attention were at the same level before and after the interruption of advertisements among all music conditions. ANOVA shows that music training has a main effect, that is, non-musicians perform better than musicians in this task.

Moreover, some studies have shown that non-musicians may also obtain absolute pitch through months of training, and their performance is almost the same as that of those who obtained absolute pitch through early music training (Stenfors Cecilia et al., 2019). These studies show that some non-musicians can have a long-term memory of pitch in their daily living environment, and can get absolute pitch sense after training.

## Results

Through analyzing the existing studies, absolute pitch sense is not the unique ability of professional musicians, and non-musicians also have such ability, but the measurement methods are not the same. There is a certain relationship between the absolute pitch sense and the starting age of learning music, but it is not that adults can not obtain it. Through a certain period of training, the absolute pitch sense can also be obtained. People with absolute pitch sense are not "absolute", they are influenced by certain culture, and people with absolute pitch sense can also use relative pitch thinking to solve problems.

## Discussion and conclusion

The performance of pitch memory of musicians and non-musicians is different, and they show differences in the level of music education. Early music education, the critical period of language acquisition and the phonetic characteristics of mother tongue all affect the formation of pitch memory. In the research of pitch memory, researchers pay more attention to the pitch memory of musicians, while the research of non-musicians is relatively few. Therefore, in the future experimental research, more attention should be paid to the pitch memory of non-musicians. There are implicit memory research methods to investigate non-musicians, which can provide empirical basis for promoting the pitch memory of non-musicians in music appreciation in primary and secondary schools, singing, solfeggio and other teaching activities of music in colleges and universities.

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SPA-230

## **Guidance and Support Mechanisms for Music Teachers Using ICT Software in Composition Classes**

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### **Abstract**

In 21<sup>st</sup> century society, where the digitalization process is advancing at an ever-greater pace, a new educational aim is for students to develop the ability to express ideas by utilizing Information and Communications Technology (ICT). Currently, an effort is underway in some music departments to design creative activities using ICT technologies.

The purpose of this study is to clarify the important elements in music lessons that teachers must be able to convey to students composing their own music utilizing ICT. Also, it hopes to provide guidance and support for music teachers utilizing ICT in their classrooms.

The authors oversaw a total of 14 hours of “Sound and Composition” classes at O. High School during the 2019 and 2020 school years that utilized various music notation software. “Sibelius” was used in 2019 and “Finale” in 2020. A third software package, “Vocaloid 3” was employed during both school years.

According to the results of a questionnaire given to students after a practice in 2019, about 90% found it fun to compose music with Vocaloid. However, the authors’ response to equipment trouble and knowledgeable support for specific composition procedures was insufficient. Therefore, despite spending about 4 to 5 hours on composing, only one song was completed. In order to have better classroom results, better support mechanisms and teacher training were found to be necessary.

Also, these software programs were used in multiple classes that included students with varying degrees of musical abilities. Furthermore, various students had different proficiencies in various musical instruments, for instance, some students had proficiency in playing the piano while others were skilled in playing the guitar.

As a result of the lessons, teachers were able to bridge these varying skills between students by utilizing the specialized ICT tools. However, while music notation software could assist the students with their compositions to some extent, it became clear that there was a need for specialized support from the teachers. In particular, teachers needed to be able to explain how chords function. Further, teachers needed to assist students in the critical analysis of their compositions.

Finally, the authors discovered that asking students to join melody with lyrics required advanced skills that could not be enhanced by ICT software. The authors believe that assistance from Japanese language teachers with an understanding of various kinds of poetry, meaning and intonation may be needed.

*Keywords:* ICT software, “1 device for 1 student”, “Sound and Composition”, Vocaloid (ICT), guidance and support.

### **Introduction**

According to an analysis by the Programme for International Student Assessment (PISA 2018), among member countries of the Organization for Economic Co-operation and Development (OECD), when it comes to utilizing Information and Communications Technology (ICT) at the school level, Japan ranks last. However, by a large margin, Japanese students rank number one when totaling the hours spent in internet chatrooms or playing online games.

The study shows Japanese students have the abilities and opportunities to use ICT at a private level, but, in most cases, not at the school level. Ogawa (2014), who analyzed PISA’s

results, stated that, compared to teachers in other countries, most Japanese school teachers do not have the skills required to manage ICT. Her study revealed that veteran teachers in other countries, due to continuous support from their governments, their schools or other sources, generally have higher ICT skills. Because of this, the authors concluded that teachers in Japan needed continuous support and guidance throughout their careers in order for them to acquire and maintain the technological skills needed to help students.

To try and mitigate this problem, officials at MEXT (Ministry of Education, Culture, Sports, Science and Technology) proposed '1 device for 1 student. (MEXT 2021a). This is a plan that covered the costs of providing all public schools in Japan with ICT equipment. The government originally had scheduled it to be implemented by 2023. However, because of the Coronavirus (Covid-19) pandemic, MEXT decided to advance the plan's implementation to the end of 2020 (MEXT 2021b).

MEXT wants to promote ICT education for all subjects, including music. However, Horita (2014) pointed out that Japanese music classes now rank last among all subjects in the utilization of ICT equipment and software. Further, he stated that more practical research would be required to bring Japanese music departments up to date. Therefore, the authors believe it is an urgent task for music teachers to learn how to utilize ICT in music classrooms.

According to Hirata (2019), the author of a major text book for music teachers used in most teacher training courses throughout Japan, ICT in music classes is best used for creative music activities. Further, Makabe (2016) states that one advantage of using ICT could be the elimination of the need for the teaching of reading music and of learning musical grammar, which, in turn, could allow teachers and students to focus more on creative activities.

Because of the urgency of this new requirement, the authors began researching how to include ICT in a high school music classroom setting at "O" High School in Tokyo. Guided by Hirata's and Makabe's observations, with further suggestions by the head music teacher at the high school, one of the authors proposed a study that she hoped would provide guidance and support for music teachers utilizing ICT in their classrooms. Her study would also try to clarify the important elements a teacher would need to convey in a music composition class containing students of varying abilities.

## **Methodology of the Study**

### **1. About "Sound and Composition" Class at "O" High School in Tokyo**

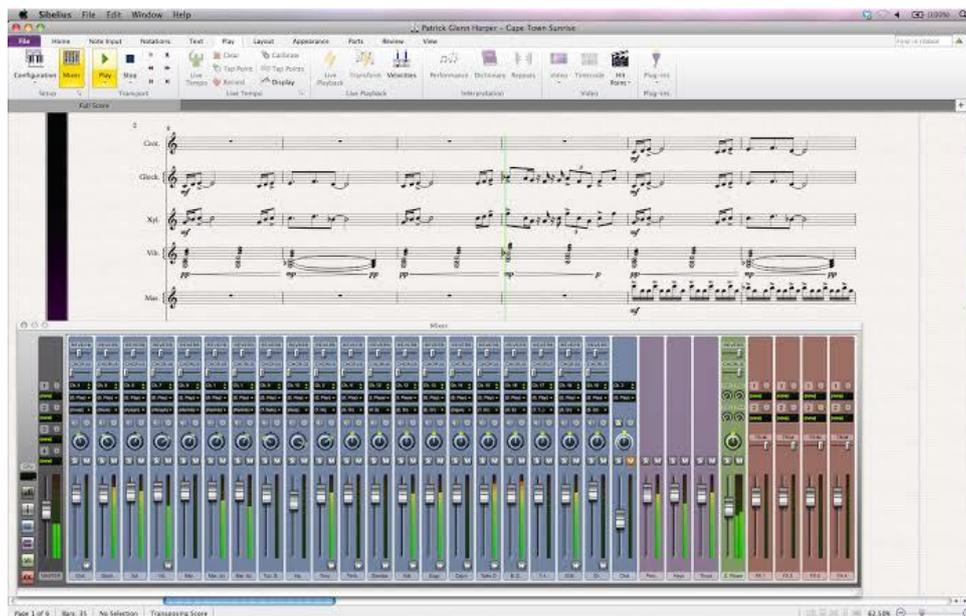
An expression activity using ICT called "Melody Creation Guidance" was implemented during the elective subject, "Sound and Composition" at "O" High School in Tokyo. The main ICT used in this class was part of the Vocaloid series, a group of software applications that use voice synthesizer technology.

The following is a brief description of this class:

- Each student composed music using a computer.
- The class used the "Vocaloid 3" software released in September of 2013.
- The class included 19 students in 2019 and 18 students in 2020.
- Many of the students had previous experience with musical instruments such as the piano and the guitar.
- This class targeted senior high school students.

### **2. Reasons for Utilizing Vocaloid**

While students in "O" High School's "Sound and Composition" classes had experience using other ICT software, the 2019 class used a "Sibelius" software package and the 2020 class used a "Finale" software package, these software packages were not used in the authors' "Melody and Creation Guidance" activities. These software assist users in making sheet music for choral and brass band groups. However, because music notation software requires previous musical experience to be fully utilized, they proved problematic for students whose ability to read music was underdeveloped.



**Figure 1. Main Interface of “Sibelius” (Sibelius 2011)**

**Though this software is useful for students who can read musical scores well  
However, it requires the high-level ability to read musical scores.**

Because of these limitations, the teacher in charge of the class expressed his desire to utilize a different software that would expand the range of compositional options available to students. Many of his students were familiar with songs, such as those of Hatsune Miku, a Vocaloid software voicebank character developed by Crypton Future Media, which were composed using Vocaloid software. Because of this, the students requested that the teacher use this software.

When researching if it would be possible to obtain this software, the teacher discovered that Vocaloid 3 was already installed on the school computers. Although it had never been utilized before at this high school, one of the authors hypothesized that it would increase students’ knowledge of composition and increase their skill levels to express musical ideas through active participation.



**Figure 2. Main Interface of “Vocaloid 3” (Vocalod 3 2013)**

**Students can input sounds as blocks. This allows users to create compositions  
intuitively, even if unable to read musical scores.**

### **3. The 2019 “Sound and Composition” Lessons**

In 2019, one of the authors, when she was a first-year graduate student, decided one of the subject goals for music composition class students would be to “familiarizing themselves with the creation of melodies using Vocaloid 3”. Another goal, she decided, would be “acquiring the skills for composition by utilizing techniques such as pattern repetition, melody changes, and stylistic contrast”, all basic music elements.

With six hours of class time allotted, she planned for the following activities:

1. Students would listen to an explanation of the Vocaloid 3 controls.
2. The teacher would guide the students in the use of the Vocaloid 3 interface.
3. The students would learn to utilize Vocaloid 3 to understand and enter musical intervals.
4. Students would present and evaluate their own compositions, which would be limited to a 4/4 time signature and eight bars.

Because of complications, the original plan to teach the class in a total of six hours was determined to be inadequate for the completion of the goals. To compensate, the activity time was increased to eight hours.

### **4. 2019 Practice Lessons: Thoughts and Issues**

- From the results of performance evaluations given the students during the lessons, as well as the results of a written questionnaire given to the students after the completion of the class, the author found that 90% of students enjoyed composing with Vocaloid 3.
- On the other hand, the author and instructor experienced technical difficulties. These included problems with the importation of the various students’ accompaniment sound sources as well as the combination of the various student compositions into one thematic work. Because of this experience, the time needed to complete the class had to be extended. The author concluded that future class plans may require more time for software familiarization.
- Because some students did not have the prerequisite knowledge to distinguish between chords and non-harmonic tones, this caused some of them to give up on matching the accompaniment sound source with a melody. In addition, seven among 19 students used what the instructor deemed to be an unsuitably frequent use of non-harmonic tones with a lack of tonal feeling. Because of this, the author believed that future lesson plans would need to take these issues into consideration.
- All the students took four to five hours to finish one song, a task which the author believed should have been completed faster. The author suggested that this issue should be addressed in future lesson plans.

### **5. The 2020 “Sound and Composition” Lessons**

Using the 2019 academic year lesson plan as a model, one of the authors created a new lesson plan for the 2020 academic year. The goal of the class was, again, to “become familiar with melody creation using Vocaloid 3”, but this year she added the new goal of acquiring “the skills to create a melody along with a secondary melody”.

The new lesson plan was as follows:

1. The teacher would explain how to use the Vocaloid 3 controls and functions.
2. The teacher would explain how to compose sound into music.
3. The students would select and install to Vocaloid 3 an accompaniment sound source by following the instructions in a teacher-provided manual.
4. The students would compose a main melody using Vocaloid 3. Also, the students could choose to add a sub-melody.
5. In the final class, the students would present their own sounds and melodies and evaluate each other’s work. The time for completing the lesson plan was set at 6 hours.

Reflecting on the mistakes from 2019, two new aspects regarding student support were added. First, to ensure the students had a better understanding of music theory, an explanation titled “How to Compose Sound into Music” was introduced. Various worksheets explaining tones and harmonies were also added.

After introductory explanations, the instructor used a piano to explain the following musical theories:

- How transition sounds, embroidery sounds, and phrase repetitions are incorporated into a song.
- How to create a song with tonal feeling using a melody centered on chord tones.
- How to use non-harmonic tones and to consider whether they should correspond to transitional tones, passing tones, or embroidery tones.

By teaching these theories, all students were able to learn how to compose songs with a sense of tonality. To make certain the mistakes of the 2019 lesson plan were not repeated in 2020, the instructor also devised various technical supports for the students in hopes of improving outcomes. Because of these changes, the authors noted that none of the 18 students used non-harmonic tones in a way the teacher deemed unsuitable.

Also, in 2020, the instructor sought advice from Yamaha Corporation's Smart Education System. Based on their research, the instructor decided to let students experiment with the interface with limited instructions from the teacher. Through student experimentation, previously unused functions, including how add vibrato and echo to their compositions, were discovered.

## **6. 2020 Results and Implications for Future ICT-Centered Lesson Plans**

After completing the 2020 lessons, the author noted the following possible implications for future lesson plans that include ICT components:

- ICT can improve student's overall classroom experience. According to the results of a questionnaire following the end of the class, students stated that they experienced "joy" when composing with Vocaloid 3.
- Through various forms of evaluation, teachers can improve ICT-centered lessons from year to year. Utilizing the experience of the previous year, the instructor had a better understanding of the software and hardware and was prepared to troubleshoot when previously experienced problems occurred.
- Teachers, by better understanding the limitations of ICT equipment, can, when necessary, better utilize his or her knowledge of music theory to improve student outcomes.
- While ICT devices can help students intuitively create music, there are still times when teachers may need to impart their expertise in order help the students understand difficult musical concepts such as how to compositionally incorporate tones.
- Getting advice from the software makers is helpful. They have data available to instructors and often offer support and assistance.

In addition, by making efficient improvements, it was possible for students to achieve more in a shorter amount of time. While the 2019 class needed extra time to complete one assignment, the 2020 class, taking advantage of better time management, was able to compose two songs in two hours. Subsequently, students had more time to modify and improve their submissions in the allotted time.

In the 2020 lesson plan, the authors focused on the two main problems that occurred when using the ICT device in 2019 – "how to capture accompaniment sound sources" and "how to save songs to the ICT device". While in 2019, the instructor explained these two procedures verbally and by using a whiteboard, in 2020, the author in charge of the class created a manual on how to manage these two issues.

Also, in 2020, because it was known in advance that the model of computer used by the students was going to be changed from the third lesson, a section on a "recovery method in case of lost data" was added to the new guidelines. Further, while in 2019, the students used the official manual attached to the Vocaloid 3 software, the authors decided to include instructions for the basic controls of the software as well as tips for troubleshooting to this new manual. It was then distributed to the students.

When creating the manual, its author tried to predict what mistakes might occur and to explain complicated actions using step-by-step photographs with extra notes for actions where

mistakes were known to have happened. By doing this, students would be able to solve complications themselves, saving time throughout the lesson.

The authors believe that these improvements not only allowed the students to concentrate more on their music, but also allowed them more time for experimentation and discovery. They also gave the classroom teacher more time to help the students fully develop their work and achieve better outcomes than in 2019.

## **Discussion**

### **Lyrics and Cross-Curriculum Possibilities**

One problem the authors discovered that ICT was not able to solve was the integration of lyrics with student melodies. The lesson plan focused on melody. However, as part of the music creation process, students were encouraged to think of images that corresponded with their melodies. Some students wanted to translate these images into lyrics. However, the instructors found that they did not have the prerequisite knowledge to assist the students in this endeavor, nor were they able to aid students through the use of the Vocaloid 3 software.

To solve this problem, the authors believe that music teachers may have to form a partnership with teachers of other subjects. Specifically, matching lyrics to melody may require collaboration with a school's Japanese language department. However, this would create a new set of problems, the most important being the challenge of cross-coordination between two different educational departments.

ICT may be able to help, but the use of these devices in school settings in Japan is still in a formative state. In the future, as with the use of ICT, a focus on cross-curricular approaches to education may require much trial and error. Even with the aid of ICT, there will be many constraints, including time management, so guidance and support mechanisms between education officials and educators may be needed.

## **Conclusion**

In Japan, the move towards the realization of an educational ICT environment that is individually optimized for each child has only just begun. Though "1 device for 1 student" is a start, there are still many problems to overcome. Students living in an increasingly digital 21<sup>st</sup>-century society urgently need help to develop their abilities to express their ideas using this technology.

The lessons conducted by the authors in 2019 and 2020 utilized ICT in a way that allowed students with varying musical instrument experience to create songs. However, while it can help bridge the differences in skillsets between students, teachers cannot fully rely on ICT to cover all students' needs. Teachers must include fundamental musical knowledge in their lesson plans if they are to be successful.

In addition, some uses of ICT, such as allowing students to add lyrics to an existing melody, may need more guidance and support or necessitate cross-curricular teamwork to fully enable student abilities. Further, while it is good that the Japanese government recognizes the need for a greater utilization of ICT devices in schools, more cooperation between government agencies, the software and hardware makers and educators may be required if these devices are to be used to their fullest extent.

As the study by these authors shows, in the future, a deep knowledge of the subject, proper lesson planning, and a critical review of results will be necessary if ICT is to be successfully integrated into Japanese schools. Further, activities must reflect the thoughts and intentions of students and their learning environment must include up-to-date technology and communication networks.

Finally, when available, children should not see ICT as a technology they only use at home or in their free time. If they are to receive the full benefits of this technology, it must be utilized more in their classrooms. No longer can Japan afford to be last in the world.

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## **A Study on the Difference between the Teaching Process of Gongche Notation and Staff**

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### **Abstract**

The Gongche notation is one of the most popular notation in Chinese traditional music. During Ming and Qing dynasties, Gongche notation was widely used in many folk music genres. However, since early 20<sup>th</sup> century, five-line staff was used in school music education in China. Which is also the enlightenment with western music knowledge.

This paper explored the difference between the learning process of the Gongche notation and the staff, so as to find a more effective teaching method for learning Gongche notation. The research takes the learning process of Gongche notation in Hebei Province Ritual Associations and North Gaoluo Village Primary School in Laishui County as the research object, combining with the existing Gongche notation examples and actual musical instrument performance, compares the learning process of Gongche notation with that of staff. It is found that there are obvious differences in teaching methods, teaching materials, content, music selection and students' mastery. Through this research, the paper discusses whether a scientific and rigorous music teaching system can be formed in the teaching of Gongche notation, which not only provides convenience for the popularization and learning of Gongche notation, but also provides greater possibility and operability for traditional music into the classroom.

*Keywords:* Hebei Province Ritual Associations, Gongche notation, staff, rhyme singing, music teaching

### **Introduction**

Since the establishment of school music education, the main content of music education in China, whether it is professional music colleges or general basic music education, is to learn western music knowledge. Five-line staff was used in school music education in China. Gongche notation is a traditional notation in China, which originated in Tang and Song Dynasties and prevailed in Ming and Qing Dynasties. In modern times, With the introduction of staff and numbered musical notation, their concise, precise and rigorous characteristics have been accepted by a large number of scholars, and introduced into chinese music education. The complicated and fuzzy Gongche notation gradually faded out of people's vision and was limited to a small number of folk music. In order to find out the causes of this phenomenon, the author searched the relevant literature and found that there are significant differences between staff and Gongche notation in the teaching process, except for the different ways of recording.

In China, there are mainly two ways for primary school students to learn the staff, one is the school music class staff learning, the other is the extracurricular music training class staff learning. After reading the staff has been involcluded in the primary school music curriculum standards, how to make primary school students staff learning the staff more interesting and vivid has become a hot topic in primary school music education. At present, in music teaching, teachers often use Kodaly teaching method, Dalcroze teaching method, Orff teaching method (referred to as "three teaching methods") to help students learn the position and name of notes, beat, rhythm, key, clef and so on. In addition, teachers also create a series of music games in teaching, such as "color pony"<sup>1</sup>, "five finger notes recognition method"<sup>2</sup>, "music children" to help students better understand and recognize. In the extra-curricular training class, teachers will use targeted teaching materials to help students understand the staff,

such as "John Thompson's Easiest Piano Course", "Hanon Piano Fingering", "Basic Piano Course Of Beyer" and so on, in which there will be basic knowledge of staff. Moreover, since 2018, it has been required that the examination of basic music knowledge should be added in the national music grade examination. When students learn instruments, they will also take the music based course to learn the staff, which greatly strengthens the popularization and promotion of staff.

In recent years, with the protection of Intangible Cultural Heritage promoted in the country, as well as the "protection of traditional music culture", "folk music into the classroom" and other ideas put forward and implemented, Chinese folk music gradually attracted the attention of educators, and introduced it into the music classroom and teaching materials. However, due to the difficulty in learning and using folk music scores and the lack of relevant knowledge of music teachers, Chinese traditional music notation, such as Gongche notation, Jianzi notation and Lülü notation, are seldom used in the classroom, and rarely used in the classroom practice teaching, which also brings difficulties for the promotion of "carrying forward traditional music culture" and "inheriting folk music" in music education.

This study is based on the background of "intangible cultural heritage into the campus" - the activity of "inheriting intangible cultural heritage Gaoluo ancient music" carried out by North Gaoluo Village Primary School, and takes Gongche notation learning in the process of inheritance as the research object. Combined with the Gongche notation examples used by the school and the actual instrument performance, through observing the learning process of ancient music in North Gaoluo Village Primary School, This paper studies the learning process of Gongche notation teaching and learning, and discusses whether the current school teaching mode is different from the original apprenticeship teaching mode? As a traditional notation in China, is it different from the learning process of Western staff? What's the difference? Can the learning process of the two notation methods learn from each other? And so on. Therefore, the author of the North Gaoluo Village Primary School field investigation and analysis, through the comparison of Gongche notation and staff in teaching methods, teaching materials, music selection and other aspects of the difference, try to answer the above questions.

## Methodology

This study adopts the method of investigation. In March 2021, the author went to North Gaoluo Village Primary School to observe the teaching process and interview with inheritors and the headmaster of the school, and through the transcription and analysis of relevant literature, analyzed and studied the learning process of traditional Gongche notation and North Gaoluo Village Primary School.

### 1. Learning traditional Gongche notation

Hebei Province Ritual Associations is a music genres that mainly plays Guanzi(Chinese oboe), Sheng(free-reed mouth-organ) and Bamboo flute, supplemented by China drums, big cymbals, cymbals and Chinese gongs, also known as "Sheng And Guanzi Music In Central Hebei Province". As a form of instrumental music, different from other music genres, the musicians of Ritual Associations always recite the music singing in the form of rhyme score when they first learn the music. When the score is memorized, they can pick up the instrument to play. Gongche notation is gradually accumulated in the process of rhyme singing, instrument learning and instrumental performance. There is no systematic teaching system about Gongche notation in Hebei Province Ritual Associations, but it is acquired by following the master's rhyme singing and playing instruments. At the beginning of rhyme singing, the old master usually starts with the short melody and few rhymed words(the so called akou)<sup>3</sup>, and the words of rhyme singing are directly recognized in the recitation, the master reads a sentence, and the apprentice follows a sentence. Through repeated rhyme singing and correction, he finally recites the melody and engraves it in his heart. After learning to read a few pieces of music, he began to learn instruments. At first, the master

would explain the corresponding notation of each hole of the instrument, after memorizing, he would start to play the music with rhyme. First, he would practice with one sound and one hole, and then he would combine words and sentences to form a piece. In the study of instruments, before each practice of playing a piece of music, the rhyme singing will be carried out first. This process is to get familiar with the score and akou. Only through rhyme singing and practice over and over again can a piece of music be really engraved in the mind. However, due to the particularity of Gongche notation with akou and the fact that the content of rhyme is extracted completely from memory rather than being able to rhyme and sing by looking at the surface of the music score, sometimes the rhyme singing starts from the middle of the music score, and the rhyme can not come out, or the rhyme is completely different when two lines of the same music score are sung.

## 2. Gongche notation study in North Gaoluo Village Primary School

### 2.1 Class

On January 9, 2018, North Gaoluo Village Primary School launched an activity called "inheriting intangible cultural heritage - Gaoluo ancient music" and opened an ancient music lesson, officially starting the study of Sheng and wind music.

The ancient music lesson is divided into Guanzi class, flute class and Sheng class. Each class is divided into three classes. The folk musicians who teach are all the inheritors of intangible cultural heritage in Hebei Province Ritual Associations. There are 131 teaching objects, including 118 students and 13 teachers. In order to thoroughly implement the intention of "running a school with characteristics", principal Li Quanbao advocates that teachers and students learn together. Each teacher must learn a instrument and set an example for students<sup>4</sup>. since its launch in March 2018, three characteristic courses with 40 minutes each have been arranged every Tuesday and Thursday afternoon. Up to now, students can play a total of 7 pieces, including Sheng Guan music tunes "Cui Hua Kai", "Zui Tai Ping", "Qing Tian Ge", "E Lang Zi", "Pi Pa Jing", "Jin Zi Jing" and percussion suite "Fen Die Da Tao".

### 2.2 Learning process

At the beginning of the ancient music lesson, headmaster Li Quanbao compiled a textbook for the course, which not only recorded the Gongche notation score used in the class, but also recorded some basic music theory. However, since the teachers are invited folk musicians, they only know the music of Gongche notation and the learning and playing of musical instruments in ritual associations, but they don't know the basic Western music theory and the theoretical knowledge related to Gongche notation. They feel that the teaching material is not practical and does not fit the actual teaching content, so they put it on hold.

During the formal teaching, the three classes of ancient music lesson are taught in parallel. The students are divided into three stages, the first class of grade 5-6; the second class of grade 3-4; in the third class of grade 2, each class has 40 minutes. Students of different instruments go to different classes to learn. Since one of the biggest characteristics of Hebei Province Ritual Associations is to learn the rhyme singing before practicing instruments, the rhyme singing is mainly used in the first semester of grade 1 to grade 2 of North Gaoluo Village Primary School . The rhyme songs are "Cui Hua Kai" and "Zui Tai Ping". The learning process follows the traditional way of learning, the teacher rhymes a sentence, students learn a sentence, and practice repeatedly until they are familiar with it. In this learning process, the biggest difference from the traditional learning mode is that the score used to learn rhyme and sing is the traditional Gongche notation, which only has the Key notes and beat. Akou is not in the score, so it needs the apprentice to imitate and remember. But the Gongche notation used in the rhyme singing of North Gaoluo Village Primary School is the Gongche notation written by Yan Xizhong, the president of North Gaoluo Village Ritual Associations, according to years of experience in rhyme singing. The score includes all the key notes and akou, and rhythm signature(banyan) is clearly marked, Students only need to learn to rhyme all the words in the score. Although this improvement may violate the

traditional notation method of Hebei Province Ritual Associations, and confuse key notes with akou, it is a simple and efficient learning method in primary school education. Moreover, for school students, it is not a means of making a living, but just a knowledge learning. Therefore, the improved Gongche notation is more suitable for school teaching.

When the students learned rhyme singing, they began to learn Sheng and Guanzi music in the second half of the second year. Whether it's Guanzi teaching, flute teaching or Sheng teaching, it's the teacher who first leads the rhyme to sing Gongche notation. After the Gongche notation is familiar with the rhyme singing, he can find out which hole on instrument the gongche words corresponds to. This process is also a period for students to master the pitch position of Gongche notation. In the process of learning, the teacher constantly demonstrates the corresponding position of a certain sound of the music and the hole on the instrument, and then the students imitate it as it is. When there is a mistake in the fingering, the teacher will correct it, and tell him the correct fingering and pitch. After the fingering of a sentence is familiar, he will start to play it. By playing music instruments, the students can deepen the actual sound of the pitch of gongche words, and then compare and overlap with the inner hearing of gongche words when they rhyme. The pitch position of gongche words is thus determined. However, in the observation, we found that when students encounter pitch inaccuracy due to lack of breath, they don't see the teacher to correct him, just say that if they practice more and have enough breath, the pitch will naturally go up.

After students master the basic fingering of instruments, it is the repeated teaching of rhyme singing and practice. In this process, the teaching modes of the three classes are relatively similar, so they don't narrate one by one.

## Result

Although Gongche notation and staff are music scores, there are great differences in the teaching process because of their different nature and status in school education and music use.

Table 1. The learning process of Gongche and staff

	Learning Gongche notation		Learning staff	
	Traditional	Campus	School music class	Instrumental music training class
Step	Rhyme singing→ knowledge	Rhyme singing→ knowledge	Knowledge→ sightsinging	Knowledge→ sightsinging
Teaching method	Rhyme singing; play	Rhyme singing ; play	Three teaching methods;game; formula; sightsinging	Three teaching methods; game;sightsinging+ play
Content	Notes;pitch (partial mastery)	Notes;pitch (partial mastery)	Note;clef;key (two up and two down);rhythm; beat;pitch;interval ;chord;mode;etc	Note;clef;key ; rhythm; beat; pitch;interval; chord;mode;etc
Teaching material	Nothing	Self compiled teaching materials (not practical)	School based teaching materials	"John Thompson's Easiest Piano Course"; "Hanon Piano Fingering"; "Basic Piano Course of Beyer";etc

Selected music	Actual repertoire	Actual repertoire	Nursery rhyme	Nursery rhyme etudes
Characteristic	Oral teaching and feeling with heart	Oral teaching and feeling with heart	Proceed in an orderly way and step by step; scientific and efficient	Proceed in an orderly way and step by step ;theory + practice
Proficiency	Unfamiliar	Unfamiliar	General	Proficiency

It can be seen from the table that there are obvious differences between Gongche notation and staff score in teaching. Gongche notation is the basic knowledge of learning music score in rhyme singing and performance; Staff has a scientific and rigorous teaching mode, through teaching materials, teaching methods and music games to master the basic content of music score, and then sightsinging or performance. Moreover, because Gongche notation is a frame notation, which only records the basic notation and banyan, students only master the Gongche notation and the pitch of some pieces of music, and the knowledge of rhythm, beat and mode can be mastered by combining with specific music and through the "oral instruction" of the old teacher.

In addition, in the 2017 music curriculum standards, reading staff is listed as a compulsory content of music teaching; In 2018, music colleges and universities in China will incorporate the basic knowledge of music into their professional examinations. The implementation of these two regulations has greatly strengthened the popularity and promotion of the staff, making the status of the staff more and more important in chinese music education.

## Conclusions

There are three main reasons for the differences between the above two music scores in the teaching process:

1. The nature of the two music scores is different. Staff is an accurate score with a set of knowledge system with clear logic and careful thinking; Gongche notation is a frame score. The handed down version is only a part of Gongche notation. The most important knowledge is all in the process of "oral teaching that inspires true understanding within", and there is no detailed literature record.

2. The development of the two music scores is different. Since the basic formation of staff in the 15<sup>th</sup> century, its development is a continuous and rising process. As a traditional music score in China, the development of Gongche notation is a process of fault and parabola falling.

3. The degree of attention of music educators and researchers in China is different. Throughout the common music teaching materials and teaching methods in primary and secondary schools, staff is the carrier and focus; the newly established music curriculum standards for primary and secondary schools are based on and focus on reading staff; many of the periodical literature about music education in primary and secondary schools also discuss how to make primary and secondary school students learn the staff better. Although the country is vigorously promoting the promotion of traditional music and inheriting excellent traditional culture, how to promote it? How to inherit? It is still groping and exploring.

## Discussion

By comparing the differences between the teaching process of Gongche notation and staff in China, and combining with the current music education environment and students' music education level, I believe that it is possible to establish a set of scientific, efficient and logical traditional music teaching system from the perspective of modern pedagogy theory. We used Gongche notation when we began to learn foreign music, annotated and explained

it in the form of traditional music; on the contrary, with the rapid renewal of educational concepts, learning traditional music, we can also learn from modern music education methods to study and pass down folk music. Just like the traditional notation method of our country - Gongche notation, from the perspective of history, its inherent ontological form and inheritance way need to be protected and inherited; but from another point of view, if Gongche notation becomes suitable for the modern music culture environment and music education mode, and is understood and studied by more people, it is a better way for the protection and inheritance of Gongche notation. "By other's fault, wise men correct their own". In the 21<sup>st</sup> century, it is a good learning method and coping strategy that learn the contemporary good teaching methods and excellent achievements to carry forward and develop Chinese traditional music culture.

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## **Does Cultural Background Affect Gordon's MAP Performance: A Small Sample Test Report in Wenzhou**

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### **Abstract**

In the 1980s, Edwin Gordon's theory of musicology and Music Aptitude Profile were introduced into China, which had a certain impact on music teaching and artistic quality evaluation in China. However, through literature search, We found that most of the literature in China is about the translation or conceptual interpretation of Gordon's music theory, the number of empirical research papers on Gordon Music Aptitude Profile is rare. Therefore, this study aims to explore the applicability of Music Aptitude Profile in Chinese cultural context and the influencing factors of test results. This research adopts the methods of experiment, semi-structured interview and questionnaire survey. We randomly selected 147 fourth grade students and 140 eighth grade students in Wenzhou. Firstly, they were investigated by questionnaire, and then they were tested by Music Aptitude Profile. In addition, we also interviewed the students and their teachers to understand the students' self cognition of music ability and the teachers' evaluation of their music classroom performance. We want to know whether gender, family background, participation in extracurricular music activities and previous music learning experience will affect the test results, and which factor plays a leading role. The results show that in different cultural contexts, the significant difference of test scores between Chinese and American students is related to grade. Regression analysis showed that grade, weekly time of participating in extracurricular activities, parents' support for music learning and other factors had a positive predictive effect on the total score of the test. The regression equation was  $Y_{\text{(total score of boys)}} = 5.600 * X_{\text{(grade)}} + 1.160 * X_{\text{(extracurricular activity time)}} + 3.849 * X_{\text{(listening to classical music)}} - 0.944 * X_{\text{(earliest contact age)}}$  ( $R^2 = 0.310$ ),  $Y_{\text{(total score of girls)}} = 6.184 * X_{\text{(grade)}} + 1.022 * X_{\text{(extracurricular activity time)}} + 1.539 * X_{\text{(parental support)}}$  ( $R^2 = 0.366$ ). This study can not only make scholars understand the applicability of Gordon Music Aptitude Profile in different cultural contexts, but also provide reference for the evaluation of Chinese art quality education, change the boring and rigid examination mode of rote learning, effectively realize "promoting teaching by evaluation", stimulate students' music creativity and self-identity, and respect each student's individual differences in artistic quality.

**Keywords:** Gordon, Music Aptitude Profile, educational equity, cultural differences, test and evaluation

### **Introduction**

The "Music Aptitude Profile" is a standardized measurement of the potential and capacity of music learners. Its purpose is to measure the differences of individual music ability, encourage the high ability tendency to participate in music activities, take informal and formal music guidance to meet the individual needs of students, and formulate music education plans. The original test consists of melody variation (60 questions), harmony variation (60 questions), rhythm variation (60 questions), balance of melody and rhythm, and sentence. The lowest difficulty level of the test is 58%. The correlation of all test items is between 0.3 and 0.78, and the reliability is between 0.61 and 0.85. The first version of map was formed after eliminating the items that did not meet the standard. The duration of the listening test in this version was 90 minutes, and each part was reduced to 40 questions. The split half reliability coefficient of the five tests was modified by using Spearman Brown

formula, and the reliability coefficient was very close to that of the original version. The second version of map has made great changes in rhythm variation. The reliability of individual questions is not high, but the overall reliability is satisfactory. The third edition of map shortens the preference questions to 24 and the non preference questions to 40, with the reliability between 0.84 and 0.89. The fourth edition of map was published in 1963. It is divided into three parts: Melody image, rhythm image and music feeling. It has seven subtests: melody, harmony, speed, beat, style, balance and sentence. The reliability is about 0.8 and the correlation coefficient is between 0.64 and 0.97. It has been followed up for three years and the results are satisfactory.

The publication of "Gordon music aptitude test" promotes the progress of follow-up research. The author uses ProQuest, sage journals, JSTOR, HowNet, Wanfang and other Chinese and foreign databases to search "Music Aptitude Profile", "music aptitude test" and other keywords, and obtains 269 literatures with a time span from 1965 to 2019, For example, Florence Culver (1965) paid attention to the correlation between map score and teacher rating. The results show that teacher rating indirectly proves the validity of music aptitude test. The correlation between the two depends not only on the test quality, but also on the insight of scoring teachers and group homogeneity, Leon Fosha (1964) tries to explore the influence of formal music teaching on test performance. Researchers believe that students with music training may be misjudged to have higher musical ability, Kelley Henderson (2016) and others found that whole group teaching had a greater impact on test scores than group teaching, Research by Culp (2017), gilleece (2006) and others has focused on the relationship between phonological awareness, language ability and musical aptitude. The results show that the auditory processing skills required for phonological awareness are related to those required for musical understanding.

Among the Chinese literature, Professor Liu Pei's paper "survey and evaluation of music behavior" published in Chinese music in 1988 has been cited for 17 times. This chapter summarizes the history of music measurement and evaluation, and the definition of related terms music capacity, music aptitude, music talent, music intelligence; music behavior measurement division (music aptitude test, music achievement test, music teaching diagnostic test, music attitude test), tested behavior and test methods, as well as the significance of music education. This paper is the earliest published literature directly related to music aptitude test. Jiang Cunmei's review and Reflection on the research of foreign musical ability, published in music research is the most frequently cited book in this field, with a total of 31 citations. This paper reviews the history of music aptitude test and music achievement test, and reflects on three issues The definition of musical ability terms, the composition of musical ability, it is the decisive factor for the development of musical ability. Zhang Shuhui's doctoral thesis "Research on musical ability from the perspective of psychology" has been cited 19 times; In 2005, scholar Wang hang published in people's music the definition of "musical ability tendency" and "musical achievement" -- Thinking from Western musical ability test cited 10 times. In addition, there are Xu Bing's research on Edwin Gordon's teaching theory, Deng Lin's special aptitude test of music intelligence etc.

To sum up, there are many empirical studies using Gordon's "Music Aptitude Profile", and the researchers are mostly concentrated in the United States and the United States, few Asian scholars put it into practice. The author thinks that this may be caused by the lack of research methods of music education and the neglect of music education test. Therefore, the author hopes to apply the Gordon music aptitude test to the assessment of primary and secondary school students' music ability. Through the data analysis of spss24.0, Excel and other software, this paper discusses the possibility of test implementation in different cultural contexts, as well as the factors affecting Chinese students' scores in this test.

## Methodology

### Sample description

In this study, five primary and secondary schools, 3 primary schools and 2 middle schools in Wenzhou were randomly selected, including central urban schools and suburban schools to ensure the fairness of random sampling. The study involved 147 fourth grade students (n=147), eighth grade students 140 (n=140), including 144 boys and 143 girls. The preliminary survey found that 155 students participated in the school music association activities, accounting for 54% (including chorus, orchestra, folk music group, dance team, etc.). The parents of 37 students have had music learning experience, 8 of them are engaged in music related work. 38.0% of parents support music learning, and sign up for music training class, 42.9% support students to learn music, but they do not sign up for music training class, 12.2% of parents do not support students to learn music.

### Test implementation conditions

According to Gordon's Manual of music aptitude test, the three parts of the test (tonal imagery, rhythm imagery and musical sensitivity) should be completed in three days of the same week or in three consecutive / discontinuous weeks. It is not recommended to complete two or three parts of the test in one day, and the test should be played on demand, Otherwise, it will affect the understanding of test direction and the effectiveness of music design. Therefore, the author cooperates with the music teachers of local schools to test each sample school for three weeks. The first week: tonal imagery (50 minutes); the second week: rhythm imagery (50 minutes); the third week : musical sensitivity (50 minutes).

The attitude of teachers and students towards the examination will also affect the accuracy of the test results. Therefore, the author tells the students and teachers the purpose of the test before the test to ensure that each student completes the test in a serious and quiet music class environment, with no more than 50 students in each class. After the test, the students evaluate the seriousness, difficulty and clarity of the test, It is convenient to screen the test samples and inform the test results in a few weeks.

### Score statistics

After the test, each student gets raw score (RS), that is, the total number of correctly answered questions in each subtest. However, the original score is always lack of concise and stable meaning, which depends on the length and difficulty of subtests, resulting in the situation that the original scores of different subtests cannot be compared. Therefore, Gordon used the concepts of standard score (SS) and percentage rank (PR) in his handbook. First, he converted the original score into standard score, and obtained a score table with similar distribution of form, central trend and range, which was convenient to calculate the total test and the total score, The standard score table showed a normal distribution with an average of 50 and a standard deviation of 10. Secondly, percentile grade is used to calculate students' relative status in school or music performance. The conversion of standard score into percentile grade is helpful to compare students' relative scores in seven subtests. After score standardization, the average standard total score of the fourth grade students is 43.3, the average standard total score of the eighth grade students is 49.4, the percentage grade of the fourth grade students is 43, and the percentage grade of the eighth grade students is 50.

## Result

The significant differences in the test results between Chinese and American students

In this study, 287 students' scores were statistically analyzed. After screening out the invalid scores, there were 138 valid scores in grade 4 and 131 valid scores in Grade 8. The average and standard deviation of the standard scores of each grade were obtained. According to this, Chinese students scored the highest in the melody image module, while the fourth grade students scored the lowest in the music feeling module (mean = 42.9,  $P < 0.05$ ), The eighth grade students got the lowest score in rhythm image module (mean = 44.9,  $SD = 7.05$ ). The score of the eighth grade students is generally higher than that of the fourth grade students, and the progress of the music feeling module is the most obvious, which directly reflects the outstanding role of the current classroom music teaching in the cultivation of aesthetic ability. Compared with the average and standard deviation of American students' standard scores in the manual of music aptitude test, except for the eighth grade students whose standard scores of music perception (mean = 52.6,  $SD = 6.78$ ) are slightly higher than those of American students in this age group, the scores of other modules are lower. The reasons may be as follows: First, Chinese students are not familiar with the materials selected in the Gordon music aptitude test; Second, the ability examined by Goldstein's music aptitude test is out of touch with classroom teaching in Chinese context, and deviates from the curriculum goal of compulsory education; Third, there are many test items, students can not maintain a high degree of concentration, a small number of students do not take the test seriously.

Single sample t-test calculates the probability of difference by t-distribution theory. When both the population and the sample are in normal distribution, the deviation statistics of the two are in t-distribution. In this study, Shapiro-Wilk (SW) was used to test the normality of several groups of standard scores, and the Q-Q diagram basically conforms to the normal distribution in the histogram. Because the sample size is less than 2000, Shapiro-Wilk (SW) was used to test the normality of the data, and the results show that the significance of each group of data is greater than 0.05,  $p > 0.05$ , the original hypothesis is not rejected, and the data of each group obey the normal distribution, so the single sample t-test can be used.

The results of single sample t-test showed that except for the score of music feeling in Grade 8 ( $p = 0.264$ ), the rest of the scores were  $p < 0.05$ . There was significant difference between the average score of Chinese students and that of American students. The most significant difference was the standard score of rhythm image ( $t_{\text{grade 4}} = -9.077$ ,  $t_{\text{Grade 8}} = -13.484$ ), It is suggested that the use of Gordon music aptitude test in Chinese context may not be universal. In addition, previous studies also support this view, In the usability of the primary measures of music audition (PMMA) and the intermediate measures of music audition (IMMA) with elementary school students in China, it is mentioned that there are significant differences between the tonal subtest and the rhythm subtest, American students in the first and third grades may have better musical talent. Their hearing ability of tone and rhythm is higher than that of Chinese students in the same grade. Chinese and American sophomores have similar musical talent.

### The influencing factors of Chinese students' test scores

The Sandusky study shows that the scores of the Sandusky study may be related to the participation of music performance team, instrumental and vocal skills, instrumental and vocal learning time, age, intelligence, school achievement, religion, gender, socio-economic status, parents' education There are some correlations between parents' music learning and music preference. Law believes that the influencing factors include the comprehensive music background (MB), general intelligence (GMA), short-term memory (TM) and working memory (WM). The questionnaire in the early stage of Pisa test suggested that the researchers concerned about the factors such as family socio-economic background, emotional attitude, learning time, learning opportunity, teaching methods, teacher-student relationship and so on.

The author investigated the age of the samples, the participation of music associations, the time of extracurricular music activities, the experience of parents' music learning, the support of parents for music learning, music preferences, previous music test experience, music ability self-evaluation and other factors. Pearson correlation analysis results of correlation analysis of the correlation degree of various factors (Table 1) showed that the music learning experience of parents was not related to the test scores, gender ( $r = 0.316^*$ ,  $p < 0.001$ ), grade ( $r = 0.451^*$ ,  $p < 0.001$ ), age of music contact ( $r = -0.216^*$ ,  $p < 0.001$ ), time of extracurricular activities ( $r = 0.296^*$ ,  $p < 0.001$ ), and The support degree of parents for music learning ( $r = 0.304^*$ ,  $p < 0.001$ ) was significantly related to the test scores of Chinese students. The correlation coefficient was ranked as: grade > gender > parents' support for music learning > time of music extracurricular activities > the earliest contact with music age. The types of extracurricular activities of music will also directly affect the test results. Independent sample t test (Table 2) shows that participating in chorus ( $t = 2.468^*$ ,  $p = 0.021$ ), folk music group ( $t = 3.260^*$ ,  $p = 0.02$ ), piano class ( $t = 4.620^*$ ,  $p < 0.001$ ), vocal music class ( $t = 2.170^*$ ,  $p = 0.034$ ) will have a positive impact on the music ability of students. In terms of music preference, students who like to listen to classical music ( $t = 3.124^*$ ,  $p = 0.002$ ) have excellent performance, while other music preferences have no significant impact on the results, indicating that the material style of the test is related to the music preference of the subjects.

Table 1. Correlation analysis

		Gender	Grade	Age of learning	Extracurricula r time	Parents' support	Parents' experience
Test T	r	.170**	.312**	-.226**	.274**	.297**	.059
	Sig.	.005	.000	.000	.000	.000	.335
Test R	r	.348**	.135*	-.137*	.261**	.283**	.093
	Sig.	.000	.027	.024	.000	.000	.127
Test S	r	.284**	.584**	-.158**	.193**	.157*	-.036
	Sig.	.000	.000	.009	.001	.010	.552
Composite	r	.316**	.451**	-.216**	.296**	.304**	.047
	Sig.	.000	.000	.000	.000	.000	.439

N = 269, \* $p < .05$ , \*\* $p < .01$

Table 2. Independent sample t test

	t	Sig.		t	Sig.
choir	2.468*	.021	like listening	3.124**	.002
National Orchestra	3.260*	.022	classical music		
orchestra	.993	.331	like listening	-1.203	.239
Dance class	1.495	.136	national music		
Piano class	4.620**	.000	like listening	.1.821	.071
Vocal class	2.170*	.034	pop music		

N = 269, \*p < .05, \*\*p < .01

In order to further explore the relationship between independent variables and dependent variables, multiple linear regression analysis (MANOVA) was used for continuous dependent variables (test scores), and the independent variables (classified variables) were virtualized. The coding situation was: Grade 1 = grade 4, grade 2 = grade 8; The earliest contact age of music is 1 = before 3 years old, 2 = 3-5 years old, 3 = 5-7 years old, 4 = 7-9 years old and 5 = 9 years old; Weekly extracurricular activities: 0 = no participation, 1 = 1-2 hours, 2 = 2-4 hours, 3 = 4-6 hours, 4 = 6-8 hours, 5 = 8 hours or more; The degree of parents' support for music: 1 = totally no support, 2 = little support, 3 = neither support nor objection, 4 = relatively support, 5 = very support; Participating in chorus: 0 = no, 1 = yes; 0 = no, 1 = yes; Participating in Piano Class 0 = no, 1 = yes; 0 = no, 1 = yes; Like listening to classical music 0 = no, 1 = yes.

Two kinds of multiple linear regression models (OLS) were established according to gender. The F value of model 1 (male) was 15.628 (p < 0.001). The regression model had significance. The coefficient of variance expansion (VIF) was between 1.023 and 1.054, and there was no multicollinearity among variables (VIF < 5). Finally, four significant variables entered the multiple regression equation, and the multiple correlation coefficient was 0.557, Explain 31.0% of the variance, grade (β= 600, p< 0.001), the time of participating in extracurricular activities every week (β= 160, p= 0. 006). Do you like listening to classical music (β= 849, p = 0. 005) had a positive predictive effect on the total score of the test (β=- 944, p = 0. 041) had a negative predictive effect on the total score, and the other variables were eliminated because they were not significant. The F value of model 2 (female students) was 23.296 (p < 0.001), and the regression model was significant. The coefficient of variance expansion (VIF) was between 1.021 and 1.100, and there was no multicollinearity among variables (VIF < 5). Finally, three significant variables entered the multiple regression equation, and the multiple correlation coefficient was 0.605, which explained 36.6% of the variance (β= 184, p< 0.001), the time of participating in extracurricular activities every week (β= 022, p= 0. 002) (β= 539, p = 0. 006) had a positive predictive effect on the total score of the test. Based on the above analysis, the regression equations of independent variables and dependent variables were obtained:

$$Y_{\text{(total score of boys)}} = 5.600 * X_{\text{(grade)}} + 1.160 * X_{\text{(extracurricular activity time)}} + 3.849 * X_{\text{(listening to classical music)}} - 0.944 * X_{\text{(earliest contact age)}} (R^2 = 0.310),$$

$$Y_{\text{(total score of girls)}} = 6.184 * X_{\text{(grade)}} + 1.022 * X_{\text{(extracurricular activity time)}} + 1.539 * X_{\text{(parental support)}} (R^2 = 0.366)$$

## Discussion or Conclusions

The results show that American students at lower age are more sensitive to tonal subtest, rhythm subtest and music perception subtest. Some researchers have speculated that it is related to the mechanism of different phonological and intonation cultural adaptation in Chinese and English (Ji Y. 2012), In the early stage, children's auditory development was stimulated by three types of preparatory listening: acculturation, imitation and assimilation. The tone and rhythm training mode in China is less applied in China. Listening and appreciation are the main part of classroom teaching. The new curriculum standard takes aesthetic as the core, reducing the requirements for the basic elements of music. This situation is objectively reflected in this study, and the students' voice and sense of force in grade eight has been greatly improved. Due to geographical restrictions, the author failed to find the essential reasons for the differences between Chinese and American students from the differences in music training, cultural adaptation, music classroom activities, music textbooks, etc., which need further study in the future.

This study points out that gender differences, early music education, parental support and extracurricular music activities will affect the test scores of Chinese students. Gender differences will lead to different physical factors, psychological factors, teaching factors and examination factors between the opposite sex (Yang Zhiming, Li Pei, Liu Xiangyi, 2021). Women of the same grade are more precocious than men, with higher self-control, higher self-control and higher thinking ability. The ability of emotion regulation and concentration were significantly better than men, and showed obvious artistic preference. Early music education can help students to show better musical talents and innovative ways of cooperation in the cultural groups of school and peer communication (ilari & young, 2016) , Adults and regional culture shape children's values and self expectations (young, 2009) , social cultural background and cultural sensitivity affect children's music experience (young & Gillen, 2010).

In the family micro system, parents' support model emphasizes parents' behaviors outside formal teaching (such as talking with teachers, signing up for cram school, etc.), which may have cultural differences. For example, parents of Chinese and American students take different measures to support students' learning music, American parents prefer interactive participatory education support, while Chinese parents prefer financial support, which eventually leads to differences in teaching and test results. Music activities inside and outside school are one of the main ways of music education for students. Extracurricular activities derived from music classroom teaching are of great value to students' self cognition, music ability and skills. In the suggestions of curriculum development in the new curriculum standard, it is mentioned that extracurricular art activities are an important part of music curriculum resources, and teachers should bring all kinds of music activities into the work plan, So as to promote the overall development of students' comprehensive music literacy.

The development of Gordon's music aptitude test in order to achieve a more equitable education, the book "music learning order" mentioned that the students with high music aptitude did not reach the level of potential achievement, while the students with low music aptitude received inappropriate education beyond the scope of ability, and there was no more unequal education than the students with different potentials. In China, education equity is the policy guidance and basic theme of education work in recent years. The 2021 government work report requires the development of more equitable and high-quality education, and the construction of an education system with comprehensive training of morality, intelligence, physical education, beauty and labor. Using map test, this study not only compares the differences of music ability between Chinese and American students, but also explores the applicability of different cultural regions based on the existing western tests. It also obtains the relevant data of individual differences of Chinese students' basic music literacy, which provides a theoretical basis for the implementation of personalized teaching in the future, and puts forward more possibilities and innovations for the evaluation of music education.

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## **Flute Air Jet Director: The Teaching Tool for Beginner Flute Students to Produce Quality Tone**

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### **Abstract**

According to physics, the flute tone is produced by blowing the airstream through the small opening mouth-hole to the outer edge of the embouchure hole of the flute. When the airstream is directed against that edge, it will be isolated and cause vortex formation, which is the source of oscillation in the air that helps initiate and sustain the tone production. This physical methodology of tone production on the flute is known as the Edge Tone principle. The utmost importance for flute students is to understand the origin of flute tone and the knowledge to produce a clear, quality tone by directing the airstream at the right angle to strike against the edge.

This study is conducted on research and development (R&D) methodology. The purpose of the study is to develop a teaching tool that helps beginner flute students understand how the flute tone is produced scientifically. The research methodology includes 1) literature reviews for the philosophy of flute making and flute playing 2) interviewing three specialists including flute teacher, flute maker, and flute technician 3) fabricating the teaching tool 4) testing the teaching tool with the three specialists and testing the teaching tool with the beginner flute students 5) collecting and analyzing data using inductive content analysis.

The Flute Air Jet Director is a wooden tool made similarly to the flute head joint with two turbine wheels installed beneath the embouchure hole. The correct airstream angle blown into the Flute Air Jet Director should be isolated by the edge. The separated airstreams will then spin both wheels at the same speed and time, representing the ideal blowing angle to produce a quality tone when blowing the flute. The Flute Air Jet Director can be used by beginner students as a practice tool and by teachers as a monitoring device that help students visualize the tone production in the flute.

*Keywords:* instrumental teaching, flute, teaching tool, tone production, beginner

### **Introduction**

Good tone is one of the most important elements of flute playing. It represents not only the unique sound of the flute but also the identity of the flute players at the same time. However, the tone production on the flute bases on scientific and artistic parts, and there is no one ideal formula of physical actions to get a good tone (Toff, 2012). There are some basic qualities of the good tone shared by all flute players as the general goals such as fullness, round, focused, resonated, projected, or should have the rich overtones in the sound (Toff, 2012; Seed, 2018). Therefore, to achieve a good tone on the flute, it is important to understand the scientific part and artistic part of the tone production on the flute first.

In the scientific perspective, the tone production on flute concerns about physics of sound in an acoustical phenomenon. According to physics, the tone production on the flute is known as the edge tone that can be created by coupling a slit, an edge, an airstream, and a tube (Harrison, 1982; Toff, 2012; Nave, 2017). When the air is blown through the small opening hole on the mouth or the slit, this fast-moving airstream will move through the air around the mouth. The resistance of the air from this phenomenon will form the vortices that cause the undulating path in the same direction of the fast-moving air stream. This undulation can produce a sound equal to whistling (Nave, 2017). A greater amount of sound can be produced when combined this process with an edge. When the airstream is directed against

that edge, it will be isolated and cause vortex formation, which is the source of oscillation in the air that helps initiate and sustain the tone production (Harrison, 1982; Nave, 2017). This will then transform into the vibration which resonates according to the length of the tube. This edge tone is the physical methodology of tone production on pipe organs, fifes, recorders, and also many types of flutes from the past (Harrison, 1982; Grove, Sadie, & Tyrrell, 2001). Accordingly, directing the airstream at the right angle to strike against the edge is vital to produce quality sound on the flute.

In the artistic perspective, as mentioned above that there is no one ideal formula to get a good tone on the flute, the pedagogy of the flute tone is inconsistent due to the lack of quantitative tools that empirically show the tone production of the flute. Flutists usually rely on qualitative preference in the form of imprecise verbal description. Many professional flutists and flute experts have shared their variety of techniques to achieve a good tone on flute. Theobald Böhm (1964) suggested that flutists should know about the origin of the flute tone to achieve a good tone. Taffanel and Gaubert suggested using lips to control the angle of the airstream to get the good tone in each note, while Marcel Moyce encouraged using the jaw to support the lips action (Toff, 2012). William Bennet shared his idea regarding the topic that the tone should have rich overtones in the sound. Flutists need to find the right angle of the air to get the richest overtones in their sound (Seed, 2018). Trevor Wye's flute method suggested that flutists should not raise the angle of the air too high because the tone will then be thin. Michel Debost (2010) mentioned in his flute method that each flutist has one ideal angle of attack to create the best flute tone, which is the same for all registers. Debost also said that this average position should go through the whole range of the flute without using the jaw or facial gymnastics. In addition, Quantz (1985), a great flutist in the Baroque era, and Stokes & Condon (2001) had the same opinion as Michel Debost about one ideal angle attack. The ideal angle attack of Quantz and Stokes & Condon, which can create the best tone on flute, is the angle where the air stream is struck against the edge and divided into two equal parts. From the techniques of the professional flutists, everyone focuses on the importance of the air stream. There are different methods but the same goal is to produce a quality tone on the flute. Thus, flutists can try and choose those that work well for them (Toff, 2012).

In the researcher's opinion, the tone production on the flute is a combination of the scientific and artistic aspects. Thus, it is essential to choose the appropriate techniques of the professional flutists that are based on the scientific part mentioned above. The ideal angle attack divided into two equal parts after hitting the outer edge (Quantz & Reilly, 1985; Stokes & Condon, 2001; Debost, 2010) and comprehension on knowledge about the origin of the flute tone (Böhm, 1964) will be the basic idea of the tone production on the flute.



Figure 1. The ideal angle attack of the air

(Quantz & Reilly, 1985; Stokes & Condon, 2001; Debost, 2010)

The utmost importance for flute students is to understand the origin of flute tone and the knowledge to produce a clear, quality tone by directing the airstream at the right angle to strike against the edge. However, almost all beginner flute students don't understand this

process of tone production causing tone problems while playing the flute such as they can't make the sound or have bad tone quality. This problem comes to some bad habits in flute playing for achieving the good tone like pinching the mouth, changing the different embouchure all the time, forcing the mouth too extreme or using too much amount of the air while blowing. All these habits are misconceptions from the origin of flute tone that can cause long-term problems in flute playing in the future. Flute teachers usually fix them depend on each situation, but the main solution is to point out how the flute sound to make them clearly understand this process.

There are some studies and teaching tools regarding tone production on the flute. Wilcocks (2006) studies how to improve tone production on the flute concerning embouchure, lip flexibility, vibrato, and tone color. The angle of the air and knowledge on how the flute tone is produced are the important topics in the embouchure part. Heller, Ruiz, & Borchers (2017) creates a teaching tool called "The augmented flute". This supporting tool has sensors in strategic positions according to technique principles and physics of the instrument for making embouchure problems visible through a real-time application. Kathryn Blocki (2012) develops the "Pneumo Pro", the teaching tool that shows the placement of the air stream angle while students are playing the flute. The teacher can observe and correct the angle of the air through this teaching tool. However, this teaching tool doesn't have the outer edge of the head joint. So, it can't show tone production on the flute referring to the physics of sound production.

According to the problems, the researcher has the idea to create the teaching tool to teach beginner flute students to understand the origin of the flute tone by using the scientific method. This teaching tool will help students find the proper angle of the air to produce a quality tone on the flute that they can use to practice along with the real flute head joint.

## **Purpose of the study**

The purpose of the study is to develop a teaching tool that helps beginner flute students understand how the flute tone is produced scientifically

## **Delimitation of the study**

This study focuses on the tone production of the flute from understanding how the flute tone is produced in beginner flute students only.

## **Methodology**

This study was conducted on research and development (R&D) methodology by following these 4 steps:

### **1) Literature reviews**

In this study, the researcher reviewed the literature about the philosophy of flute making and flute playing in both scientific and artistic aspects. The scientific aspect is concerned with the physics of sound production in the flute. The artistic aspect is concerned with the technique to produce flute tone on the flute. The sources for the literature review included the flute methods, books about the aspects of flute making and flute playing, and articles about the acoustical basis of tone production of the flute.

### **2) Interviewing**

The researcher interviewed three specialists including the researcher's flute teacher in Thailand, local flute technician in Thailand, and flute maker of GUO Musical Instruments Company, Mr. Geoffrey Guo, in their aspects and knowledge about flute making and flute playing. The information from the interviews combined with the information from the literature

reviews formed the idea of integrating local materials with the art of flute making to fabricate an ideal teaching tool in the Thai context.

### 3) Fabricating the teaching tool

After the researcher had collected all the information and knowledge needed, the next step was to design and fabricate. The process of fabricating the Flute Air Jet Director had 8 steps:

3.1) Create the head joint tube and lip plate part by lathing the wood in the same shape and scale of real flute head joint, according to Theobald Böhm (1964) in his aspect of flute making.

The researcher chooses rubberwood to make this teaching tool because this light-colored medium-density tropical hardwood is lightweight but strong and able to transform easily. It also has very little shrinkage making it one of the more stable construction materials. Moreover, it can be found in Thailand and the price is affordable.

3.2) Cut the plastic sheet by the laser into a U-curve shape that one leg is straight, and another leg is bend. The magnet is installed at the tip of the straight leg, while two stainless bars are installed at the bent leg to be the spindle of the two turbine wheels.

3.3) Install two turbine wheels to the stainless bars. These two turbine wheels indicate the proper angle of the air stream after hitting the edge and isolated.

3.4) Cut and divide the head joint tube into two parts. The first part length is from the end of the crown side to the left edge of the embouchure hole. The second part length is from the right edge of the embouchure hole to the ending of the head joint.

3.5) At the second part of the head joint on the embouchure hole end cutting, drill one small hole at the center and install a magnetic bar. And under this magnet hole, carve the groove downward to fit the shape of the straight leg of U-curve plastic.

3.6) Assemble two parts of the divided head joint to the lip plate part by gluing. Gap space between the first and second part of the head joint is required equal to the embouchure hole.

3.7) Install the U-curve plastic with two turbine wheels to the groove. The plastic sticks with the head joint tube by magnetic power.

3.8) Lastly, insert two rubber rings to the tuning part of the head joint tube for connecting with the body joint of the real flute.

### 4) Testing the teaching tool

This process had two main sections. First, the researcher tested the Flute Air Jet Director with the three specialists. The researcher had collected comments and feedbacks from the specialists and modified the prototype of the Flute Air Jet Director according to the feedback, especially on the structure of the head joint and the position of the two turbine wheels. Second, the researcher tested this teaching tool with 5 beginner flute students to observe the learning process on understanding the flute tone production and whether this teaching tool helped the beginner flute students produce the good tone on the real flute after experimenting with it.

### 5) Collecting and analyzing data

Collecting the data about the development process of the Flute Air Jet Director included general structure, each stage of the creation, comments from the specialists about developing this teaching tool, instruction on how to use it, and the result from tryouts. Then, the researcher analyzed all data using inductive content analysis and presented the conclusion of the study qualitatively purpose of the study is to develop the teaching tool that helps beginner flute students understand how the flute tone is produced scientifically

## Result

### The teaching tool: Flute Air Jet Director

The Flute Air Jet Director is a wooden tool made similarly to the flute head joint with two turbine wheels installed beneath the embouchure hole. The overall structure is the combination of a lip plate and a solid cylindrical tube divided into two main parts. The first part is the short part of the head joint tube from below the left edge of the embouchure hole to the crown of the flute head joint. The second part is the long part of the head joint tube from below the right edge of the embouchure hole to the end of the tuning part that connects to the body joint. At this second part on the lip plate side, there is a small hole attaching the magnet and the carved groove for assembling the plastic curve with two turbine wheels located and also has the magnet iron at the end of the curve. While working, this plastic curve with two turbine wheels will assemble to the second part by magnetic power. Users can remove the curve part when they do not use this teaching tool that making it easy to store after use. Lastly, two rubber rings are at the opposite end side of the second part for connecting to the body joint of the flute.

### How the Flute Air Jet Director to work

To use the Flute Air Jet Director is like blowing the real flute head joint. The correct airstream angle blown into the Flute Air Jet Director should be isolated by the edge. The separated airstreams will then spin both wheels at the same speed and time, representing the ideal blowing angle to produce a quality tone when blowing the flute. The Flute Air Jet Director can be used by beginner students as a practice tool and by teachers as a monitoring device that help students visualize the tone production in the flute.

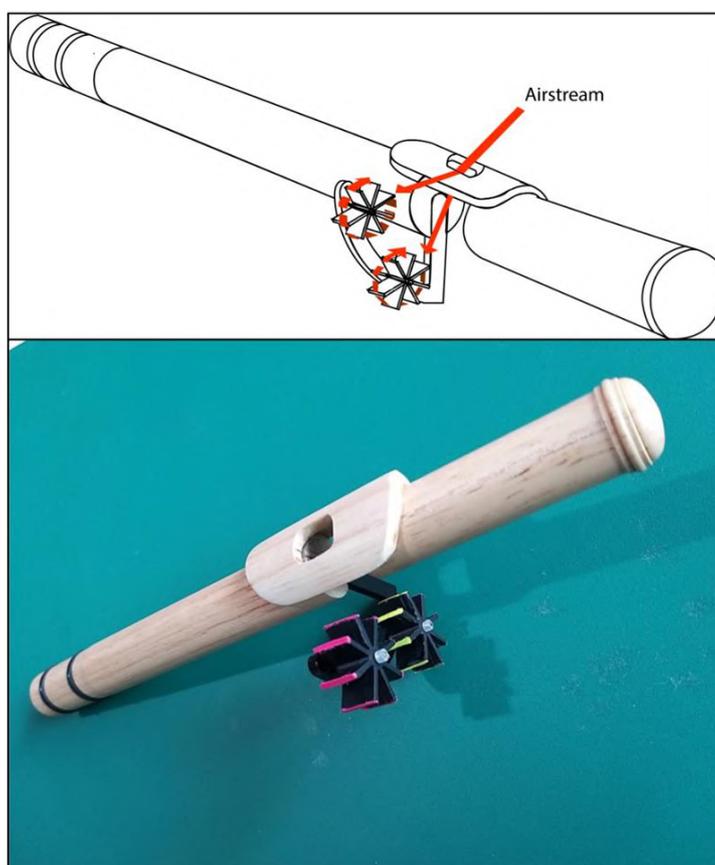


Figure 2. The Flute Air Jet Director and its process.

## **Discussion**

### **The design of the Flute Air Jet Director**

The Flute Air Jet Director is designed to demonstrate the physics of sound production in the flute. As Nave (2017) and Harrison (1982) mentioned that the flute tone is produced by blowing the airstream through the small opening mouth-hole to the outer edge of the embouchure hole of the flute. When the airstream is directed against that edge, it will be isolated and cause vortex formation, which is the source of oscillation in the air that helps initiate and sustain the tone production. The Flute Air Jet Director shows this process; The proper airstream angle is isolated from hitting the outer edge of the embouchure hole, and these separated airstreams will spin both wheels installed beneath the embouchure hole. In addition, the creation of this teaching tool follows the design of the flute head joint by Theobald Böhm (1964), who was the inventor of the flute system we use nowadays, in the thickness of the wall of the blow-hole, the size of the blow-hole and the angle between the sides of the blow-hole and the longitudinal section through the axis of the air column. Therefore, The Flute Air Jet Director will work nearly like the real flute head joint.

### **The angle of the air**

The proper angle of the airstream is very important in tone production on the flute. There is only one proper angle of the air stream that can produce the best tone quality on the flute as Michel Debost (2010) and Sheridan Stokes & Richard Condon (2001) have mentioned in their flute teaching method. However, this proper angle of the air stream is different according to each person and individual due to differences in the shape of the mouth, the size of the mouth, the strength of the muscle around the mouth, and overall face. Thus, each flute students have a different proper angle of the airstream that can produce the best tone quality on the flute, and they have to find it by themselves.

### **Experiment with the beginner flute students**

After the experiment of the Flute Air Jet Director with the beginner flute students, the researcher found that the beginner flute students can produce the good tone on real flute head joint immediately after understanding the production of flute tone as Theobald Böhm (1964) said that "A knowledge of the origin of the tone will be helpful to play the new flute system". However, the placement of the head joint on the lips is different due to the different shapes of the mouths. Therefore, teachers must help students find the proper position of the head joint on the students' lips for the first lesson of the flute. This will help students recognize the feelings of the contact point between lips and the head joint in the right position. After students recognize this position, they will be able to find the proper position to create a quality tone on the flute themselves.

## **Recommendations for the further study**

The researcher recommends modifying the main material to use synthetic polymer instead of woods, to reduce the usage of natural resources.

For the pros and cons, this teaching tool only appropriate for beginner flute students under instruction by teachers. The benefit of students who clearly understand the principle of flute tone production from this teaching tool, they can practice and find the best blowing angle by themselves.

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## **Progress of Young Children's Interactions with Musical Instruments through Free Play**

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### **Abstract**

In recent years, it has been revealed that young children accumulate experiences that are essential for human development through play. Given this theory, development of musical expression with instruments might also be cultivated through children's spontaneous play. However, kindergarten teachers usually teach children how to play instruments through goal-directed skill acquisition activities. Young children's ability to accumulate experiences essential for the development of musical expression through free play with instruments has not been adequately documented. In this study, the progress of young children's interactions with musical instruments during free play was observed to determine any development of musical expression through the spontaneous use of instruments as a result of free play. This longitudinal study involved 3-year-old children in public kindergarten classes who were exposed to musical instruments for the first time. In total, 33 observations were conducted during May 2014–March 2015. In the corner of a classroom, we created a musical instrument section consisting of several types of percussion instruments that the children could freely play with: two djembes, two cajóns, and two bongos. Video recordings and field notes were organized chronologically for analysis. When the children first saw and tried to understand the features the instruments, their interactions were exploratory in nature. After understanding the construction and structure of each instrument, they explored the possible use of the instruments as play tools in interactions with friends. As their relationships with the instruments deepened over time, their interests shifted from object exploration to sound exploration. They associated images with sounds and acquired skills in controlling sound generation. Having examined every aspect of the instruments, tried out the instruments, and accustomed themselves to the instruments, the children's consciousness appeared to gravitate toward a world generated by instruments. They seemed interested in having others watch their performance or in performing with others, which led to further musical expression through the sounds of the instruments. The results showed that the children explored the instruments during free play, and by exploring sounds and testing skills, they came to express their musically generated images with friends. This suggests that young children fully interact with musical instruments during free play and accumulate various experiences essential for the development of musical expression. The findings of this study contribute to deepening understanding about the development of musical expression through the manipulation of instruments and to providing a new view to introducing musical instruments to kindergarten children.

*Keywords:* early childhood, free play, music education, musical expression, musical instruments

### **Introduction**

In recent years, it has become clear that young children accumulate experiences essential for human development through play. Accordingly, development of musical expression with instruments might also be cultivated through children's spontaneous play. However, musical instruments are typically kept on shelves in Japanese kindergartens and are not freely accessible to children. Teachers give instruction on musical instruments in planned activities oriented toward skill acquisition, and it remains unclear whether children are able gain the experience necessary for development through play.

From shortly after birth, humans are equipped with musicality to support communication with others. Called communicative musicality, this music-making sociality has been found in even the youngest children. Conceivably, instrument-based musical expression may also develop through communication with others.

Studies of instrument-based musical expression among children tend to focus on musical ability in order to systematize children's expression from the perspective of creation (Swanwick & Tillman, 1986). Other such studies adopt the perspective of exploration to clarify how individual children build relationships with musical instruments and encounter the culture with which they are associated (Ihara, 2017, 2020). However, few studies have approached children's instrument-based musical expression from the perspective of their involvement with their friends in the context of play.

Previously, I have demonstrated the importance of children's free use of musical instruments. In the present study, the aim was to clarify how children's relationship with musical instruments develops through play in order to ascertain whether the development of musical expression is apparent in their play with musical instruments. Therefore, I considered a kindergarten class in which 3-year-old children first encountered musical instruments. I analyzed how they encountered the instruments and interacted with their friends through them.

## **Methodology**

This study involved 18 children (9 boys and 9 girls) enrolled in a class for 3-year-old children at a public kindergarten in Tokyo, and one female teacher. The field site selection criteria were that the educational content of the kindergarten followed the Japanese Kindergarten Educational Guidelines, and that the school was a public facility open to attendance by children in the general public. The teacher allowed the children to use things according to their own ideas, without restriction, so that they would feel comfortable just as they were. She did not teach them how to play the musical instruments provided for this study.

A total of 33 observation sessions were conducted weekly for approximately 1 year between May 2014 and March 2015. In July, I placed djembes (40 cm tall), cajóns (40 cm tall), and bongos (17 cm tall) in the classroom for the children to freely access. These musical instruments were selected because they are easy for the children to handle, safe, and can be played by hand. Given the aural environment, I provided two of each of the three types of instruments. Video footage of the children's play sessions was recorded between 9:20 a.m. and 10:50 a.m. from May to September. From October to March, the children began to play with the musical instruments after lunch, so video footage was recorded between 12:15 p.m. and 1:00 p.m. While conducting these participant observations to assess how the children engaged in free play, I took comprehensive notes that included observations of the teacher's involvement and the children's surrounding environment. I compiled a record of my observations on the same day. Moreover, I endeavored to understand the flow of play by asking the teacher about the state of the children's play on non-observation days.

Analysis focused on the 27 sessions from July onward, after the musical instruments had been provided. Video recordings and observation records were arranged chronologically for exploratory examination. Characteristic cases were identified and then how the children's involvement with the musical instruments developed through play was examined. Names were expressed in alphabetical notation according to the order in which children appeared in the cases, using lowercase letters to indicate the children who were girls.

This study was approved by the ethics committee of Teikyo Heisei University.

## Observations and Discussion

### Case 1 (July 11)

Before the children arrived at the kindergarten, the teacher laid out all the musical instruments in the center of the classroom. Student a, who was the first to discover the instruments, showed interest in the djembe, which she looked at from the side and picked up before gently tapping it. Although she described the musical instrument as “this thing,” Student B struck the djembe and said “drum,” and Student C heard the sound and said it was a “festival sound.” When the children began to play house, B placed a frying pan on top of the djembe. However, Students a, B, and D sat on the cajóns, or placed other musical instruments on top of the cajóns. When Student E found the hole in the side of the cajón, he stuck his hand in and discovered a bell inside. While playing the bongos with the teacher, Student E described the two drumheads as “a big circle and a small circle.” Student f, who was watching from a distance, approached the bongo and began humming the song “Anpanman Exercise” to herself while striking the drum.

When the children first saw the musical instruments, they imagined the djembe as a stove and the cajón as a platform or chair based on shape. In some cases, they also associated them with musical instruments based on sound. During the play session, the children became familiar with the structure of the cajón and noticed the difference in the size of the bongo drumheads. These musical instruments that the children encountered for the first time were open-ended objects that encompassed a variety of possibilities depending on the children’s interests. Although some children actively tried to engage with the musical instruments and others showed interest but only looked on from a distance, each child became interested in the newly encountered musical instruments and tried to explore and understand the objects’ characteristics in various ways.

### Case 2 (October 3)

Student E, who was the first to finish eating lunch, arranged the cajóns in front of him and to his right and the djembes on his left and behind him, placing the bongos on top of the cajóns. Kneeling upright while turning his body, he struck the various musical instruments in quick succession, striking the instruments to his left and right with both hands at the same time or rubbing their surfaces with his fingers. Thereafter, he placed a chair in the center and sat on it. He sang a snippet from “Jingle Bells” twice while striking a djembe he held in his hands and smiling at the teacher. Student C alternated between striking a bongo, the floor, and a chair. Student g played by rotating an upright djembe with Student h.

The children learned to devise ways of arranging the musical instruments and using them to generate sounds. The djembe produces a more reverberant sound when struck while being held off the floor than while sitting on the floor. Presumably, the children discovered ways to produce reverberant sound through trial and error. The song in Case 1 was elicited by the sound of the bongo, but because Student E sang the song twice with his teacher in mind, it seems likely that the singing here was conscious. The children perceived the musical instruments, chairs, and the floor similarly as objects that produce sounds when struck, and began to explore the possibilities of the various musical instruments as both sound-producing objects and playthings.

### Case 3 (October 24)

The musical instruments in the classroom were taken to the book corner at the end of the corridor. Students B and h both brought djembes and played them while facing each other. When Students i, C, and j brought over a cajón, the three began striking each of the musical instruments while giggling. The bongos were placed on a desk or on the carpet. When Student E passed by and asked them, “What is this place?” Student i answered, “It’s drum town!”

Previously, the children showed a strong desire to monopolize the musical instruments and were rarely observed enjoying making sounds together with their friends. In this case, the children shared in the fun of striking the musical instruments together with their friends. Although the bongos had been placed atop the cajóns up until Case 2, the cajóns were no longer used as platforms, but were instead used as musical instruments. Also, from the words “drum town,” we can infer that the musical instruments were recognized as such. As a result of their various explorations of the musical instruments, the children appeared to turn their interest toward making sounds.

#### Case 4 (November 14)

After Student E struck the djembe and mentioned that it made a different sound when he changed the angle at which he held it, he began thinking of it as “the sound of thunder.” He gathered all the musical instruments in one place and arranged five chairs in a row beside the instruments, then placed stuffed animals on the chairs. Then he added more chairs and asked other children in the room to sit, but none of them did.

Student E seemed to have expanded his inner world in the process of interacting with and exploring the musical instruments, thereby evoking the image of the “sound of thunder” in connection with the sound. Previously, chairs had been used exclusively for performers to sit in, but the chairs began to serve as seating for an audience. The desire of Student E to stage a concert performance using the musical instruments seemed to blossom this day.

#### Case 5 (January 9)

Students a, g, k, and l were playing at being mermaids. The mermaid house was surrounded by musical instruments arranged in a line that was extended by a circle of 10 chairs. When the teacher sat in a chair as a member of the audience, the concert began. Student g played a combination of the bongo and djembe, while Student l played a combination of the bongo and cajón, producing sound by rubbing and striking the instrument with her fingers. Student k danced by spinning around and leaping into the air. Student a pretended to play the violin, using a rolled-up advertisement as a makeshift bow. Finally, Student k brought her hands together in the center, gesturing as though to close a curtain.

In Case 4, the musical instruments were readied, and the seats were arranged, but the concert never started. In the present case, however, it seems likely that when the teacher became an audience member, the girls all shared the idea of staging a performance, whereupon the concert came into being. In this case, each child was attempting to represent her own internal images, so that presumably their awareness gravitated toward a world that was generated using the musical instruments.

#### Case 6 (January 15)

Wielding a cardboard tube for plastic wrap in both hands, Student g struck the djembe with a downward motion, then struck the cajón and djembe with staggered timing. When she heard from Student M that she should not be using the wrapping tube, she said, “But my hands will hurt.” Student M then used a baton made from a rolled-up advertisement to strike the two instruments and said that the djembe made a louder sound than the cajón. When Student M asked Student N to hit the cajón harder to make a louder sound, Student N met the request by bringing his arm down with the wrapping tube onto the drum.

Student g introduced the wrapping tube as a new item and expressed various musical ideas by developing bodily techniques. Given the fact she said that striking with her hands in the same way as when using the wrapping tube would hurt, we can see that the point of using the wrapping tube was to produce a loud sound more easily than with her hands. In his interaction using the rolled-up advertisement to strike the musical instruments, Student M

felt that the loudness of the sound was different depending on the instrument. Student N may have had learned how to use his body to make loud sounds and found a way to control sound while feeding back the sound in his interactions with the instruments.

### Case 7 (January 23)

After striking the cajón all over on both sides, Student i started hitting the striking surface on the side of the instrument, then flipped the cajón over and stood it up again with the striking surface facing up.

Student i's series of actions indicated that she was aware of the cajón's striking surface. It was presumed that she sensed the difference in sound quality between the striking surface and the other surfaces in her frequent interactions with the instrument, so she began to consciously choose the striking surface.

### Case 8 (February 12)

Students M, o, and P gathered the musical instruments and had fun striking the instruments together. Then other children and the teacher gathered round. When Student B started singing the song "100% Courage" he and six others (Students C, j, M, o, P, and Q) all began playing musical instruments. When Student B finished singing, the musical sounds produced by the six students also stopped. When B started singing "Riding on the Bus" the six children sang together, waving their fists in time with the calls, raising their fingers according to the numbers in the lyrics, and miming turning the steering wheel on the bus. Over the course of three repetitions of this performance, the children came up with the rule of striking the musical instruments many times during the song's finale.

The fun atmosphere created by the three children playing the musical instruments brought more children together and led to the subsequent development. Because the sounds of the musical instruments that were played by the six children ended with the conclusion of Student B's song, we can infer that the children were trying to play the musical instruments in time with the song. The children participated in various ways along with the song and came up with the musical idea of striking the musical instruments many times at the end of the song. Presumably, the children's musical idea of wanting to perform in this way arose out of the fun of attuning their feelings and performing together with their friends. According to Saeki (1995), when cultural practice is generated, the tool takes on a transparent aspect and consciousness is focused on a world produced by using the tool. At this point, the musical instruments took on a transparent aspect, and it seems likely that the children's consciousness was focused on their ensemble of the songs that they produced using the musical instruments. We could say that cultural practice was generated as a result of the children using the musical instruments to express their inner musical ideas.

## Conclusion

In the context of a kindergarten class where 3-year-old children encountered musical instruments for the first time, this study sought to clarify how children's relationships with musical instruments develops during play with their friends.

When the children first encountered the musical instruments, they viewed the instruments as open-ended objects encompassing various possibilities. First, the children engaged with the instruments and attempted to explore their characteristics. Once they came to understand the structure and form of the instruments, they gradually began exploring their possibilities as sound-producing objects and playthings in interactions with friends. As their relationship with the instruments deepened, their interests shifted from exploration of the objects to exploration of sounds. The children came to have ideas about sound, and in their play learnt techniques that enabled them to control the sound. They wanted to find an audience for their

performances and to perform together with their friends, and so began to use the sounds they produced on the instruments to express their internal musical ideas.

In this study, the children evidently explored musical instruments through play, and in their exploration of sound and techniques, they expressed their musical ideas together with friends. In play, the children accumulated various experiences that are essential for the development of musical expression. The results further suggest that the development of instrument-based musical expression is also promoted in children's spontaneous play.

This study demonstrates that the children examined the musical instruments from all angles, tried them out, and became accustomed to using them. As a result, the children's consciousness turned toward a world of collaborative musical expression generated by the musical instruments, that is, toward cultural practice. Humans have various forms of expression as cultural practices. It could be said that, as cultural practice, children's participation in musical expression is a matter that cultivates their independence by connecting them with culture and society. If kindergarten is the site that supports this growth, then teachers should play a role in guiding children to musical expression as a form of cultural practice. I believe that teachers need to not only know that children's musical expression develops through spontaneous play, but also understand this path. Rather than aim for perfection from the outset by providing technical instruction, teachers should value the process by which children self-initiate engagement with musical instruments. Such understanding will conceivably engender a change in the situation that prevails in Japanese kindergartens, where musical instruments are not freely accessible to children. I believe that this research succeeds in further clarifying the development of instrument-based musical expression and providing a new way of thinking about how musical instruments can be used in kindergarten instruction in Japan.

In this study, the teacher involved herself in play with the children. However, I was not able to fully investigate how this teacher assistance supported the development of the children's play. To promote musical development in children, teachers will likely need to research the best ways to help students. I hope to investigate this in a future study.

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## **Exploring Teaching Strategies in Music Education for Autistic Students**

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### **Abstract**

What are the music teaching process and the learning experiences for children with autism? Few articles explored that under what circumstances music teachers could relatively easily communicate with students. In this qualitative study, three individual teaching and learning processes and responses of the students with autism have been observed and analyzed with their teacher's recall interviews in a summer school program. Findings show that having joint attention and communication based on the reciprocal understanding between the teacher and the children attracted children's attention. Eight to nine-year-old high-medium functioning students tend to learn and repeat independently, which would help them to recall and build evolving connections of prior knowledge. Pre-set rules and instant evaluation records can lower the risk of having challenges. Reciprocal and appropriate asking and answering can help to chain the learning materials together. Additionally, colors, pictures, and stories help a lot to crystallize the learning goal and process.

*Keywords:* musical interactions, teaching strategies, children with autism, qualitative study

### **Introduction**

What is the effective music teaching process for children with autism? What are their interactions in music learning? The word "autism" originates from the Greek word "autos", which means "self" (Hammel, Hammel, & Hourigan, 2013, p. 1). Leo Kanner (Carter, Davis, Klin, & Volkmar, 2005, p. 312) first used the word in 1943 to describe the behavioral characteristics and mental states of the children who lived in their isolated world and seldom gave a response to the outside world. They often have "social dysfunction" and gave "unusual responses." In their minds, the relationship between people, events and concepts seems to have been congenitally cut off or stopped developing in their early infancy (Hammel et al., 2013, p. 53). With the deepening understanding of autism, researchers have discovered that autism is defined by "a certain set of behaviors and is a 'spectrum disorder', which affects individuals differently and to varying degrees" (Hammel et al., 2013, p. 53). The idiosyncratic nature of the disorder complicates the difficulty in understanding and summarizing the specific characteristics and degree of autism. At the same time, the incidence of autism in children is relatively high. As of March 2014, 1 in 68 children and 1 in 42 boys are children with autism spectrum disorder (ASD) (Christensen et al., 2016). Autism can be diagnosed in early childhood, around 18 months to 3 years old. Behavioral features of ASD include delays in social and communication skills; restrictive, repetitive behaviors, interests or activities; lack of joint attention; and an inability to read facial expressions and body languages (Hammel et al., 2013, p. 3). Meanwhile, the research addressing autism in the cognitive sciences has confirmed the above behavioral characteristics of children with autism. Daniel Geshwind (Alarcón et al., 2008) pointed out that compared with a healthy brain's frontal and temporal lobes, the autistic brain had very little interpretation or expression of DNA in the brain across regions. This leads to weak central coherence in children with ASD. Correspondingly, reflecting on learning behavior, individuals with autism usually give small details, focusing on the local rather than the global aspects of an object or interests (Simpson, Keen, & Lamb, 2013). However, in the field of music education, many teachers experienced that the children with autism they teach have an affinity or a talent for music (Hourigan & Hourigan, 2009). They can respond in a more frequent and appropriate

manner to music than speech and other sound stimuli (Simpson et al., 2013). The existing studies mainly focus on the following three aspects:

- The role of music as an intervention in the treatment of children with autism and their regulation of emotions (e.g., Walworth, 2007);
- The current function of music teaching methods and teaching strategies in children with ASD music learning (e.g., Allen, Hill, & Heaton, 2009);
- Difficulties and reflections on music teaching for children with ASD (e.g., Heaton, 2009).

However, as mentioned above, autism affects children in different aspects and in varying degrees. Most studies, though, employed therapeutic views to analyze children's music activities. Very few articles focus on summarizing ideas from teaching and learning. This reason prompted me to think about the following questions: How does the teaching of music to children with autism proceed? What conditions can be met to successfully communicate with them in the context of music instruction? This study looks for possible answers to these questions from the view of teaching and learning.

Drawing from the problems stated above, the purposes of this study are stated as follows. What kinds of interactions do the three students with autism experience during the process learning music?

1. From the beginning to the end of the class, when, where, to what extent, and under what circumstances do they seek or experience connections with their teacher or peers?
2. What challenges do they experience with their teacher or peers?
3. What is the teacher's perception of each student during the music teaching and learning?

## **Theoretical Framework**

The main concern parents and teachers have for children with ASD is their development of the capability to create relationships among people, concepts, and things. The prerequisite for developing this capability is to have interactions and communications with other people and information. In other words, the priority of my study is to find out and summarize when, how and why the interaction between students with autism and other people or events. Thus, I observed, interviewed and analyzed the teacher, the students and relative phenomena through the lens of social constructivism (Creswell & Poth, 2017, p. 29) as the theoretical framework of this study. Social constructivism (Schertz, Call-Cummings, Horn, Quest, & Law, 2017) is a paradigm that stresses knowing the world through individuals' existing knowledge and the experience of interactions, which implies that subjective meanings are negotiated socially and historically. In the perspective of social constructivism, knowledge is formed through interaction between the learners and the social context. Students are reluctant to change their established schema. When new knowledge challenges their prior knowledge, with the help of their teachers, peers or the environment, the relevant experience in their zone of proximal development will promote learning by helping them to reorganize information into a new schema (Therault & Jones, 2018; Whyte, Smyth, & Scherf, 2015).

## **Definitions of terms**

- Communication: the ability to receive, send, process, and comprehend concepts of verbal, nonverbal, and graphic symbol systems (Heflin & Alaimo, 2007, p. 234).
- Expressive language: being able to put thoughts into words and sentences, in a way that makes sense and is grammatically accurate (Hammel et al., 2013, p. 42).

- Eye contact: to have the children's attention before communicating (Qi, Barton, Collier, Lin, & Montoya, 2015).
- Inattentiveness: stare at one thing and hard to be aroused to switch attention (Hill & Frith, 2003).
- Joint attention: the shared focus of two individuals on an object. It is achieved when one individual alerts another to an object by means of eye gazing, pointing or other verbal or non-verbal indications (Mundy, Kim, McIntyre, Lerro, & Jarrold, 2016).
- Nonverbal communication: communication through sending and receiving wordless cues, including facial expressions, gestures, eye contact, posture, and tone of voice (Hammel et al., 2013, p. 37).

## Methodology

### Research design

This study adopts a qualitative research method. Additionally, as I introduced above, autism is a spectrum, which has varying impact on different individuals. These three purposefully selected children with autism have both the common and comparable features in autism and have diverse but comparable responses in the music course, which can be categorized in the multiple themes. Although the result might be not easy to be generalized, the three cases give us an opportunity to understand the experience of the students with autism regarding learning music through multiple aspects and comparable situations (Creswell & Poth, 2017, p. 144).

### Context

The three individual children with autism's music and communication activities with the help of the teacher in class in the summer 2018 semester included: the types of music interaction between the teacher and each student dyad, the types of responses from the students, the communication with the teacher and their peers, the challenging moments, teaching behavior and strategies, and the change of musicality and behavior. What students learned was a song "I Have a Little Donkey." The instructional goal was to enable students to familiarize themselves with the melody on the piano keyboard accurately. The teacher presented the PRBs (Plastic Resonator Bells, which were tiny seven-color-keyboard detachable glockenspiels) to the students first, and helped them to practice a C centered diatonic scale on the PRB in accordance with what they previously sang. After clarifying the keyboard solfège names and sounds on the PRB, the teacher presents a "color music sheet" to the students. The names of the notes (solfège) were not on the music sheet. Instead, the seven rainbow colors corresponded to seven pitch levels in a diatonic scale on the PRB. Each beat on the music sheet was an equal keyboard sized rectangle. A whole note was represented by four consecutive equal-sized rectangles. After skillful practicing the melody on the PRB with the help of the teacher individually, the teacher encouraged the students to sing in solfège, and then showing them another color music sheet with solfège music notations. Finally, students are encouraged to play the song on the piano keyboard for the teacher and their other two peers. Throughout the process, the teacher instantly recorded the classroom performance of the three children, converted into the final score of the whole class, and rewarded the student with decals or candies in the case of the realization of the teaching goal.

## Focal participants

The participants are eight to nine years old, high- and middle-functioning elementary students with autism in the music education program in a college in Nanjing City, Jiangsu Province, People’s Republic of China (PRC). With the dual permission of teachers and parents, three students were selected as research participants. The researcher is a non-participant observer and interviewer. The whole instructional process was videotaped with the permission of the teacher and parents as well as the approval of IRB. No disruption happened during the class. Findings are summarized from documents, observation, and interviews.

Table 1. Participants’ information

Name	Gender	Age	Grade	Functioning*
Damao	Male	9	2	Medium – High
Doudou	Female	9	2	Medium - High
Domi	Male	8	1	Medium

*\*Functioning: High functioning children are more likely to achieve the expectations of an academic setting, more aware of social conventions, and more likely to be included, with or without support (Craig & Trauner, 2018).*

## Data Collection and Analysis

Data collection includes observations of the class and the recall interviews of the teacher. The course was once a week, from July to August 2018, a total of eight times, 40 minutes each. The classroom is in the rehearsal building at the School of Music. There were blackboards, a piano keyboard, three PRBs, hand drums, and an alto xylophone. Three students could be accommodated in the classroom, while the parents sat in the next glass-window booth so the whole process of teaching and learning could be observed clearly and directly. Parents could also know the students’ performance in class and the students could see their parents when they were looking for a secure base, which gave all of them a sense of security. In order to avoid distracting the students’ attention, I sat in the booth with another teacher as two independent observers behind the parents.

After every class, I conducted recall interviews with the teacher for a few questions, asking him for an understanding of some of the teaching strategies and student responses that were used just now in class, which is centered in his teaching and behavioral goals. For example, after reviewing the video, "Do you think you've achieved your instructional goal today?" or "What do you worry about before teaching them today?" Moreover, on the two Friday afternoons in the last weeks of July and August, I conducted semi-structured interviews based on the fieldnotes and the research questions. For example, "Do you think the learning content is hard or easy to the three students individually?" or "What are the strategies do you think you've just adopted?" The themes of this study were summarized from the research questions above. I and the other observer coded these documents, including the fieldnotes and interviews openly for the themes after "participant check-ins" (Creswell, 2013). In order to minimize the subjectivity, I set my role as a non-participant observer. In order to protect the participants from harm, I assign a pseudonym to each individual student. I conduct member-checking strategies for sharing procedures and analyze the results from different perspectives. The whole process of eight times lessons

were videotaped and transcribed verbatim. They were also segmented into episodes, which varied in length from a single turn to a number of turns (Storch, 2005). Each episode was coded for the kinds of interactions from the teacher, responses from the students, challenges in class and improvements of the students' performance.

## Findings

### Types of interactions from the teacher

From the records of observations and interviews, the communication between teachers and students shows the following characteristics. First, if the teacher encourages students to learn something, he spoke to the students directly. For example, in Damao's moment in learning the song "I Have a Little Donkey," the teacher got his eye contact and said "Nicely done, Damao. The red note (a whole note) [does] have four beats." However, when the teacher issues the order, or when explaining the rules of the music activity, he sang with a *mi-re-dol* melodic pattern, for example, "Listen (*mi*) to (*re*) me (*dol*) now (*dol*)!" Sometimes the effect of behavioral intervention is greater than language intervention. So the teacher usually directly took actions to assist the student (e.g. tapping the beat when Domi was speeding up or ignored the whole note value), or stop students from repetitive behavior (e. g. helping Doudou to switch from one task to another).

### Types of responses from the students

The teacher did not speak slowly, but he always tried to keep the students' attention by asking questions and doing nonverbal communication with them. Accordingly, students usually responded to him actively by three means: 1) exaggerated behaviors (e.g. shouting out the solfège they are learning or high-low notation movements); 2) echolalia or repetition of a specific learning behavior led by the teacher (e.g. practicing the diatonic scale once and once again until they have familiarized themselves with it); 3) trying to describe what they perceive or the story in expressive language (e.g. If you have the little donkey, where are you going to ride it?). Additionally, multiple noticeable communicative moments were discovered in class. For example, Damao would actively ask for a high-five when he was successfully complete a performing task. Doudou was confidently answer the questions but did not make eye contact. And Domi used colors to sing the song rather than the solfège when the teacher asked him to demonstrate to Damao.

### Challenges and improvements

According to observation and video analysis, the first kind of challenge was behavioral challenges, for example, when the teacher was setting the rules of the music tasks, especially when announcing the rewarding policy, the three kids were often trying to challenge it or twist it in another way. To be specific, Damao was used to spitting at any time voluntarily. In order to reduce his spitting behavior, the teacher prepared six pieces of tissue for him and let him know that there were only six times chances to spit in class. But Damao tore each tissue in half to increase his chances of spitting in class. The second kind of challenge was about music learning, for example, tapping the beat steadily. It was a long process to achieve the goal of steady beat tapping in this summer program. There are six times of classes training, many times for each lesson to practice it. Any tiny improvement was recorded on the blackboard in class for each student and would occur gradually, from

the teacher matching the students' tempo, to students being able to follow the teacher's tempo.

### **Discussion and implications**

At first, although the three children have autism, two of them are of medium to high functioning, and one is of medium functioning, which means from the intellectual point of view, they can learn what typical children can learn at the age of eight to nine. It is crucial to know this information. For example, they are more independent than before, more self-reliant, more persistent and patient and reluctant to rely on others. For example, Domi practiced a diatonic scale for 11 times continuously until the teacher said stop. He intended to keep practicing until he can completely play the diatonic scale without any wrong note or stop on his PRB. Similarly, their mood changes were also large. For example, when scoring the students' performance quality in class, Doudou showed a very unhappy look and even lost her temper when she saw that the teacher was strict in scoring. In addition to understanding the general characteristics of children at this age level, special education teachers should also understand each student's own characteristics, including their personality. For example, the teacher told me in the interview that Damao had a habit of spitting. In order to curb this unnecessary behavior, the teacher included scoring his times of spitting in class. This strategy effectively lowered his times of spitting. Therefore, knowing the general characteristics and the personality of the students will help teachers make effective plans and interventions in teaching and learning.

Secondly, in the classroom setting, the teacher first let the students practice the PRB and helped them to establish a connection with the music notes through different colors. At the same time, the music notes on the score were also written in color keyboards. After four classes, when the students were familiar with the relation between colors and pitches, the teacher began to encourage them to sing the melody and tap the beat. Even at the beginning of the rhythm practice, the student couldn't keep up with the teacher's tempo, and the teacher in turn fit in the students' tempo because the principle of the concept "tempo" is even. The goal is to let the students play the music in a steady tempo. When the students are able to sing the melody and play it skillfully on the PRB, the teacher started to lead the students to sing the song in solfège (symbols: *do*, *re*, *mi*). After figuring out the positions of the *do*, *re*, *mi* on the piano keyboard, they were encouraged to move their practice from the PRB to the piano keyboard. Let us review the whole process briefly. The teacher started from labeling the color, to sound, to humming, to playing, to piano keys identification, to practicing on the keyboard. This process can be interpreted from sound to symbols, from what they know to what they don't know. Meanwhile, asking and answering questions about the lyrics and the melodic contours between the teachers and students were seldom interrupted. In other words, the teacher and the students had a long time engaged in joint attention and communication based on the reciprocal understanding. This ensures that even if students had the behavior of echolalia, the teacher could promote the thinking and behavior of the students. During the whole process, animals, cartoon pictures, color, sound, dialogue, humming, and performance were interlaced.

At last, I would like to use music tempo teaching and learning as an example to illustrate how the teacher deals with challenges in this summer program. For students with autism, if there is a gap between the teacher's expectation and what the students can do, the point is not to teach, but to maintain the joint attention between the student-teacher dyads as often and long as possible. Therefore, it is imperative for the teacher to make appropriate adjustments first. In this case, when the student can't keep up with the teacher's tempo, the teacher listened to the student's inner beat, matched the fast and slow, then tapped the stable beats (doing behavior to emphasize the concept of "steady"). When the students

familiarized themselves with the melody, the teacher started to adjust the tempo by speeding up or slowing down.

There are three main limitations in this study. 1. All three students with autism are from one program. Due to the limitation of the number of participants and the single program, this study does not have the diversity of the music experience and communication of the students with autism. 2. Autism is a spectrum syndrome, which affects people in varying ways and in different levels of severity. The result of these three individuals may not be broadly transferable to other individuals situated within contrasting settings. 3. The observation time is limited. Eight weeks observation is not enough to reveal the whole picture of their music learning activity. A design affording prolonged engagement in the field would represent an improvement for future related studies.

## Conclusion

The purpose of this study is to explore the teaching and learning interactions from three children with autism. Under the lens of social constructivism, eight weeks data were collected and analyzed. These findings suggest that it is conditional to make children with autism change in learning behavior. First, to understand the physical and psychological characteristics of students in this age group, it is critical to master the individual degree of autism and the intelligence level of the three students, which is a prerequisite for all teaching plans. Secondly, teachers should adopt a series of strategies in behavior and in multi-sensory teaching to promote the students' music learning behavior organically and completely. Finally, challenges might appear at any time. So how to face the challenge and solve problems is the key to help children's learning, and it is also an important task that every pre-service and in-service teacher in special education has to learn. Future studies may focus on specific strategies for communicating with children with ASD in music classrooms by conducting longitudinal studies longer than eight weeks. It can be one academic year or even longer. Future research questions might include how to get the joint attention, or how to make nonverbal communication more meaningful and observable to the students with autism.

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## Note

1. Pseudonyms are used throughout.

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## **What Is the Role of the Music Department in the Connection Period?: To Smoothly Connect Early Childhood Education and Elementary School Education**

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### **Abstract**

In March 2017, the three laws and regulations related to early childhood education, including the National Curriculum Standard for Kindergarten, and the Elementary School Curriculum Guidelines were revised at the same time. The basic policy states the establishment of consistent learning and support for child development, which includes the connection between early childhood and elementary school educations.

The difference between early childhood and elementary school educations is that early childhood education is a directional goal, elementary school education is an achievement goal, and in contrast to the experience curriculum that emphasizes the life and experience of each individual in early childhood, elementary school is a subject curriculum that emphasizes the academic system. Each education has its own characteristics, and many first graders are confused by the differences and cause maladaptation. Therefore, from the viewpoint of smooth connection from early childhood education to elementary school, the curriculum at the beginning of the first grade was positioned as the Start Curriculum so children could be adapted to school life.

The aim of this study is to clarify the role of the music department in the connection period between early childhood and elementary school educations.

Method used is the examination and consideration of the Elementary School Curriculum Guidelines, and the Start Curriculum prepared by each local government.

In the music textbook used by the first graders, several songs sung in early childhood education are hidden on the spread page so that pupils can search while looking at the pictures. It is devised so that because those are the songs they know, pupils can feel and sing the songs with confidence throughout their bodies leading to smooth start of elementary school learning. The Fukui prefecture's Start Curriculum takes advantage of lower grade characteristics such as the integration of thinking and expression to help pupils make new friends by cross-curricular approach, incorporating singing in activities and experiences in living environment studies, and playing with Japanese nursery rhymes. In other words, for children in the connection period, singing songs not only achieves the goals of the music department, but also has a function which leads to expressing feelings, and by uniting the voices together, uniting the heart with new friends.

The music department plays a role in stabilizing the minds of first grade pupils. Therefore, it can be said that it's important for teachers to be aware of this and teach especially during the connection period.

*Keywords:* smoothly connect early childhood education and elementary school education, music education, start curriculum, five-year-old children's singing,

### **Introduction**

The three government ordinances related to early childhood education, including the Course of Study for Kindergarten, were revised in March 2017, as was the Course of Study for Elementary School. In the revised Course of Study for Elementary School, the basic policy was expressed by the phrase "curriculum open to society." The basic policy calls for

the establishment of consistent learning and support for childhood development, and a link between early childhood education and elementary school education.

Differences between early childhood education and elementary school education include the fact that early childhood education sets forth “directional goals,” whereas elementary school education establishes goals to be achieved. Early childhood education features an experiential curriculum that emphasizes children’s life and experiences, while elementary school education focuses on systematized studies. In early childhood education, a preschool teacher directs the activities of individual children, children and their friends, and children in their small groups in their respective environment and provides comprehensive instructions through play. In elementary schools, education revolves around teaching materials chosen according to the goals and content of subjects for each class and grade. Thus, each system has its own unique characteristics. For this reason, many first graders are perplexed by these differences and have difficulty adjusting. Therefore, from the viewpoint of ensuring smooth transition from early childhood education to elementary school, first-grade curriculums (“start curriculum”) are required to include “integrated and related instructions and the establishment of a flexible time schedule” to help children adapt to school life (MEXT,2017) .

This study clarifies the role of music education in the transitional period between early childhood and elementary school.

## Methodology

On February 10, 2021, based on a case study of five-year-old children’s singing practice for a presentation at a kodomoen child facility in City T, Aichi prefecture, we examined start curriculums listed on the website of the local board of education and selected those that included music classes for analysis.

## Result

### 1. Five-year-old children’s singing practice in preparation for a presentation

When children turn five, the oldest year in early childhood education, they recognize that the presentation in February is their final performance as a preschooler. For this reason, the children work eagerly with their teacher to practice for the presentation.

#### (1) Five-year-old children consciously make themselves heard

The presentation was switched to an online format to prevent the spread of the novel coronavirus. However, a stage was built in the hall as in the case of an in-person event, and a tiered platform was created. A rehearsal was held on February 10 in preparation for the following week’s video shoot.

A total of songs would be sung at the event: Aoi sora ni e o kako (Let us draw a picture in the blue sky) (lyrics: Kazumi Kazuki; music: Hajime Ueshiba), and Tomo dachi wa ii mon da (Friends are good) (lyrics: Tokiko Iwatani; music: Takashi Miki).

#### Scene1 Trying to understand and express the lyrics

At the rehearsal, the children were lined up on the tiered platform feeling nervous. They were all paying attention to the preschool teacher conducting the music. When the prelude began, they moved their bodies gently with the rhythm of the piano. They were full of energy as they sang “Aoi so ra ni ...” and their lively and powerful singing voice spread throughout the hall. At the part where they sang “Ei! Ya!” the children thrust their right hand toward the sky as they shouted “Ya!”

#### Scene 2 Singing with a voice that matches the mood of the song

The second song began with an anacrusis, with the children singing “tomo dachi wa ii mon da” with the cheerful voice of the first song. When they finished singing, another preschool teacher who was watching the practice asked, “How do you think you should sing so that people can understand your feeling?” A girl answered, “We should sing gently.” Then,

another girl moved her body slightly from side to side and said, "Like this." The children once again sang the song encouraged by this teacher. The children sang in a very soft voice for the second time, moving their bodies lightly from side to side to match the song.

## 2. How singing is mentioned in Course of Study for Kindergarten

The 1989 revision to the Course of Study for Kindergarten included a new learning domain called "expression." The domain of expression, as part of "sensitivity and expression," was added to the course based on how preschoolers grow. The main goal is for children to develop a rich sensitivity and the abilities to express themselves by learning how to express their feelings and thoughts in their own way and enrich their creativity.

The second of the three objectives shown here is to "enjoy expressing how they feel and think in their own way." In the domain of expression, there is a reference to singing that says, "familiarize themselves with music and experience the fun of singing, using simple rhythmic instruments." (MEXT,2017)

## 3. The relationship between elementary school education and early childhood education as seen in the Course of Study for Elementary School and the Course of Study for Kindergarten

### (1) Linking the Course of Study for Kindergarten with that of elementary schools

Early childhood education is based on an education conducted through the children's environment. It encourages independent activities of younger children and promotes activities suitable for early childhood. In addition, it is designed in such a way that the goals indicated in the Course of Study for Kindergarten can be achieved comprehensively in accordance with the characteristics of each child's development mainly through instructions in the form of play.

In the Course of Study for Kindergarten, Chapter 1 "General Provisions," Section 3 "Roles of the Curriculum and its Organization, etc.," 5 "Considerations Regarding the Link with Elementary School Education" (2) states: Based on the qualities and abilities nurtured in kindergarten education, to ensure smooth implementation of elementary school education, an opportunity should be created for an exchange of opinions and joint research with elementary school teachers to strive for a smooth connection between kindergarten education and elementary school education by sharing what characteristics children should develop by the end of infancy(MEXT,2017).

### (2) Description in the Course of Study for Elementary School Regarding the Relationship with Early Childhood Education

Chapter 4 of the Living Environment Studies section of the Course of Study for Elementary School, "Creation of instructional plans and the handling of contents, 1 Considerations for creating instructional plans 1 (4)" states: Actively promote the relationship with other subjects, increase the effectiveness of instructions, enhance the overall education in the lower grades, enable smooth transition to education in the middle grades and beyond. In addition, consider the relationship with the characteristics that the children should develop by the end of infancy as indicated in the Course of Study for Kindergarten. In particular, at the beginning of elementary school, make it possible for children to make a smooth transition from comprehensive learning through play in early childhood to learning in other subjects and express themselves proactively and move toward more self-conscious learning. In so doing, create measures to provide integrated and related instructions centered on the living environment studies and set a flexible time schedule. Chapter 4 of the music education section, "Creation of instructional plans and the handling of contents, Considerations for creating instructional plans 1 (6)" states: For the lower grades, based on Chapter 1 General Provisions 2-4 (1), actively promote the relationship with other subjects, increase the effectiveness of instructions, and consider the relationship with the characteristics that children should develop by the end of infancy as indicated by the Course of Study for Kindergarten. In particular, at the beginning of elementary school, create measures to provide integrated and related instructions centered on the living environment studies and

set a flexible time schedule. Chapter 1 General Provisions, 2 “Creation of Educational Curriculum,” 4 “Connection between School Grades (1)” states: Create instructions based on the characteristics that children should develop by the end of infancy to implement educational activities in accordance with the qualities and abilities nurtured based on the Course of Study for Kindergarten so that children can proactively express themselves and go about their learning ...In particular, at the beginning of elementary school, create measures to provide integrated and related instructions centered on the living environment studies and set a flexible time schedule so that what has been nurtured through play as a spontaneous activity in early childhood is smoothly connected to learning in each subject(MEXT,2017).

#### 4. Start curriculum for making friends through play in early childhood

##### (1) Connecting the “ukiuki time” with the music class

“Ukiuki time” is included in the first week of April in Kumamoto City’s start curriculum(Kumamoto,2021). “Ukiuki time” refers to one or two school periods flexibly established to allow children to spend time at school with peace of mind. Specifically, it offers 10 minutes of music, 25 minutes of living environment studies, 20 minutes of penmanship, five minutes of music, and 25 minutes of physical education according to the situation of the children.

The Ukiuki time, a weekly program, says “Let us become friends through songs.” The primary activities for the first day include “(1) Relax and interact with friends. Sing Sa min naga (everyone together) and Oterano oshosan (the priest at the temple).” The activities also feature songs such as Otsukai arisan (errand ants) and Tulip, as well as Zosan no sampo (elephant taking a walk), through which children introduce themselves to one another. There is also an activity in which children tell their name to those next to them and take other children’s hands to play with them. Thus, the activities are mostly centered around songs. On the fourth day, the plan includes the singing of a song that allows children to introduce one another, as well as the signing of Doki doki don ichi nensei (doki doki don first grade), which is frequently sung when children go on an excursion. The children think about how to move their bodies with these songs.

From the second week, the program gradually shifts to textbook-based learning. The children read some of the songs that they used to sing, such as Kagomekagome (a game song in which one player sits blindfolded and tries to identify other players).

#### 5. Start curriculum centering on the living environment studies

##### (1) Start curriculum in Yokohama City

As an example of the start curriculum implemented in April in Yokohama City, (Yokohama,2021) there is a unit of study called Shizen to nakayoshi haru no asobi tai (we are friends with nature, we want to play with the spring). The curriculum states that “We expect that children will look at the nature around them (spring) and observe and play with interest. We make a plan accordingly.” As an integrated teaching plan with music, the unit entitled “Let us sing together” is listed. The curriculum states that, on the fourth day, a teacher catches remarks made by children who found a tulip, and children sing Tulip together.

In the second week, children visit the school library. They are asked to find a book written by the same author who wrote Guri to gura (Guri and Gura) and Iyaiaen (do not want to go to kindergarten), books that they may have enjoyed as preschoolers. They find that Sampo (taking a walk) was written by the same author. They return to their classroom and sing Sampo together.

In addition, as examples of activities that can be used as class subjects by considering the goals of each class subject as they relate to music, the following are listed: hand-motion songs, songs and play that use body expressions (such as children’s songs including Nabe nabe sokonuke, Ocharakahoi, Kagomekagome, Hana ichimonme), rhythmic play (Tebyoushi chimu waku (handclapping teamwork), Pachi pachi rire (handclapping relay), Ueibu o

tsunageyou (Let us connect the waves), Manekko koshin (mimicking march), and Dobutsu utagassen (animal singing contest)).

## (2) Start curriculum in Fukui Prefecture

The start curriculum in Fukui Prefecture (Fukui,2021) incorporates integrated instructions centered on living environment studies not only in April but also throughout the first grade. Accordingly, to clarify the link between early childhood education and childhood education, the curriculum lists 15 items regarding the aims and the learning content of the first grade.

It also identifies the similarities and differences between the two stages in an effort to ensure the continuity of the curriculum. In addition, for preschool teachers and elementary school teachers to discuss children in a concrete manner regarding the characteristics that children should develop by the end of infancy (10 specific characteristics are listed as a “common language” for preschool teachers and elementary school teachers) and create a smooth transition for children, the curriculum lists the developmental process from age zero to age seven, including both the five areas of childcare and the 10 characteristics that the child should develop by the end of infancy, thereby summarizing the growth stages of children in an easy manner.

## Discussion

### 1. Music is the key to linking early childhood education with elementary school education

#### (1) Role of the 10 characteristics that children should develop by the end of infancy

The 2017 revision to the Course of Study for Kindergarten clarified the relationship between the qualities and abilities to be nurtured through kindergarten education and the qualities and abilities to be nurtured through primary and secondary education. In particular, it is of great significance that the contents of the five preschool areas (health, human relations, environment, language, and expression) were organized as the 10 characteristics that children should develop by the end of infancy. The way in which children grow from the end of infancy toward elementary school is expressed through these 10 characteristics.

What is directly related to music education is the 10th characteristic, “rich sensibilities and expressions.” In early childhood education, children’s self-expression is naive. Thus, it is important to affirm children’s expression and their eagerness to express themselves because the desire to express oneself may lead to the desire to learn as school children.

The Course of Study for Elementary School also states that consideration should be given to the characteristics that children should develop by the end of infancy. For these 10 characteristics to function as a “common language” for preschool teachers and elementary school teachers, it is necessary for elementary school teachers to understand the characteristics of younger children who enjoyed the affirmation of preschool teachers.

#### (2) Affirm five-year-old children’s eagerness to express themselves

In kindergartens, nursery schools, and so on, when children gather in the morning in class, they sing morning songs, seasonal songs, lunch songs, and songs for going home. Thus, songs are an important part of their life. There are many occasions throughout the day when children sing with preschool teachers using hand motions. Even so, songs practiced and sung for a presentation like the case discussed herein are very special for the children.

When children reach five years of age, the oldest preschool year, they begin to enjoy the meaning of lyrics and share it with preschool teachers and friends. They also try to sing songs in accordance with the song’s mood. They do not just sing, but also seek to share the feeling with others. The children’s thoughts are directed toward singing, and the fact that they are in a condition in which their bodies are united is emphasized and maintained(Kimura,1988).

The attitude of elementary school teachers who understand and affirm the uplifting music of children in the early years of school helps calm the children’s emotions during the transitional period. They can establish a trusting relationship with the children in this way.

### 2. The role of music education in start curriculums

The start curriculums discussed herein show an attempt to have children adapt to elementary school, have them make friends, and make use of the children's life (play, etc.) and their environment to avoid causing major changes. In music education, consideration is given to ensure that first graders do not feel that the transition from kindergarten, and so on to elementary school is too burdensome. This is shown in the class contents, which feature songs that children enjoyed in their early childhood and songs that are accompanied by hand motions. However, what is important is not only singing songs that children enjoyed during their early childhood, but also whether elementary school teachers show the kind of affirming attitude expressed by preschool teachers. It is the teachers' affirmation of children's eagerness to express themselves that leads to proactive learning by children as they engage in music. Although this eagerness is fundamental to education, it is not mentioned in start curriculums.

## Conclusion

Based on a case study of five-year-old children (the oldest preschool age) practicing singing for a presentation, this study examined the role of music education in the transitional period between early childhood education and elementary school education with a focus on start curriculums. Five-year-old children yearn for the first grade and are eager to study hard when they enter elementary school. They can overcome some difficulty because they are aware that kindergartens and elementary schools are different. However, what puzzles them is the difference in attitude between preschool and elementary school teachers. Preschool teachers are more affirming, and they involve themselves attentively in the life of individual children. If elementary school teachers have the same attitude, first graders will feel more at ease. In a music class, the first subject is singing, which is an important part of life for early children(Eda,2018,chap.3-2). Thus, music may be the most appropriate subject linking early childhood education with elementary school education. Music education plays an important role during this transitional period.

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## Observable Flow Experience in Japanese Children's Interactions with the Violin and the Iconic Grid Instrument

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### Abstract

This study investigated the perceived challenges and observable flow experience in young children's interaction with the violin and the iconic grid instrument. The method adopted a case study approach to capture young children's challenging behavior and flow experience. Participants of the study were 4 children ages from 2 to 4. Children were observed in a total of 4 workshops playing the violin and the technological device. Each session averaged in 60 minutes including free exploration of the instruments. Custodero's Flow Indicators in Musical Activities (FIMA, Custodero, 1989 & 2005) were cited to capture children's flow experiences during workshop activities. Each session was videotaped by using four video cameras to capture events occurring during the children's instrumental playing. Certain portions of video data were selected for further review, and transcribed into verbal and written descriptions. Interpretations of video evidence by caregivers, teachers and practitioner-researchers provided contextual insight into children's flow experiences. The study found that the violin playing facilitated wider range of flow for children of all ages. In contrast, playing of the iconic grid instruments facilitated flow only in younger children in a limited manner. Findings also included interpretations of children's flow experiences to play both traditional and technological instruments, and critical examinations of children's musical play which may suggest implications for future practice.

*Keywords:* flow theory, flow indicators in musical activities (FIMA), instrumental teaching, motivation, technology in music education

### Introduction

Flow is stated as "the experience of complete absorption in the present moment, and the experimental approach to positive psychology that it represents" (Nakamura & Csikszentmihalyi, 2009, p.195), as theorized by Csikszentmihalyi. When children are involved in challenging activities, and there is a balance between an individual's perceived skill and the challenge, they experience flow in a state of optimal enjoyment (Nakamura & Csikszentmihalyi, 2009). Although most of the flow research were applied to adult professionals, Csikszentmihalyi (1990) insisted that children were in flow most of the time.

In the realm of music education, Custodero's flow research focused on in preschool children's music making (Custodero, 1998, 2002a, b, 2003; St. John, 2004; Sullivan, 2004). The flow research has been also expanded to school aged children (Custodero, 2005), middle school beginner string orchestra (Cassie, 2011), and beginner adult singers (Matthews, 2003). Moreover, in Custodero's (2005) study, grounded theory was cited to descriptively analyze children's flow experiences in several naturally occurring music learning settings including Suzuki violin group classes, and Dalcroze group classes. Findings suggests that age related increase in self-assignment and self-correction as well as peer awareness be considered as possible factors to foster children's musical flow. Recently, in the realm of string education, Akutsu (2017) applied Custodero's FIMA, and observed single case of young children's violin playing by citing the flow indicator as a tool for observation.

This study, aside from the violin, implemented another technological instrument called an iconic grid instrument which was specifically designed for the study by Professor Yutaka

Nakanishi of Shujitsu University, and compared children's flow to interact with two different instruments both in free play and structured learning sessions.

## Methodology

Team of researchers previously created the instruments called iconic grid instrument (Nakanishi, Okada, Sutani, and Akutsu, 2017). We used the device to investigate how young children, including severely and multiply disabled children, perceive their challenges to play the instrument. The researchers first installed Digital Audio Workstation software called "Ableton Live 9 Lite" to their Laptop. Next, they collected and put some sound effects and drum loops to Ableton Live, and then connected a grid controller Novation's "LaunchPad Pro" to the Laptop. The grid controller is a kind of MIDI controller, also known as a "pad controller", "matrix controller", or "DJ controller". It is mainly used by DJs when they play the dance music. Moreover, the researchers put the big button to the instrument for young children to be able to play easily. The researcher prepared iconic grid instruments with total of 6 buttons to play Twinkle's melody. Each button would create one of the phrases of the Twinkle Twinkle Little Star which consists of 7 notes. As for violins, the researchers prepared 4 instruments and bow, and prepared them on the floor so that children were able to touch and make sounds on the instrument at any time.

Participants were 4 children ages from 2 to 4, all female by coincident, and their caregivers. In January, 2019, the researchers announced at a kindergarten in Okayama City, Japan, that there would be a free musical session for young children and families to experience the instrumental playing including the technological instruments and the violins. A total of 4 participants applied. The researchers offered a total of 4 sessions to experience the iconic grid instrument and the violin at a room in a university in Japan. The following was the schedule to hold the sessions: March 10, March 17, March 24, April 7 in 2019. The following is the participants with their ages as of March, 2019: Uta (2y3m); Kako (2y7m); Kokomi (3y8m); and Honoka (4y4m).

We used four video cameras to capture each area of the room from different angles, for all sessions. We conducted the systematic behavior observation as a team to know how each child experienced success or failure, with and without adult help, to play both the technological instrument and the violin. In specific, to record children's success and failure, we employed 3-second partial interval recording method. As for flow observation, we applied the analytical procedure that focused on Custodero's (2005) flow indicators, such as self-assignment, self-correction, deliberate gesture, anticipation, expansion, extension and social awareness, video clips were analyzed to capture children's flow experiences.

## Result

Findings of this study illustrated the perceived challenges for each child, ages 2-4 to play the iconic grid instrument and the violins. The study also addressed children's flow experience to play the iconic grid instrument and the violins during the sessions. One of the findings suggested that Uta and Kako, both were under age 3, experienced high challenge to play the technological instrument. On the other hand, for Kokomi and Honoka, above age 3, managed the task with lower challenge. For Uta and Kako, there were many errors and sometimes care givers helped them by holding their hands. For Kokomi, there were some errors, but she managed the task independently. For Honoka, the challenge was too easy: she made a perfect performance without any errors. As the table indicated, she even predicted the next button to press, and prepared way ahead.

Next, to observe children's interaction with the violin and the technological device, we observed a free session for the first time on March 10. During the free session, in fact, there was also free access to the iconic grid instruments; however, no child went for playing the technological instrument or even tried to get closer to the iconic grid instrument. During the free play session on the 10th, children all focused on exploration of the violins. Uta was touching the instrument but almost never had success in her sound making or rhythmic

playing. As for flow indicator, Self-assignment was apparent as Uta always started her activity to play both iconic grid instrument and the violin without any adult assistance. Self-correction and Deliberate Gesture, Anticipation were not observed at all observed. Expansion was somewhat apparent as she added speed of the motion to tap the button or to move the bow. Extension was obvious as she continued to engage with the presented material after the teacher has finished. Social Awareness was clearly observed; however, she denied her mother to help make sound for both instruments. There were observable flow indicators in her playing; however, there was no clear differences between her interaction with iconic grid instrument and the violin.

Kako was touching the instrument and played some rhythm without adult help. As for flow indicators, Self-assignment was obvious in her intense eye gaze and listening in her playing of both instruments. She gave an intense eye gaze to other children learning to play the violin, and she was always standing next to the iconic grid instrument and watching them. Expansion, Deliberate Gesture and Anticipation was not observed. Expansion was apparent only in her violin playing as she added her own challenge to play other strings or add faster bow movement. Extension was not observed. Adult awareness was clearly observed as her mother and father held her hands and gave her verbal cues often to support her playing.

Kokomi was touching the instrument and gradually was able to play the violin without adult help. As for flow, Self-assignment was observable for her violin as she began playing without having adult instruction. Self-correction and Deliberate Gesture were only observable in her violin playing. She carefully placed the bow on her violin strings and tried to match her rhythm with her bow motion. Anticipation and Extension was not observed. Expansion was apparent in her violin playing as she changed her bow motion faster. Social Awareness was observed in her violin playing as she matched her rhythms to other children by watching them.

Honoka was creating the sound on the violin during the free session, and became able to play the violin without adult help. Honoka even added and invented rhythm to play. As for flow, Self-assignment was not visible as she was always called by her mother to take a turn. Self-correction was observed in her violin playing to change the angle of the bow and the placement of the bow. Deliberate Gesture was also apparent only in her violin playing as she carefully placed the bow on the string and listened to the sound of the violin. Anticipation, Expansion and Extension was not observed. Notice, in her free violin playing at the first day, Honoka added more a complex rhythm to her violin playing; however, during and after the session with some instruction, she stopped her playing with unique rhythm. Adult awareness was apparent as her mother always called her to participate in the activities.

Figure 1 indicates children's violin playing session to observe the behavior by employing partial interval recording.

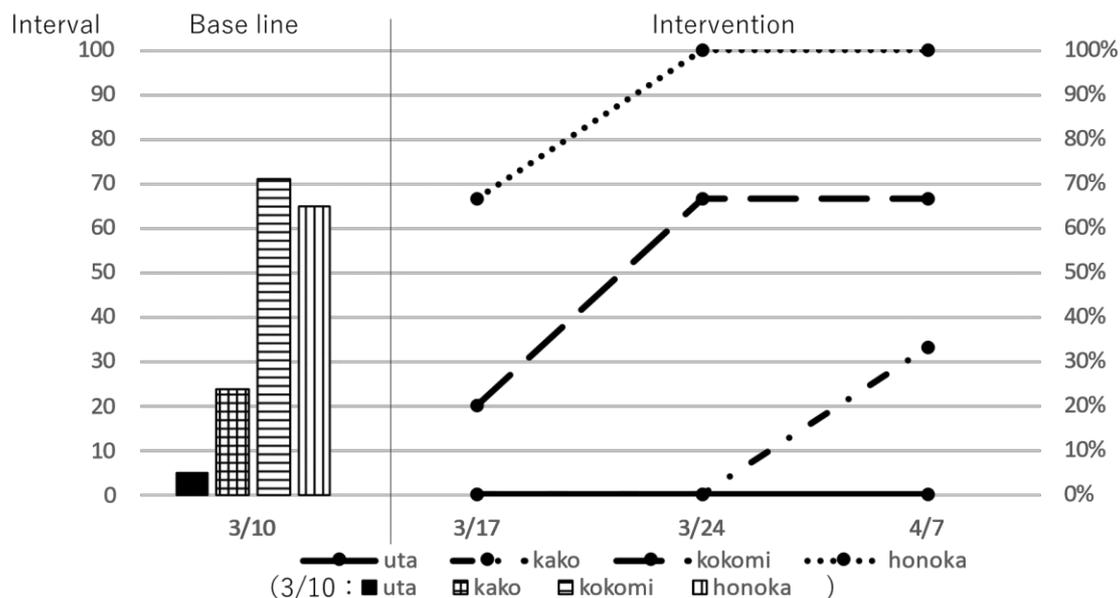


Figure 1. Violin Playing

3/10 was a baseline session. In the baseline session, participants observed their spontaneous violin playing. In this session, 4 violins were prepared in the classroom and the participants were informed that they could touch them freely. Recording was performed by 3-second partial interval recording method. The figure showed the number of intervals during which participants touched the violin within the 11-minute observation time. Uta touched the violin at 5 intervals during the observation time, but could not make any sound. Kako touched the 24-interval violin and succeeded in producing a choppy sound in 13 intervals, of which one interval succeeded in producing the correct instrument sound. Kokomi touched the violin at 71 intervals and succeeded in making a choppy sound at every interval. Honoka touched the 65-interval violin and succeeded in producing sound in 27-interval intervals, of which 8 intervals succeeded in producing the violin sound.

There were also sessions with adult intervention after 3/17. At the sessions, the teacher-researcher taught children individually. The success rate of each session was shown by recording the success of each trial without any help. Uta made three trials in each session. Uta was able to make sound in every session, but couldn't play rhythm without adult's help. Kako performed 7 trials on 3/17 and 3 trials on 3/24 and 4/7. Kako could hardly produce the sound without help, but she was able to play a few rhythm alone on 4/7 by herself. Kokomi performed 5 trials on 3/17 and 3 trials on 3/24 and 4/7. Kokomi was able to play some rhythms on every session without any intervention. Honoka made three trials in each session. Only on 3/17, Honoka was supported by the instructor, but she could play some rhythms in all the following sessions.

## Discussion and Conclusion

Overall, the present study revealed that playing the iconic grid instruments and the violin offered the different challenges to each participant. As for the challenges to play the iconic grid instrument, the timing and the order were only the issue to let the instrument playing the melody line of Twinkle. For the violins, in contrast, the creation of the sound itself, and matching the rhythm and bow movement, and complexity of playing offered higher challenges especially for elder children.

For the younger children, like in the cases of Uta and Kako, both playing the iconic grid instrument and the violin required high challenges as they had lower ratio of success in their playing. Even without having success to play the tune, by pushing the button and by moving the bow, they pursued her own challenge to play both instruments. For Kokomi, to play both

iconic grid instrument and the violin matches with her skill as she had success with a few errors. Kokomi gradually overcame the challenges to become able to play both instruments. For Honoka, both instruments were too easy to play so that she already perfectly performed without any errors.

The study revealed that the violin playing offered more flow for children of all ages, and playing of the iconic grid instruments facilitated flow only in the younger children. The flow was always observable in Uta's and Kako's playing on both the iconic grid instruments and the violin even though the challenge level was rather high by considering their skill. Notice, we need to consider that success or failure was perhaps not so important in their playing. For Kokomi, although her challenges and skill level match as she showed her gradual achievement with a few errors, there was only observed flow in her violin playing, but there was no indicator observed in her playing with iconic grid instrument. For Honoka, the challenge level was too low for her as she was able to manage all tasks perfectly; however, she demonstrated some flow in her violin playing by expanding the challenges. On the other hand, there was no room for Honoka to add any more challenges to play the iconic grid instrument once she mastered how to press the button by order.

In short, this study investigated the perceived challenges and observable flow experience in young children's interaction with the iconic grid instrument and the violin in Japan. A team of researchers offered a total of four music sessions to play both the iconic grid instruments and the violin, and 4 children ages from 2 to 4 participated to learn to play the instruments. The present study revealed that playing the iconic grid instruments and the violin offered different challenges. The study also revealed that the violin playing offered the higher challenges so that it facilitates more flow for children of all ages. In contrast, playing of the iconic grid instruments facilitated flow only in younger children in a limited manner. The usage of strings instruments offers higher challenges for children of all ages; thus, flow was more observable with the violins was because there were more challenges and choices.

## Acknowledgements

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## A Case Study on Humming Phonation

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### Abstract

There are restrictions on singing songs with Corona. Humming is one of the vocalizations that is considered to have a low risk of infection. Since humming is uttered only by the sound without adding words, it is used as a vocal practice or in chorus aiming at a special effect. Humming vocalizations has features such as confirming the sound the voice, avoiding the strained power of the singing voice, and not burdening the throat. However, many humming instructions are subjective, and the mechanism and actual conditions are not well understood. This study examined what kind of acoustic features the humming with closed the mouth and various gestures have. Since mask is required in singing with corona, this study investigated the case of using mask, mouth shield, and face shield.

The subject made types of gestures by humming with the mouth closed (humming with a narrow mouth, humming with a wide mouth, and humming with a lowered throat). One female music teacher uttered humming three times at C4, G4, and C5. The recording was done in a music classroom. These three types of humming were uttered with four types: no Mask, disposable non-woven mask, mouse shield, and face shield. These voices were taken into a personal computer and acoustic analysis was performed using Praat. A 0.5 sec of the stationary part where the voice was stable was extracted, and the acoustic analysis of that part was performed.

Of the three types of humming vocalizations, the sound intensity was lowest for humming with the oral cavity narrowed and highest for humming with the larynx lowered.

At the pitch of C4, comparing non-woven mask, mouse shield, and face shield, the non-woven mask had the lowest sound intensity. The sound intensity of the face shield was showed to tend also low, but the volume of the mouse shield was no changed that without the mask.

In humming with lowered larynx, the 4<sup>th</sup> formant showed to tend to be closer to the 3<sup>rd</sup> formant. Humming with lowered throat increased the sound pressure levels. This result is effective as one of the methods for obtaining the sound of the voice in humming.

**Keywords:** humming phonation, non-woven masks, mouse shields, face shields, acoustic analysis..

### Introduction

Singing is the most familiar musical expression of human beings using voice. However, in coronavirus, singing and chorus are regarded as "activity with high risk of infection". When singing songs, it has become necessary to wear a mask, keep each person as far apart as possible, face the same direction, and do not ask for voice volume in a short time.

There are restrictions on singing songs in the coronavirus, but one of the vocalizations that is considered to have a low risk of infection is humming.

Humming is a type of nasal vocalization, generally with the mouth closed, the voice out of the nose, and only the melody sung. Since humming is uttered only by the sound without adding words, it is used as a vocal practice or in chorus aiming at a special effect (for example, the famous chorus at the end of Act 2 of Giacomo Puccini's *Madama Butterfly*). Humming vocalization has been used and practiced in singing education (Mitsuhashi, 2012), but its mechanism and actual condition are not well understood.

Humming is used not only for singing and chorus, but also for vocal training in voice therapy. As a physiological finding regarding humming, there is a report of observing laryngeal and vocal cord vibration during humming vocalization.

Iwahashi et al. (2017) used a laryngeal fiberscope connected to a high-speed imaging device to record high-speed videos of the larynx such as continuous vowels, loud vocalizations, and humming vocalizations in 20 healthy adults. As a result, it was suggested that the humming vocalization was soft and vocal cord vibration gradually occurred, which promoted the ease of vocalization.

By training of humming phonation, patients with hypertonic dysphonia showed to improve the constriction of the upper glottis which had been covered during vocalization, making it easier to vocalize and expanding the resonance cavity. (Ogawa et al., 2007). Also, by training humming, roughness of voice was improved. (Yui & Ho, 2002).

Since humming is uttered without words, it was suggested that it is easy to utter and it is possible to avoid uttering with excessive pressure.

Wearing a mask has become a new lifestyle for Corona. Singing with the mask on is stuffy and can't see the facial expressions on your mouth or face. Previous studies on wearing masks examined how the voices of a nurses wearing masks were heard by patients (Kitajima et al., 2012). The voice when the nurse wearing a mask was difficult for the patient to hear, and patients was felt that "the voice was muffled" and "the voice became quieter."

It has also been pointed out that covering the mouth with a mask by the caregiver has an effect on communication and development with infants.

Humming is used in singing education, and its effect has been recognized in the practice of vocal instruction, but the acoustic characteristics of humming in actual singing voice are not well understood. Also, in the music class, it is necessary to teach with the mask on, but the acoustic characteristics of the singing voice due to the influence of wearing the mask are not well understood.

This study examined what kind of acoustic features the humming and various gestures have. Since a mask is required in singing with corona, this study investigated the case of using mask, mouth shields, and face shields.

## Methodology

Humming is generally performed with the mouth closed, but in reality, the timbre changes due to changes in the vocal tract such as the position of the larynx and the spread of the oral cavity, and various timbres are possible.

The subject was humming with the mouth closed /m/ and uttered with the intension of three types of gestures humming with a narrow mouth (NARROW), humming with a wide mouth (WIDE), and humming with a lowered throat (LOW). A female music teacher (38 years of experience singing) uttered these humming three times at the pitch of C4, G4, and C5. The recording was performed in a music classroom in a quiet environment, and after producing the target sound with the piano, (1) without mask and (2) three types of humming were uttered at the pitch of the sound. These voices were uttered with four types: no mask, disposable non-woven mask, mouth shield, and face shield.

These voices were taken into a personal computer in sampling frequency 22050 Hz and acoustic analysis was performed using Praat. Praat is a free software that can analyze voice and was developed by Paul Boersma and David Weenik of the University of Amsterdam (Boersma & Heuven, 2001).

A 0.5 sec of the stationary part of voice where the voice was stable was extracted, and the acoustic analysis of that part was performed. For the extracted voice, the sound pressure levels and formant frequency were used as objective data. Since humming is related to voice resonance, formants representing vocal tract resonance were measured. Formants are generally called formant frequency and singer's formant have been reported in singing voices (Sundberg, 1987).

## Result

### 1) Sound pressure levels due to different of humming gestures

#### 1-1) Results of three types of humming

Figure 1 showed the results of different of humming gesture (NARROW, WIDE, LOW). To understand how the sound was heard, the sound pressure level was extracted.

The average sound pressure levels of by three types of humming gestures on the pitch of C4 was NARROW 52.3dB, WIDE 54dB and LOW 56 dB. Similarly, at pitch of G4 were NARROW 48.5 dB, WIDE 51.1 dB, and LOW 55.9 dB. At the pitch of C5, it was NARROW 48.7 dB, WIDE 54.6dB, LOW 56.7 dB.

From these results, the sound pressure levels tended to be highest for larynx lowered humming (LOW), second for wide-mouth humming (WIDE) , and minimum for narrow- mouth humming (NARROW). The same tendency was seen at the pitch of the G4 and C5. (Figure 1)

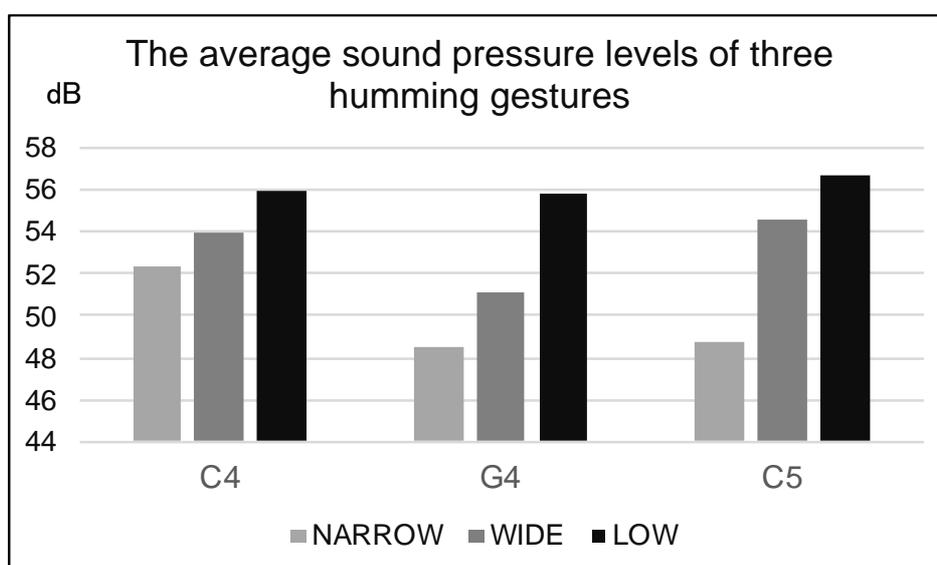


Figure 1. Sound pressure levels due to different humming gestures

The horizontal axis is three types of humming gestures uttered at the pitch of C4, G4, C5. The vertical axis is sound intensity (dB).

#### 1-2) Results of 3 types of humming due to difference in mask, mouth shield, and face shield

Next, we examined how different humming gesture vocalizations sounded when wearing masks, mouth shield and face shield.

The average sound pressure levels of with mask on the pitch of C4 was NARROW 50.2 dB, WIDE 52.9 dB and LOW 54.6 dB. Similarly, at the pitch of G4 was NARROW 48.7 dB, WIDE 50.4 dB, and LOW 53.7 dB. On the pitch of C5 was NARROW 50.8 dB, WIDE 53.6 dB, and LOW 55.8 dB.

In all of the masks, mouth shields, and face shields, the sound pressure levels tended to be highest for larynx lowered humming (LOW), second for wide-mouth humming (WIDE) , and minimum for narrow- mouth humming (NARROW).

### 2) Difference in sound pressure level due to the effect of mask, mouth shield, and face shield

We investigated whether wearing a mask, mouth shield, face shield would make a difference in hearing humming vocalizations. The sound pressure levels of 3 types of humming gestures (NARROW, WIDE, LOW) which phonated by 4 types (no mask, mask, mouth shield, face shield ) were compared.

The average sound pressure levels of humming with a narrow mouth at the pitch of C4 was no mask 52.3 dB, mask 50.2 dB, face shield 51.4 dB, mouth shield 52.8 dB. The average sound pressure levels when masked was slightly smaller than in other cases.

Similarly, at humming with a wide mouth was no mask 54.06 dB, mask 52.9 dB, face shield 53.1 dB, mouth shield 54.4 dB, at LOW was no mask 56 dB, mask 54.6 dB, face shield 55 dB, mouth shield 56.1 dB.

At the pitch of C4, comparing mask, mouse shield, and face shield, the mask had the lowest sound intensity. The sound intensity of the face shield was showed to tend also low, but the volume of the mouse shield was no changed that without the mask.

The average sound pressure levels of NARROW at G4 pitch was no mask 48.5 dB, mask 48.7 dB, face shield 45.7 dB, mouth shield 49 dB. The average sound pressure levels of WIDE at G4 pitch was no mask 51.1 dB, mask 50.4 dB, face shield 51.2 dB, mouth shield 50.8 dB. The average sound intensity of LOW at G4 pitch was no mask 55.9 dB, mask 53.7 dB, face shield 54.3 dB, mouth shield 54 dB.

For the pitch of G4, the average sound pressure levels of face shield for humming with a narrow mouth were smaller than for the case of no-mask, mask and mouth shield. On the other hand, the average sound pressure of mask and mouth shield were slightly decreased in humming with a wide mouth and humming with a lowered throat.

The average sound pressure levels of NARROW at the pitch of C5 pitch was no mask 48.7 dB, mask 50.8 dB, face shield 49.5 dB, mouth shield 50.6 dB. Similarly, WIDE was no mask 54 dB, mask 53.6 dB, face shield 52.7 dB, mouth shield 53.7dB, LOW was no mask 56.7dB, mask 55.8 dB, face shield 55.7 dB, mouth shield 56.6 dB.

At the pitch of C5, the average sound pressure levels of the face shield tended to decrease slightly in the humming with a wide mouth and humming with a lowered throat. On the other hand, but the volume of the mouse shield was no changed that without the mask.

Summarizing the above, at the pitches of C4 and C5, the sound pressure levels tended to be slightly lower when using mask and face shield.

### 3) Formant frequencies due to different of humming gestures

The subject uttered various humming gestures with the intention of mouth and throat height. The acoustic features of those intended vocalizations were investigated using formant frequencies. Formant frequency is a resonant frequency characteristic of vocal tract morphology (Raphael et al., 2007).

Figure 2 shows the formant frequencies of the three different humming phonation (NARROW, WIDE, LOW) uttered three times in the pitch of G4. Looking at the formant frequencies of humming voice, F4 showed to tend to be closer to F3 in the humming with lowered throat. Also, when humming with a wide mouth, F2 showed to tend to decrease more than when humming with a narrow mouth.

At the pitch of C5, similarly, the fourth formant showed to tend to be closer to third formant in humming with a lowered throat.

Comparing with mask, mouth shield and face shield, F4 showed to tend to be closer to F3 when wearing mouse shield and face shield.

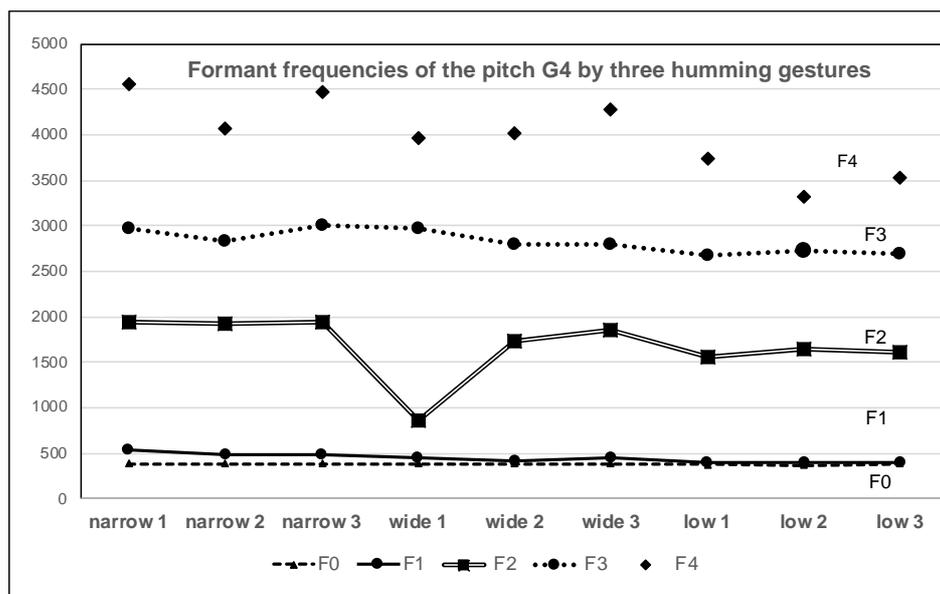


Figure 2 Formant frequencies of the pitch G4 by three humming gestures. The horizontal axis is each of the 3 phonation of 3 types of humming gestures. The vertical axis is formant frequencies (Hz).

## Discussion

Most of the humming instruction in music education so far is subjective, and the mechanism and actual situation are not well understood. In this analysis, it was found that the humming intended by the singer is also acoustically different. The sound pressure levels tended to be highest for humming with lowered throat, second for humming with a wide mouth, and minimum for humming with a narrow mouth. In singing education, instructions such as singing with the mouth wide open and singing with the throat wide are given. These instructions were also found to be effective in humming vocalization. Humming vocalizations with intentional lowering of the larynx was considered to be louder and to affect the resonance by concentrating of F3 and F4.

This was a preliminary analysis of a single singer, but in the future, we need to expand the scope to include teachers, students, and other vocalists. Also, it is necessary to make an auditory – psychological evaluation of how the humming intended by the singer is actually transmitted to the listener.

It is said that it is difficult to hear voices with masks, mouth shields, and face shield on. This trend was also seen in the current analysis with masks and face shields. There were a slight decrease with respect to the loudness of the sound, but there were variations depending on the height of the sound, and no consistent trend was seen in the current analysis. One of the reasons for this is that the subject was only sustained vocalization. In the future, it was considered necessary to analyze in the actual melody.

On the other hand, F4 tended to be closer to F4 at mouth shield and face shield. This could be due to the reverberation phenomenon of mouth shield and face shield, but this is an issue for the future.

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## **The Modern Face of Tradition: On the Concept and Practice of the Development of Chinese Dance Education from the Perspective of Cross Culture**

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### **Abstract**

In today's globalized world, the research and discussion on multiculturalism is developing vigorously. The cultural interactions have gradually become a bridge connecting hearts and minds, eliminating misunderstandings and leading to a "community with a shared future for mankind". This paper analyzes the construction and development of Chinese dance education under the cross-cultural background from the three dimensions of historical evolution, contemporary appearance and value orientation, in order to provide reference and basis for further research on contemporary Chinese art education.

*Keywords:* Cross-culture; Art education; Dance education; Aesthetic education

### **I、 "Traditional" and "Modern" : The Change of Values in Dance Education**

At present, Under the impact and influence of western modern aesthetic education ideas, art education begins to return to the subject of "human", return to aesthetic freedom and enjoyment, and face every person, constantly changing and developing in the system, theory, curriculum practice and other aspects.

#### **(I) The break with the traditional music education**

As a form of expression of social ideology, dance education is also naturally influenced by the world outlook of the ruling class, presenting aesthetic viewpoints, aesthetic tastes and aesthetic ideals with characteristics of The Times. Thus it can be seen that the concept of "music and political harmony" makes music and dance directly or indirectly become a tool of political education in Anbang, among which dance education activities must be correspondingly endowed with strong political and religious nature.

In the late Qing Dynasty and the Republic of China, under the influence of modern western aesthetic education ideas and the rise of the New Culture Movement, aesthetic education ideas broke with traditional culture on the one hand, and on the other hand began to emphasize "returning to the subjectivity of human beings and the authenticity of individual life".<sup>[1]69</sup>, which led to the change of the nature, function and method of art education. For example, in the 1920s and 1930s, Cai Yuanpei put forward the idea and practice of "replacing religion with aesthetic education". Music educationist Li Jinhui's idea and practice of singing and dancing in school.

#### **(II) Enlightenment of modern aesthetic education thought**

"The Turn of Aesthetic Education" in Western Modern Aesthetics after the 20th Century<sup>①</sup>. Before that, the completion of "the generation of nature to man" in Kant's philosophy system explained that the key link to cultivate people with noble morals is aesthetics, which marked the rise of western aesthetics from pure epistemology to axiology, and the rise of aesthetic research logic from speculation to the realm of life. In his "Essay on Aesthetic Education", he not only put forward the term of "aesthetic education". Later, Schopenhauer, Nietzsche and other Western philosophers carried out a more distinctive modern development of aesthetic education, completely denied the tradition of rationalism, took "the will of life" and "strong will"

as the spear, took "artistic life" as the main label, and believed that "aesthetic and art" were the noumenon of the world.

In contrast, the change of educational concept in China at that time was forced by the fiasco of the Sino-Japanese War of 1894-1895 and the failure of reform. .And after modern liang qichao "emotional education" of education, taste, wang guowei advocated "as" characters of the aesthetic culture completely, CAI yuanpei advocated the "aesthetic education for religion", zhu guangqian "aesthetic education to promote the moral education, realize the human liberation", zong baihua "life artistry" base of the aesthetic education modernization process such as drink, promote the development of modern Chinese aesthetic education idea gradually.

### **(III) The reference of Soviet art education**

After the founding of the People's Republic of China, China was in urgent need of learning from the advanced experience of others, and the Soviet Union provided a good model for China's socialist revolutionary construction and social development. Among them, the great influence on Chinese dance education mode by the Soviet union, new China's art education and modernization of professional development, is also closely associated with the Soviet education mode: "pay attention to the traditional literature and art, pay attention to only branch education, period are the successors of the Soviet union, the Soviet experience model has been widely accepted and, in China and permeate into the construction of new China's art education system"<sup>[2]</sup>.

Olge Alexandrovna Irina came to Beijing in 1954 at the invitation of the Ministry of Culture of the People's Republic of China to help establish the Beijing Dance School and train dance teachers. After its establishment, Beijing Dance School took the task of "learning the advanced experience of dance schools founded by the Soviet Union and the achievements of dance art", and quickly established its own system and model. In 1955, Chaplin, an expert in choreography from the Soviet Union, and Leshevich, a representative expert in folk dance. The collection and compilation of Chinese dance education materials and the improvement of the dance education system were also influenced by the Soviet Union to varying degrees, and gradually completed the process of the introduction and mainstreaming of the Soviet education model. This "Early Professional Dance Education System"<sup>[3]</sup><sup>42</sup> Chinese dance education and teaching system was soon established and began to develop in a standardized way.

### **(IV) The division of contemporary dance education**

The early professional dance education system gives full play to the skills of the educated and highly develops, which is conducive to the cultivation of high-end dance talents and professional dancers in China. Advantage lies in the dance education system from the macro level with dance career development level and industry competitiveness, its malpractice lies in the dance education cause strong professional, high threshold, and the standard requirement of the "advanced" widening professional actor and a gap of public education, make dance art too high "elegance" and "art of the ivory tower". After the reform and opening up, under the background of the development of mass culture and the reform of national education, the single professional dance education has been unable to meet the needs of the masses for dance education.

Universal Dance Education System<sup>[3]</sup><sup>39</sup> is another kind of more typical dance education mode, with a wide coverage, the dance education is permeated into the general education to make the two synchronized. Its idea is to regard dance as a kind of beneficial sports and cultural activities, for the cultivation of students' aesthetic creativity, good moral character and appearance, as well as the overall promotion of students' personality, improve the quality of moral civilization are of great benefit. The United States has a better development of this system. As early as in the Education Law 2000 published in 1994, the United States has stipulated the National Standard for Art Education, which combines art subjects as one of the core subjects and extends the art curriculum from primary school to 12th grade. Under such standards and requirements. For example, in art and aesthetic concept, Germany is to

"cultivate the perfect man of aesthetic freedom".<sup>[4]</sup>In 1925, more than half of German institutions of higher learning had opened art-related courses. After 1941, the popularity of art courses in German institutions of higher learning reached three quarters of the country, among which dance course was an important subject. In the 1950s, the Institute of Action Arts was established in the UK<sup>[5]</sup>To study the education of children's body movement and labor operation. After the 1970s, many colleges and universities successively set up research institutions related to the movement art and started a number of research funds, which laid a good foundation for the popularization of dance education.

In the transformation from modern society to post-modern society, the concept and practice of dance art education in China has gone through a process of "formation-development-rupture-construction-differentiation" from "autocracy as the body, enlightenment as the use" to "freedom as the body, democracy as the use" and then to "harmony as the body, the mean as the use". It gradually clarified that "maintain the diversity of the education system, build a cultural bridge, and cultivate a sense of cultural acceptance".<sup>[6]</sup>The development direction of.

## **II、 "Bring" and "Integration" : the "face" of Chinese Dance Education**

The emphasis on modern educational thoughts and ideas accelerated the modernization of dance education in New China. In the process of "bringing in" heterogeneous culture and "blending" with traditional culture, contemporary Chinese dance education has established its own unique educational system, methods and aesthetic norms in the aspects of body discipline, cultural presentation and consciousness expression.

### **(I) Physical discipline of dance art**

Influenced by the traditional opera art and the training system of western ballet art, the body language construction of contemporary Chinese dance has gradually formed a unique body discipline method and education model. Such as "Chinese classical dance" was founded at the beginning of the founding of new China, the dance movement is derived from Chinese opera, and through practical test and the dancer's extraction, processing, sorting, creation, as a special action element requirements and emf rhythm form action characteristic of Chinese traditional aesthetic style and rhythm, namely "through to the study of traditional opera, reference and modification, pay attention to the national aesthetic style construction of the contemporary form of Chinese classical dance gradually clear"<sup>[7]</sup>.

Compared with opera, ballet attaches great importance to the standardization and systematicness of physical training, forming a complete set of meticulous, rigorous and step-by-step body training system of dance. Since the establishment of Beijing Dance School and Ballet Teaching and Research Office in 1954, the teaching of professional ballet in China has always followed the textbooks and syllabus of the Russian School, and later absorbed the ballet teaching methods of different schools in the world, in order to cultivate "professional ballet performing and teaching talents in China".<sup>[8]</sup>Service. In the spirit of "serve the past for the present, the foreign for China"<sup>[9]</sup>The scientific and effective teaching system of ballet has produced obvious effects on the basic training of Chinese classical dance and folk dance as well as the training of dance performers.

### **(II) the physical presentation of national culture**

The entry of Chinese national and folk dance into the contemporary dance art system was initiated by Dai Ailian's "Frontier Dance Conference" and his artistic practice of "Frontier Dance" in the 1940s, that is, nationality and times have far-reaching significance and modern reference for the performance, education and teaching of Chinese folk dance, which also opens the professional development and stage germination of national folk dance. After the founding of new China, the dance "experts" through dance elements extraction transformation of ethnic folk dance, from the folk custom culture ecological field in the form of "from" and independent, but also in the structure of the "original ecological - theatre" present a national

culture through body language, the dance education in professional and performing development, realize the different value and function.

In the field of modern art education, traditional culture has been endowed with new connotations and forms. For example, in the early 1980s, Beijing Dance Academy adopted the mode of "classroom element teaching method" in the folk dance classes, which extracted and sorted out the basic elements of various ethnic dances and applied them in the class. This is very conducive to the improvement of the form, content, structure and performance system of folk dance, and has a profound impact on teaching and creation, presenting the procedural and normative aesthetic form of modern performing art. This mode of dance creation, from folk to classroom and then from classroom to stage, further deepens the national characteristics of folk dance with varied styles. In China, the national culture of contemporary China traditional aesthetic style and features with The Times.

### **(III) the physical expression of self-awareness**

Since the 20th century, the modern dance art, which is rich in humanity, diversity and inclusiveness, has been born and developed rapidly. Its ideological trend enriches the concept of Chinese dance art and promotes the reform and innovative development of Chinese dance education. For example, after the reform and opening up, modern dance "pursues individual expression, eliminates repetition, and always seeks novelty".<sup>[10]</sup> The artistic view of the dance education in the new era has influenced the transformation and enrichment of the concept. The core cultural value of modern dance "to seek freedom through rebellion" determines its educational concept and teaching activities to focus on "the pursuit of self-individual consciousness and unique expression of the body".<sup>[11]</sup><sup>133</sup>

Since the new century, the dance education reform, which takes the subjectivity expression of "the unity of body and mind" as the educational goal, has been continuously advanced in depth, which obviously urges the more reasonable development of the intelligent structure of dance talents, that is, to realize the development from "one-way talent to two-way and multi-talent".<sup>[3]</sup><sup>37</sup>. Through the specific dance education activities to realize the dance art of the body and mind of the self-expression, make the educatees more delicate and abundant emotions, more complete and rich personality, reflects the quality of dance education aesthetic connotation.

## **III、 "Dialogue" and "Mutual View" : The Value Orientation of Dance Education**

Since its birth, aesthetic education has been rich in aesthetic ideal character because of its surreal poetic charm, which reflects people's pursuit of ideal personality and ideal society. When placed in the current context of globalization, it has become an ideal way to connect different countries, nationalities, regional cultures and civilizations for equal dialogue, and gradually realize the "modern aesthetic education utopia".<sup>[1]</sup><sup>70</sup> .

### **(I) The value of Artistic aesthetics**

"Aesthetics are a special way of treating the world."<sup>[12]</sup><sup>408</sup> In the atmosphere of pursuing benefit and utility, it is difficult for us not to look at the world with a relative conceptual, scientific attitude of understanding and a practical attitude of theory, so we often feel bleak and low; But with an aesthetic attitude and mind to experience the world, the world is always perceptual, fresh, colorful and poetic. The implementation means of aesthetic education and aesthetic education can be carried out through various channels, but the study of art is undoubtedly the best way of aesthetic education, and dance education, as an aesthetic education, plays a strong artistic aesthetic value. Changes in one's taste can be intervened and nurtured by means of education. And aesthetic education can cultivate "elegant, pure and healthy taste" of the educatees.<sup>[12]</sup><sup>412</sup>

## **(II) The value of cultural interaction**

Art is the figurative manifestation of human culture. The development of dance art is based on the profound historical and cultural soil, and the perception of the dance forms between different nationalities in ancient and modern times, China and other countries is also a kind of experience and interaction of diverse cultures. For example, the study of ballet and modern dance is an interaction between western classical culture and modern culture. From the artistic characteristics and forms of ballet art in different stages, such as "early, romantic, classical and modern", we can feel the track of European historical context synchronously. From the main schools of ballet art can be more in-depth and detailed perception of the different cultural characteristics of western countries, such as the Italian school of lofty and stretch, the French school of noble and elegant, the Russian school of dignified and grand, the Danish school of fine norms and so on.

The cultural interaction in dance education not only exists in the "Chinese-foreign" category, but also in the "ancient and modern" diachronic dance education activities and the "region-nation" synchronic dance education activities. For example, contemporary students dance Chinese classical dance with national historical and cultural attributes, which is a vertical cultural interaction; The study of folk dances of Han, Tibetan, Mongolian, Uygur, Korean and other nationalities is an interactive perception and identification of different national cultures.

## **(III) The value of life aesthetic education**

As a kind of aesthetic education, dance education can help the educatees to set up the correct aesthetic sense, cultivate the noble moral sentiment and aesthetic emotion, so that the educatees, as the existence of "human", can experience the reality of "human" and achieve the goal of creating life. The cultivation of aesthetic education enables us to pursue the perfection of human nature and produce infinite satisfaction and joy to life. Aesthetic education solves the problem of serious imbalance between material life and spiritual life"<sup>[12]</sup><sup>435</sup>The imbalance of the relationship between man and nature can be solved through the improvement of the realm of aesthetic education. In this sense, aesthetic education is necessary for individual understanding and overall development.

The carrier of dance is human body, which conveys human's spirituality and understanding of life. The non-utilitarian pursuit and education of individual life quality not only reflect the progress of society and the degree of social civilization, but also people's good wishes to pursue a better life and transform society through education. The dance education affects people's hearts with the internal emotional fluctuations of "feeling", "meaning" and "rhyme", so that the educates can complete the cycle of "self-transcendence" under the influence of art.<sup>[3]</sup><sup>204</sup>. In this way, dance education realizes the pursuit of the value of life aesthetic education through the body perception of aesthetic taste.

## **conclusion**

The concepts and ways of aesthetic education at home and abroad are constantly changing and moving forward in the process of value discovery and concept change. In the context of intercultural communication in the era of globalization, Chinese aesthetic education should constantly establish its own system in terms of concept and practice. In the vision of constructing "new aesthetic education", it can be said that the art discipline is the "main front" of aesthetic education, and the school is the "main battlefield" of aesthetic education. How the contemporary dance education achieves the realm of "Tao" beyond the level of "technique" by means of the concept and approach of "aesthetic education" under the new historical conditions needs to be answered by us in practice and reflection.

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### **【note】**

①That is to say, "in the process of transforming the classical form of abstract thinking of beauty into the exploration of the relationship between beauty and life, and from philosophical aesthetics to life aesthetics, aesthetic education has become a frontier topic in western modern aesthetics, especially in modern humanistic aesthetics." See Zeng fanren: the western modern "aesthetic education turn" and the development of Chinese aesthetic education in the 21st century, academic monthly, 2002 (5): 8

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## **Dance Freed from the Influence by Another Manifestation of Group**

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### **Abstract**

The term dance was produced to indicate “dance” itself as a human behavior. Prior to being named and valued by words, “dance” itself merely existed as an empty thing or matter. Dance, however, is influenced by another manifestation of group.

The group guarantees the position of the members. At the same time, the group influenced the members. The influence of the group appears in the form of group expectations for the members. Group expectations dominate the behavior of the members (e.g, Bauman & May 1990). Those who don't meet expectations is excluded from the group. We often refuse to be excluded from the group that guarantee our position. As a result, sometimes we are influenced by another manifestation of group too much. My specific research question, therefore, was: How had superficial dance activities been developed among junior and senior high schools' students in Japanese physical education? -To clarify this question, semi-structured interviews with 10 people (age: 19-22, Male: 2, Female: 8) was undertaken. The followings are the questions:

- Did you do the dance in physical education classes during for junior and senior high schools?
- If the answer is yes, what was it like? What music you used? Did you dance with groups or individual? How to choreograph? etc.

As a result, the following three problems were found:

- 1) Choreographies by professionals are more important than students' choreography.
- 2) Using pre-existed choreographies, students' creativity and originality are forgotten.
- 3) Fictitious audience is always expected.

The most significant finding in this research was: Many students tend to copy directly from pre-existed PVs because of the existence of another. This dance activity can be considered as singing in Karaoke Box, for example. Referring to Bauman's *Thinking Sociologically*, this paper concluded that improvisation would be the key to solve the problems above since students can possibly create their own individual choreographies without being influenced by another manifestation of group.

*Keywords:* Dance; Choreography; Group; Body

## **Background**

Consciously and sometimes unconsciously, we become the members of a group. The group gives a strange peace of mind to the members. Bauman & May (1990, p.30) state:

Given that our self-identities are bound up with the groups to which we belong, some scholars, notably the French historian and philosopher Michel Foucault and the French philosopher Jacques Derrida, have argued that we possess an 'essence' to what we are only by the exclusion of negatives, in this case the assumed characteristics of 'them'.

The group is divided into "us" and "them." The term "us" is the group to which we feel we belong and understand. The term "them" is the group to which we can't access or don't wish to belong (Bauman & May 1990). We can identify ourselves by excluding those who belong to "them". Bauman & May (1990, p.31) state:

Mutual help, protection and friendship therefore become the imaginary rules of in-group life, all of which make us perceive of relationship in this context as emotionally warm, suffused with mutual sympathy and the potential to inspire loyalty, as well as the determination required for the defence of the group's interests. ...People may seem harsh and selfish, but one can count on their help if the need arises. Above all, one can understand them and be certain of being understood by them.

Therefore, we can get the answer to the question "what is myself?" and relationships that members can trust each other in the group. Accordingly, we are relieved to belong to the group and afraid to be excluded from the group.

## **Research question and Methods**

The group gives an identity as his or herself by excluding "negatives" and companions who can understand each other. However, there is a price that must be paid to belong to the group. Bauman (2001) states that the price is "autonomy", "right to self-assertion", and "right to be yourself." The group sometimes takes away freedom of members. Bauman (2001, p.46) states:

Thus, the very fact that we may be adjusted to the conditions of action inside our group can be said to circumscribe our freedom by preventing us from exploring poorly charted and unimagined experiences that lie beyond the confines of that group.

The group teaches ideas, methods, and values. In the other words, members can't learn the ideas, methods, and values of the group to which they don't belong to. Members are restricted in their words and actions by the group.

According to Bauman, I speculate that restrictions on freedom by the groups also work in environment for education, especially in dance activities of the physical education. The reason why the dance activities of the physical education are mentioned here is that the dance activities in the physical education in Japan tends to be particularly grouped compared to other subjects. Group-based activities in dance education began after World War II, mainly in the field of creation. Matsumoto (2011, p.19) states:

The characteristic of creative learning of dance is that it has a place for mutual negotiation to deepen understanding with others as well as own creative activities. (Translation mine)

In the other words, dance activities in the physical education used an unit called a group as a place of communication. The tendency has been passed down, and it seems that group dance activities are still being actively carried out today. In the first place, dance can “keep existing as long as human beings communicate each other.” (Kataoka 1991) that is, it includes the element of “communication with others.” So, group of dance activities in the physical education are inevitable. However, what I would like to set as the problem here is not the collective nature of such dance activities. The following two problems I would like to consider in this paper:

- 1) Are children restricted by the group in their dance activities?
- 2) If children are restricted by the group, how do those restrictions affect them?

To clarify this, semi-structured interviews with 10 people (age: 19-22, Male: 2, Female: 8) was undertaken. The followings are the questions:

- Did you do the dance in physical education classes during for junior and senior high schools?
- If the answer is yes, what was it like? What music you used? Did you dance with groups or individual? How to choreograph? etc.

## Results

The following answers were obtained for these questions.

- ◆ A (Interview date: 2018. 10. 30) ...In junior high school, I danced J-POP music with pre-existed choreography as group activity. Also, I watched DVD of HIP-HOP with my group members, and choreographed based on it.
- ◆ B (Interview date: 2018. 10. 30) ...I didn't experience dance activity in junior high school.
- ◆ C (Interview date: 2018. 10.30) ...I danced samba with pre-exist music. The choreography was based on the form instructed by the teacher. On the other hand, I did an activity to express decided theme with body.
- ◆ D (Interview date: 2018. 11. 01) ...I didn't experience to dance in junior high school. In high school, I chose either creative dance or pre-exist dance for each group. I chose pre-exist dance and copied artists' dance. There was the student who loves the artist in my group, so she became a leader to teach pre-exist choreograph in my group.
- ◆ E (Interview date: 2018. 11. 06) ...I copied pre-exist choreograph. I was taught the artist' choreograph by the student who is very good at dancing. In high school, I was taught aerobics and basic movements of dance by the instructor from outside school.
- ◆ F (Interview date: 2018. 11. 07) ...In junior high school, the girls did a dance as group activities. So, I didn't experience dancing. She did a dance to the CD of JPOP, and the person who experienced the dance taught pre-exist choreograph to the members.

- ◆ G (Interview date: 2018. 11. 07) ...I did a dance in junior high school. The teacher requested to create the original choreography, but I and my members copied artists' dance. In high school, I was taught HIP-HOP by the instructor from outside school.
- ◆ H (Interview date: 2018. 11. 08)...I did folk dance in junior high school. In high school, I experienced the activities to imitate the instructors' movement to music.
- ◆ I (Interview date: 2018. 11. 09)...I didn't experience to dance in junior high school. In high school, I copied the artists' dance based on YouTube with my group members.
- ◆ J (Interview date: 2018. 11. 12)...I experienced the activities that chose favorite music and choreograph freely. The teacher called the dance activities "the create dance". I formed a group with my friends and copied the artists' dance. I eventually performed our dance in front of the class.

## Analysis

As a result, the following three problems were found:

- 1) Choreographies by professionals are more important than students' choreography.
- 2) Using pre-existed choreographies, students' creativity and originality are forgotten.
- 3) Fictitious audience is always expected.

These problems are the result of restrictions due to group activity. Because of 1) and 2) above, many students tend to copy directly from pre-existed PVs. Each student's creativity and originality are somehow forgotten in those physical classes as if they simply sing in Karaoke. Furthermore, according to D, E, and F, children who have dance experience in the group or who have good motor nerve tend to play the role of instructors. Such assignments make a difference between the members as "leader" and "followers." As a result, followers are limited in their autonomy, right to self-assertion, and right to be themselves. Besides, I presume that the nature of the group is also related to problem 3). Bauman & May (1990, pp.20-21) states:

How we act and see ourselves is informed by the expectations of the groups to which we belong. This is manifested in several ways. First, there are the *ends* or goals that we assign with particular significance and so consider worth pursuing. ...Second, how we are expected to achieve these ends is influenced by another manifestation of group expectations: the accepted *means* employed in the pursuit of ends.

In the other words, the groups expect and require the members natural words and deeds. The groups try to achieve the goal that the group should achieve by "natural words and deeds". Therefore, the dance activity of the physical education is also a consequential activity on the premise of achieving the goal of "performing the completed work." In this way, the nature of the group influences children's dance activities. It can sometimes have a positive effect on children's dance, however, also have a negative effect. As far as I analyze the results of the interviews, it seems that the nature of the group limits children's dance and has a negative effect.

## **Possibility of improvisational dance**

As explained above, the group imposes various restrictions on its members. Furthermore, it became clear that it can also occur in dance activities in the physical education. Is it possible to realize a dance that is not restricted by the group in schools that presupposes the group?

I found the answer in "improvisation." Suzuki (2021, pp.6-7, Translation mine) states that "improvisation isn't the intentional production of representational images and thoughts in advance to produce movements." In other words, improvisation isn't an act expressing a pre-prepared choreography or image by the body. It is that images naturally appear in the body. The methods of improvisation don't classify as "professional" or "amateur" because improvisational movements are based on the movements that occur in daily life. Suzuki (2021, p.56, Translation mine) states:

The movements created by improvisational dance are concrete movements such as walking, grasping and touching, not abstract movements performed by instructions and commands. Specific exercise is learned while forming patterns in the form of habits in social life and daily life.

In other words, improvisation is the act of separating the movements performed in daily life and giving them representational images. No one evaluates his or her daily movements as "professional movements" or "amateur movements." From this point of view, improvisation doesn't give members a position or role. Meanwhile, improvisation doesn't spoil the creativity and originality of its members. Even the movements that everyone makes on a daily life, such as walking and running, differ from person to person. According to this point, improvisation itself allows daily movements to be used, it can be said that improvisation itself has individual creativity and originality. Finally, the nature of improvisation that the body precedes the representational image can betray the expectations of the group. Iwashita (2001, p.165 Translation mine) states: "improvisation is not the use of the body as a means of expressing something, but the entrustment of everything to something that appears in the body itself. Instead of trying to move the body is moved before thinking." The expectations of the group depend on what they say and what they do. (Bauman 2016, p.48) The group doesn't expect the existence of the body. Therefore, in the method of improvisation, which embodies the physical state of the body, the group doesn't expect it, nor does it set any goals for it. Consequently, I consider that improvisation can be a key for dance education that isn't influenced by the group.

## **Conclusion**

This paper began with Bauman's concept that the group have different influences on their members. I speculate that the nature of such group is common in physical education dance activities. Therefore, I set the question, "what kind of influence does the group have on children in the dance activities of the physical education?" and considered this problem. As a result of the interviews, it was found that children's dance activities are influenced by the group in the physical education. Furthermore, these effects are considered to cause the following three problems.

- 1) Children's creativity and originality are limited due to the use of professional choreography.
- 2) Specific roles arise within the group, and children lose their autonomy and right to assert themselves according to their roles.

3)As a result of the group's expectations, children's dance activities have become consequential.

Referring to both Bauman's and Iwashita's concepts, this paper concluded that improvisation would be the key to solve the problems above since students can possibly create their own individual choreographies without being influenced by other manifestation of group. Improvisation is one of the dance methods that can be used for various physical expressions. Iwashita (2001, p.168, Translation mine) states about improvisation is a dance that doesn't have a specific form and "it can be done in any situation with just the body." In the other words, improvisation is the act of gradually freeing from the body institutionalized by the group.

In this paper, I focused on the bad influences of the group. However, I consider that there is a good influence of the group in the dance activities of the physical education. Because it can happen when dancing in the group, it is effective for creative dance activities such as remembering new ideas by interacting with others and physical communication with others, which cannot be realized by one person. I will focus on the good influences of the group, analyze the influences of the group on children's dance activities, and consider the possibility of children's dance activities in the future.

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## Field Survey Report on Media Artists' Works and Their Educational Methods

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### Abstract

In music, it is highly important to enhance one's sensitivity to various musical elements to help nurture learners' musical expression. However, the conventional music education method of teachers and learners imitating sounds together was limited in conveying minute nuance of sounds.

Thanks to developing information technology, our ways of experiencing music are changing drastically. In addition, a new breed of artists is emerging; these "media artists" create new ways of expressing and experiencing music. They provide opportunities to experience music with information devices, creating new forms of music where processes of sensing sounds' various expressions are replaced with sounds that utilize characteristics of those processes. Their methodology could possibly be applied to musical education. However, there has been very few cases of musical education utilizing information devices, making it necessary to conduct a practical research on the matter.

Thus, this research examines the possibility of music education that utilizes new media and media artists' expression methods.

For this research, in February 2020 I visited Junya Oikawa (a specialist in sound expression) at the Center for Art and Media Technology (ZKM) to conduct field research on his work *Growing Verse 1*. I also conducted an education practice using his work *Acoustic Systems for Pitch Recognition*.

As a result, I experienced first-hand that using media artists' works allows one to experience improvisational musical expression via body movement, even without special vocal or musical training. Thus, this approach could encourage diverse people to experience various elements of music.

Furthermore, learners can potentially sense sounds in a way that differs from the conventional sound imitation-based approach, helping develop learners' new sensitivity towards sound.

This research demonstrated that the presentation of sounds using information devices has a potential to narrow the gap in capability of sensing sound among learners caused by differing musical background, solving the problem in conventional musical education.

It is expected that in the future, more and more diverse sound expression means are created and practiced using information devices, and new sound experiences created by media artists are expected to become innovative methods of music education.

*Keywords:* Music, Education, Expression, Information, Media Art

## 1. Introduction/Methodology

The importance of “listening” in musical activities is commonly recognized (Sakai, 2008). The basis of music learning is also “listening,” and traditional learning has generally taken the form of experiencing and acquiring the expressions the teacher presents.

As a musician and music teacher, one of the authors has been practicing acquisition of solfege ability and other skills (Sato, 2021). However, due to differences in the learners’ musical experience, there are individual differences in their ability to perceive the expression of sound. This fact that there are many learners who cannot acquire solfege abilities has been a problem.

Nowadays, with the development of information technology, a conceptual shift is taking place in music. Digital technology has the potential to break through existing values and create a new musical culture (Goto, 2013), and information devices are also being used in music education. Tanaka (2012), for example, uses electronic blackboards and digital textbooks to support solfege education, including music reading. Katayose’s (1995) *The Voice Shooting Game* is a method of supporting acquiring pitch recognition skills using information devices. In this gamified system, the vocalized note’s pitch is visually shown, allowing users to have fun while deepening their understanding of pitch perception. While these tools assist in acquiring basic musical skills, there are others—called media artists—who are trying to change music itself. They create unconventional ways of expressing music and some media artists provide opportunities to experience music without using instruments or voices, a famous example of which is Ochiai’s *Music Concert without Hearing* (2018). Using a balloon-shaped device that allows the user to physically feel the vibrations of sound with their body, audiences are invited to experience music expression through vibrations as well as hearing. This work has been widely discussed in the music field. One of the characteristics of media artists’ works is that they deal with experiential systems that allow people to taste the expression of sound regardless of their musical ability.

I believe that music education’s traditional form, which is learning through imitation of sound between teacher and learner, can be changed to a method of learning through media artists’ expression and the communication of sound through information devices (Sato, 2020).

As a practice that applies artists’ ideas to education, one well-known case is Reggio Emilia Education (the Reggio Emilia Approach) in Italy, which aims at art and figurative arts education. There are also reports that figurative arts activities using light and videos enrich young children’s figurative experiences, leading to numerous discussions on the effects and significance of art education using media (Takano 2017, Yoshioka and Takeuchi 2018). However, these practices are still mainly in the field of art, and very few in music education. Nowadays, research that effectively utilizes media expression is highly expected in music education as well.

Therefore, to examine the influence of media-based sound expression on music education, we conducted a field survey in February 2020, experiencing the work media artist Junya Oikawa (whose background will be described in section 2) created. In addition, we conducted a music education practice using Oikawa’s sound expression method. Based on these two results, we examined the possibility of music education using new media.

The text included in the sections or subsections must begin one line after the section or subsection title.

## 2. About media artist Junya Oikawa

Since 2011, Junya Oikawa has been invited to be a visiting artist at the Center for Art and Media Technology (ZKM) in Germany, and has been highly successful both in Japan and abroad as a media artist who creates sound environments. His works, which specialize in “sonic environmental art” that connects humans, nature, and digital expressions, have been

presented in diverse places both domestically and internationally, such as art museums, digital art festivals, gardens, historical sites, and public spaces, among others.<sup>1</sup>

Organizations that are the authority in dealing with pioneering digital expressions have highly acclaimed Oikawa's words. One such authority is the Quartz Music Awards, the largest electronic music awards in France, which awarded him the highest prize in the experimental and research category (for the award-winning work, "Bell Fantasia" 2012).<sup>2</sup> He is a "sound artist" in contemporary fashion who crosses multiple realms of music, contemporary art, and media art.

### **3. Field Study: Experiencing *Growing Verse 1* (Oikawa, 2016)**

#### **3.1 Overview of *Growing Verse 1***

This is a work that combines music and gesture in a unique program to explore a new means of communication between people. *Growing Verse 1* is his original installation project that pursues the "inter-effect of sound" and uses people's movements in the radiated light. It is a program that responds to body movements through motion detection, creating specific pitches and syllables through simple repetitions of moving and stopping. The program allows the user to perceive the sound generated in real time while consciously moving a part (or parts) of the body at the appropriate time.

*Growing Verse 1* has also been applied to the natural environment. For example, it was installed in the garden of the Archaeological Museum of Don Diogo de Souza. Here, multiple speakers automatically generate three-dimensional sound in response to the trees' shadows swaying in the wind and people's movements. The idea was to create an organic sound environment that connects nature, people, and digital technology (Braga/2018). It was also applied in the collaboration project with JR East's *Tokyo Moving Round*, where people drew pictures on the blackboard installed at JR Nishi-Nippori station, and the sound was played in response to their movements, becoming the station's environmental sound.

*Growing Verse 1*'s goal is not bound to having sound as the foundation, but to experience and enjoy sound through space. Simple vocal phrases played from the work create various sound expressions through the audience's movement, leading to the expression of the body's breathing. According to Oikawa, in this way, the audience will be able to understand how music is woven together.

At first, the audience is not told how it works, and is instructed to move their hands in the dark, relying on the light. Gradually, the audience will notice that the phrases they hear are changing in accordance with their own movements. This experience draws out the audience's desire to create changes in sound by their own will, and enhances their sensibility to sound.

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<sup>1</sup> As of now, he has track records in participation of international exhibition are at Tokyo Contemporary Art Museum (2010), seminar at Maison de la culture du japon a Paris (2016), sound installation at Chionin (2019), supervision of sound installation at JR Nishi-Nippori Station concourse, and installation of the interactive acoustic system (2020). For educational activities, he has conducted a sound workshop at Guangzhou Academy of Fine Arts (2019) and has been working in collaboration with educational institutions and corporate bodies, going beyond the realm of arts. At the moment, at The Design Museum Pinakothek der Moderne (Germany), one of the largest in its kind, he has been participating the centenary project for the birth of Bauhaus, working on a commissioned new sound work.

<sup>2</sup> Other awards include the best prize at the SEMIBREVE EDIGMA Award (*Growing Verse* no.1, 2016) in Portugal, and the critics' award at Bains Numérique (*Voice Landscape*, 2014), one of the largest digital arts festival in France.

The composition of such an environment creates a sensitivity and awareness of the various sound elements that cannot be experienced in everyday spaces, leading to eliciting the audience's latent expression. This is the kind of musical expression that only an artist can devise.

### 3.2 Possibility of *Growing Verse 1*

I experienced *Growing Verse 1* at Oikawa's atelier in ZKM, and examined its potential as a method of music education.

I believe that it is an effective educational method that uses media to present sound to draw out learners' sensitivity to sound. In this section, I will introduce the two possibilities of music education that I have considered through my experience with this work.

The first is to bring out the senses of sound expression and to increase the desire for expression. By blocking out the visual information, all the body's nerves are used only for listening to the sound. In this way, learners can fully appreciate the changes in the expression of the various sounds the work generates by sharpening their auditory senses in an unusual space. In addition, listening to the sounds that are synchronized with one's own movements and generated in various ways will increase the learners' motivation for expression. The longer the experience, the more they can sense the relationship between their movements and the sounds, and the more they can develop their own initiative to express the sounds they envision.

Second, it is an effective a method to learn music's resonance. In this work, sounds are generated according to the hands' movements, and after experiencing the interruption of the sound, the next movement is made, and the phrase is improvised. These experiences lead to not only melodic musical expression, but also a comprehensive human expression of tension and relaxation, stillness and movement. The concept of experiencing the interruption of sound and then continuing to the next action enhances the sensitivity to silence, listening to the sound's resonance, and thinking about the musical phrase. We believe that this kind of experience of being aware of resonance will have an effect on developing human expression and sensitivity.

In summary, *Growing Verse 1* allows students to experience improvisational musical expression through physical movement without having to acquire skills such as vocal or musical instruments, providing an opportunity for a wide range of people to experience the various elements of music.



Figure 1. *Growing Verse 1* (author's own experience)

Experiencing media art such as this work also enhances the sensibility to sound, such as tasting the expression of musical melody and being aware of the resonance, and provides an opportunity to express the power of expression in music education in a natural way in daily life.

This new experience of sound through information devices creates educational effects that go beyond conventional music education's framework, and is expected to be a potential new method of music education.

## 4. Practice of music education using media works

### 4.1 Acoustic Systems for Pitch Recognition (Oikawa, 2020)

Using media artists' original expression, this system is a program for learning pitch recognition, utilizing the characteristics of information devices. The program has two features, A and B. The first is "A: same voice feedback," and the second is "B: experience of a simulated resonant acoustic space."

In "A: same voice feedback," one's own voice is fed back in various pitches as one's own vocal quality, and one can experience the harmony of two voices in real time with one's own voice. By listening to the difference in the pitches' character from 1 to 8 degrees with one's own voice, it is possible to observe pitch understanding from a different perspective, which has been ambiguous when communicating with others.

"B: experience of a simulated resonant acoustic space" allows users to experience how their voices sound when they speak in a reverberant space, such as a Western church or concert hall. In ordinary everyday spaces, such as classrooms, there is little reverberation, and it is easy to become desensitized to sound. By listening to one's own voice with reverberation, an individual will be able to sense the sound characteristics that they would not have noticed in an everyday space.

Learners can enjoy these programs' characteristics that respond to their own vocalizations, and can face their own voices in an unusual acoustic space.

To examine the possibility of using this work in music education, I conducted an educational practice with three first-year students of T Junior College. The students were studying musical expression to become nursery school teachers, but according to a questionnaire survey, they were feeling uncomfortable with pitch recognition.

This practice's method was to ask the students to vocalize at an arbitrary pitch and listen to the pitch as the main tone of the major scale with feedback from the first to the eighth degree in turn through the program, and then ask the students to answer if the pitch was (1) the same, (2) different, or (3) could not tell. If they could not tell, I told them the pitch's number of degrees and asked them to listen again for confirmation. In addition, the students were asked to repeatedly listen to the pitches that sounded similar, such as the difference between the first and eighth degrees, and the perfect pitch of the fourth and fifth degrees alternately. After the practice, the test results were examined, and the participants were asked to answer about their impressions of this method.

As a result, all students were able to perceive the difference in pitch accurately. The students answered that the method via Oikawa's "Acoustic System for Pitch Recognition" was easier to hear than listening to mine and the students' own vocalizations.



Figure 2. Students practiced using Acoustic System for Pitch Recognition

## **4.2 Possibility of music education using media works**

I conducted a questionnaire survey of students and practiced using media to support acquiring pitch recognition to verify its potential as a method of music education.

We believe that the "Acoustic System for Pitch Recognition" helped students acquire a sensitivity to sound that the usual methods of music education could not express, and did this by using an unusual method of presenting sound using information devices' expressions.

In this section, we discuss the possibilities of music education using media works, based on this work's two features.

The two features of the information device's program used in this practice were "A: same voice feedback" and "B: experience of a simulated resonant acoustic space."

In "A: same voice feedback," listening to their own voices objectively helped the students feel pitch changes differently from listening to others' voices. Some students said it was easier to understand the difference when they listened to their own voices rather than others' voices. Some said it was easier to listen to their own voice than others' own voices because they did not have to match their own voice with others, which meant less psychological burden for students who were uncomfortable with pitch perception, and thus could concentrate on listening. We believe this allows them to face their own sense of pitch at their own pace and bring out their sensitivity to sounds that have not yet been expressed.

For "B: experience of a simulated resonant acoustic space" we asked the students to compare the two patterns of (1) listening with reverberation, and (2) listening without reverberation, and to choose which pattern was easier to hear. As a result, two of the three students who practiced this method answered that (1) listening with reverberation was easier to understand the difference in pitch. This suggests the importance of listening to vocalizations in an acoustic space with rich resonance to easily recognize pitch.

In summary, the ideas and methods of sound expression that are unique to media artists have the potential to draw out students' sound awareness and give them the opportunity to perceive changes in pitch.

By using the ideas and methods of expression media artists can provide, the nuances of sound that were difficult to convey through the conventional vocal exchanges between teachers and students could be easily perceived through using sound expression methods conjured by information devices. The use of information devices may make perceiving changes in sound easier.

## **5. Conclusion**

This paper examined the possibility of a new music education method in an information society through discussing educational practices using media artists' works and their expression methods.

With the advent of media artists, experiencing sound expression in a way that has never been experienced before is possible. We believe these media-based sound expression methods can potentially solve problems that conventional music education has not solved.

In the future, we must consider how to incorporate musical experiences new artists create, such as media artists, into music education, and how to utilize these experiences in the learners' development.

## **Addendum**

This research was conducted under approval from the research ethics committee of Tohoku Seikatsu Bunka University and Junior College.

This essay with addition and modification, is based on “Field research report on media artists’ works and educational methods” (2021), published on Educational Information Studies vol. 19.

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## **Research on the Problems and Causes of Chinese Traditional Music Teaching in Primary and Secondary Schools: A Grounded Theory Analysis of 4224 Teachers' Survey Results**

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### **Abstract**

After the 18th traditional Congress of the CPC and the consequent awakening of interest in traditional culture, Chinese traditional music has gradually attracted attention, becoming a stronger cultural force. It happened everywhere from the central government to rural areas, influencing everyone from professional scholars to frontline teachers. Recently, the issue of teaching traditional music has become an important topic in the field of music education in China. Teaching and learning traditional music in the classroom is an important way to transmit and develop traditional music culture. From a practical perspective, however, the efficiency of the teaching still does not meet the requirements laid out by the traditional culture strategy, failing to meet the current demand of transmission and development.

Based on the above considerations, this study mainly explored the real problems and corresponding recommendations faced by those in Chinese traditional music education. Through an unstructured questionnaire taken by 4224 music teachers from 26 Chinese provinces/municipalities, this paper analyzed the existing problems in the present approach to such teaching by using the analytical path of grounded theory. A total of 86 three-level codes (with 5746 reference points), five two-level codes, and two one-level codes were generated through the open coding, axial coding, and selective coding of grounded theory.

This study revealed the structural relationship between the internal problems (between teachers and students) and external problems (involving teaching conditions, subject contents, and organizing strategies). It also gave insight into the logical relationship between teaching's core problems (as the direct element of teaching-teachers, students, contents, and strategies) and the supporting problems (guarantee conditions), and then pointed out the key problems, core problems, and supporting problems existing in traditional music education in primary and secondary schools in China. Finally, we proposed three suggestions for traditional music teaching in China.

*Keywords:* Chinese traditional music, teaching, problems, countermeasures, primary and secondary schools

### **1 Introduction**

In the 21st century, especially in the time since 2012's 18th traditional Congress of the Communist Party of China, the inheritance and development of Chinese traditional culture has been paid increasing levels of attention at the traditional level. Through the introduction of a series of documents, this focus has led to strengthening schools' work in aesthetic education, promoting the overall development of excellent Chinese traditional culture education, and always emphasizing the inheritance and development of such culture; after all, publicity and popularization have proven to be an important part of school aesthetic education. The Ministry of Education issued *Guiding Outline of Perfecting Chinese Excellent Traditional Culture Education* [完善中华优秀传统文化教育指导纲要] in 2014, pointing out that the integration of this traditional culture and its education should be promoted in different stages of primary and secondary schools. In 2017, the State Council of the Central Committee of the Communist Party of China issued *Opinions on Implementing the Project of Inheritance and Development*

*of Chinese Excellent Traditional Culture* [关于实施中华优秀传统文化传承发展工程的意见], calling for the integration of traditional culture in all fields of cultural knowledge, art, and physical education. In 2020, the State Council of the Central Committee of the Communist Party of China issued *The Opinions on Comprehensively Strengthening and Improving School Aesthetic Education in the New Era* [关于全面加强和改进新时代学校美育工作的意见], pointing out that we should strengthen this kind of cultural education, cultivate people through aesthetic education in schools, and enhance cultural confidence.

School is an important place to implement aesthetic education, and teaching is the main way of imparting an aesthetic education in school. This generation of teenagers and primary and secondary school students are the best hope for traditional cultural development. Carrying out traditional music teaching for primary and secondary school students is a necessary link for promoting a student's confidence in traditional music culture and cultural inheritance. At present, the proportion of traditional music content included in the current versions of music textbooks becomes gradually richer. *The Current Compulsory Education Music Curriculum Standard* [义务教育音乐课程标准 (2011 版)] and *The Ordinary High School Music Curriculum Standard* [普通高中音乐课程标准 (2017 版)] both regard "promoting traditional music" as one of the concepts of primary and secondary school music curriculum.

Since the 1990s, it has been clearly put forward the goal of establishing "Chinese culture as the mother tongue of music education" [中华文化为母语的音乐教育] (Xie, J. X., 1996), but, after nearly 30 years of development, the effectiveness of current traditional music teaching in primary and secondary schools falter when compared with the requirements of the traditional aesthetic education policy and cultural development strategy in the new era; there are still many difficulties to be overcome, with the relevant scholars pointing out the current difficulties at different levels, such as "the weak inheritance of traditional music" (Fan, Z. Y. & Xie, J. X., 2008), the arrangement of traditional music teaching curriculum, the teaching content setting, and deep interpretation of culture and students' "practical skills of music" (Qiu, B. & Sun, J., 2018). As both a leader and participant of traditional music teaching, teachers have an important "speech right" to traditional music teaching. Thus, it is urgent to study the teaching of Chinese traditional music from the perspective of teachers, exploring its problems and causes.

## 2 Method

Grounded theory was proposed by American sociologists Anselm Strauss and Barney Glaser in 1967. Grounded theory is not a specific theory, but, rather, a research path or method (Chen, X. M., 2015). It is a bottom-up "constructive method", intended to collect data, construct the core concept of factual phenomena, and establish relevant "theories" (Chen, X. M., 1999). The construction of grounded theory can effectively find the core content in this field, allowing for the construction and development of this field. In this study, grounded theory is used as the method and paradigm, and Nvivo12 qualitative analysis software is used to conduct open coding, spindle coding, and selective coding for the existing problems for the teaching of traditional music in primary and secondary school classrooms. The core categories are formed by layer-by-layer construction, and the core problems are summarized.

The first step is to determine the survey content and data collection methods. In order to obtain direct question feedback from music teachers, this study adopts an open questionnaire for its investigation. The survey mainly focuses on what problems arise when music teachers teach traditional Chinese music. Initiated teachers list between one and three key issues based on their own teaching experience, distributing them across the country through the data research platform [问卷星]. Then is the collation of data information and the systematic coding of research content. Finally, through the construction of grounded theory, the problems present in the classroom teaching of ethnic music in primary and secondary schools are summarized, analyzed, and interpreted. In order to ensure better reliability and validity, this study invited relevant researchers to assist in the process of coding and analysis, as well as discussing and

unifying the "consistency" in the process of data analysis. At the same time, the data collection is supported by music teachers and researchers in various provinces and cities throughout the country. The purpose of the investigation is made clear throughout the process, and a relationship of trust is established between the respondents. In the coding, the relevant participants are questioned to ensure the validity and credibility of the data.

This study collected a total of 4224 questionnaires for music teachers in primary and secondary schools. The research samples cover almost all regions in mainland China. Among them, there are 1688 samples from Northeast China (accounting for 40%), 1510 samples in East China (accounting for 36%), 628 samples in Central and South China (accounting for 15%), and 315 samples in Southwest China (accounting for 7%). The remaining 83 samples are from North China and Northwest China. According to each teacher's professional development stage and the actual situation of music teaching, there is a uniform distribution in the teachers' teaching age structures and the distribution of the teaching periods. The structure of the number of years taught by the music teachers is as follows: 1243 (29%) in 1-5 years, 843 (20%) in 5-10 years, 985 (23%) in 10-20 years, 908 (22%) in 20-30 years, and 245 (6%) in 30 years. At the same time, in different stages of this teaching age, it covers all grades from primary school to high school, so it can be seen that the sample size reflects "heterogeneity".

The coding results are shown in Tables 1 and 2, two third-level nodes (selective coding), six second-level nodes (spindle coding), and 86 first-level nodes (open coding) are generated through the analysis of open coding, spindle coding, and selective coding of the grounded theory data. Table 2 is mainly divided into two categories based on different perspectives. With the perspective of educational subject-object, it was divided into internal problems and external problems. Based on the relationship between inside and outside classroom teaching, it was divided into two aspects—core problems and support problems.

*Table 1: first-level(open coding) and second-level coding(spindle coding)*

Open coding (Items)	Spindle coding (Items)
Students lack interest in traditional music ( 1014 ); Students ' traditional music knowledge is weak ( 580 ); Students ' understanding of traditional music is not deep enough ( 223 ); Students have less contact with traditional music ( 196 ); Students ' traditional music learning difficulties ( 61 ); Students know too little ( 28 ); Students ' traditional music learning attitude deviation ( do not attach importance to ) ( 28 ); Students lack a correct understanding of traditional music culture ( 27 ); Students cannot appreciate the beauty of traditional music ( 10 ); Students ' traditional music skills performance ( practice ) poor ( 9 ); Student discipline issues ( 8 ); Students ' low aesthetic identity ( 2 )	Students ' learning foundation and cognition of traditional music ( 2186 )
Teachers ' traditional music knowledge ( literacy ) is insufficient ( 701 ); Teachers lack awareness of traditional music ( education ) ( 256 ); Limited faculty ( 111 ); Teachers lack of traditional music knowledge training ( 80 ); Teachers do not attach importance to ( 68 ); Teachers ' teaching ability is poor ( 53 ); Teachers lack the ability to teach and research traditional music ( 12 ); Less development of teaching materials ( 18 ); Insufficient development of traditional music teaching in class ( 5 ); Teachers ' lack of awareness of inheriting traditional music ( 5 )	Teachers ' traditional Music Cognition and Teaching Ability ( 1309 )
Textbook content ( traditional music ) is not rich ( 296 ); Teaching ( content ) lacks systematic ( 99 ); The selection of teaching materials and students ' actual contact is less ( 80 ); The students in the teaching materials have poor acceptability ( difficulty ) ( 66 ); Less teaching materials ( 58 ); Cultural differences and limitations of traditional music ( region ) ( 43 ); The content of teaching materials keeps pace with the times ( cannot meet the needs of the society and students ) ( 24 ); Traditional music itself is complex, profound ( 8 ); Lack of traditional music perceptual materials ( 7 ); The teaching material lacks features ( 5 ); traditional music classroom teaching content fusion is not enough ( 4 ); Textbook repertoire quality is not high ( 3 ); The repertoire lack of emotional resonance with students ( 3 ); Less contact with traditional music teaching content and form ( 1 ); Limited to textbook content ( 1 ); The curriculum is unscientific ( 7 ); Traditional music classroom teaching arrangement is not reasonable ( 6 ); Cultural differences ( 16 ); Traditional music not recognized ( 1 )	The External Environment Influence of traditional Music Teaching ( 822 )
Traditional instruments into the classroom ( learning and practice ) less opportunities ( 148 ); Lack of students ' personal experience and practice ( 110 ); Teaching forms and methods are not rich ( 107 ); The popularity of traditional music teaching is not high ( 71 ); Less popularity of traditional music teachers ( 53 ); Teaching methods do not work ( 25 ); Teachers cannot effectively mobilize students ' interest ( 22 ); Teachers ' explanation depth is not enough ( 21 ); Teachers only talk about knowledge and ignore the cultural connotation of traditional music ( 15 ); Teachers ' teaching demonstration is poor ( less ) ( 10 ); Traditional music practice is limited ( 10 ); Let students learn the method is not clear ( in-depth study ) ( 9 ); Insufficient community activities ( 9 ); Teachers lack guidance to students ( 6 ); Traditional music classroom ( practice ) activities are limited ( 6 ); Teachers ' teaching of traditional music is not in place ( 6 ); Traditional music teaching goal formalization ( 6 ); School music education and traditional music heritage disjointed ( 6 ); Insufficient use of teaching aids ( 5 ); Singing difficult ( 5 ); Teachers can not effectively design teaching ( 4 ); Focus on repertoire analysis, cultural connotation explanation less ( 4 ); Teaching listening, lack of broadening ( 4 ); Teaching too much emphasis on technology ( skills ) ( 3 ); Teaching traditional music with western thinking ( 3 ); Teaching is a mere formality ( 3 ); Traditional music classroom teaching effect is poor ( 3 ); Lack of the latest traditional music propaganda ( 3 ); Teachers ' teaching methods are dull ( 2 ); Classroom teaching efficiency is not high ( 1 ); Lack of implementation ( 1 ); Difficulties in implementation ( 10 )	Content Structure and Curriculum of traditional Music ( 728 )
Lack of teaching related resources ( audio and video, text data ) ( 219 ); School traditional music teaching conditions are inadequate ( 148 ); Schools do not attach importance to ( 134 ); No attention ( 108 ); Insufficient classroom teaching resources ( 46 ); Poor learning atmosphere for traditional music ( 43 ); Parents do not pay enough attention ( 42 ); Limited classroom time ( 41 ); Less music class hours ( 26 ); The gap between urban and rural areas is obvious ( rural difference ); 12 Students ' heavy schoolwork ( 3 )	Traditional music teaching strategy and practice ( 701 )

*Table 2: Second-level (spindle coding) and third-level coding(selective coding)*

Spindle coding (Items)	Selective coding (Items)	Perspectives
Students' learning foundation and cognition of traditional music (2186) Teachers' traditional Music Cognition and Teaching Ability (1309)	Interior problems (3495)	Perspective 1
The External Environment Influence of traditional Music Teaching (822) Content Structure and Curriculum of traditional Music (728) Traditional music teaching strategy and practice (701)	External problems (2251)	
Students' learning foundation and cognition of traditional music (2186) Teachers' traditional Music Cognition and Teaching Ability (1309) Content Structure and Curriculum of traditional Music (728) Traditional music teaching strategy and practice (701)	Core problems (4924)	Perspective 2
The External Environment Influence of traditional Music Teaching (822)	Support problems (822)	

### 3 Result

Through grounded theory, three-level coding, and system analysis, the results of this study are summarized according to the following three aspects.

#### 3.1 Key problems: People's issues in traditional music classroom teaching

The problems faced by teachers and students are the key problems in the current approach to traditional music classroom teaching. The reason why this overall issue is called "key" is that the main body of education are the people involved. People have initiative and development, which determine the basis and direction of education.

According to the data analysis, the current students' interest in traditional music learning is low, the basic knowledge of traditional music is weak, and the understanding of traditional music is insufficient. Students lack correct understanding of the content in traditional music, preferring pop music. As something closely tied to "native language", traditional music has become a "strange field" in the minds of students; this "emotion" is one of the biggest barriers faced by teachers in teaching "traditional music".

At the same time, teachers are the main body of teaching, so data feedback has been collected about a lot of their problems. Teachers' traditional music discipline foundation, understanding, and ability are also the sources of outstanding problems in current traditional music classroom education. Teachers themselves lack in-depth understanding of and rich experience with traditional music. In the face of the content theme of "traditional music", most of them are using "professional accumulation" or temporary "knowledge remedies" in the student era (here, we should affirm the enthusiasm of teachers' learning, but still need to strengthen the persistence and systematic nature of their own learning). In the current situation, teachers lack a grasp of the "repertoire form" and "cultural connotation" of traditional music embodied and stipulated in music textbooks and music curriculum standards. The author also identifies some other relevant content in this survey. The results show that only 41% of music teachers have an above-average understanding of ethnic music (4% of them know it well), and, in the course of their own ethnic music knowledge advancement, this proportion has increased by 74% through "music curriculum standards and teaching materials", 46% through "books and documents related to ethnic music", and no more than 30% through the categories of "relevant training/lectures", "network resources", and "skills and cultural background". This also confirms the weak traditional music foundation of teachers, their singular approach to knowledge accumulation, and the lack of learning and training opportunities.

Of course, what is pointed out here is only one of the common problems, and there are current examples of excellent teachers should not be ignored. The “people” problem in teaching traditional music in the classroom is the key problem. As the “drivers”, “practitioners”, “developers”, and “beneficiaries” of traditional music classroom teaching, people are the key to realizing how to effectively teach traditional music.

### **3.2 Core problems: Practical issues in traditional music classroom teaching**

The teaching of traditional music in a classroom setting is the practical interaction between teachers and students, with traditional music content as the carrier and traditional music teaching strategies as the means. This dynamic “collection” composed of students, teachers, contents, and strategies is the core element of traditional music teaching. These prominent problems are, then, the core problems faced in such teaching. The reason why this problem is considered “core” is because it originates from the internal classroom teaching—the direct reflection of practice—and occupies the main component of node coding.

According to the data analysis, in addition to the “subject” problem of teachers and students, the knowledge structure, capacity, diversity, and systematic nature of traditional music content in current textbooks still need to be further improved, and, though there are problems of “keeping pace with the times” (in terms of teaching content), “the actual connection and emotional resonance of teaching content and students” are more prominent issues. The problem of teaching materials has always been the focus of the traditional music teaching research, and the construction of traditional music teaching materials using Chinese characteristics is the common aspiration of and direction for today's scholars. Of course, as mentioned at the beginning of the study, it is a certain fact that the richness and importance of traditional music content have been gradually strengthened in both textbooks and curriculum standards. There is still room for improvement when they are compared with the development needs of China's cultural strategy in the new era and the practices of music teaching.

At the same time, the organization strategy and practice path of traditional music classroom teaching are also core problems of current traditional music teaching. In practice, the problems of “insufficient entry of traditional instruments into the classroom”, “lack of students' personal experience and practice opportunities”, “only paying attention to knowledge explanation and ignoring cultural connotation”, and the “lack of effective teaching demonstration” are more prominent. Through this survey, it can be found that the practical ability of primary and secondary school music teachers has played a key role. The author believes that although the current situation has feedback on students' problems and teaching materials, in general, teachers cannot carry out effective teaching (design and implementation). As the leader of classroom activities, the important reason is that teachers cannot effectively transform the static “teaching material content” into the “teaching content” of students' learning, and cannot transform the “understanding of traditional music culture” acquired by themselves into the “cognition of traditional music culture” of students. This reflects the lack of teachers' deep understanding of the content of traditional music and “school-based development”, the lack of systematic cognition and long-term planning of students' traditional music learning, so it is unable to construct effective traditional music teaching practice strategy.

### **3.3 Support problems: The external guarantee issues of traditional music classroom teaching**

The external guarantee of traditional music teaching is the supporting problem of such teaching, which depends not only on its “attribute” outside teaching in the classroom and supporting the classroom, but also on its “contribution” in the periphery of the content node in the grounded theory construction.

According to the data analysis, there are some problems in the current teaching approach, such as the “limited resources” covering traditional music teaching, the “lack of attention” paid

to the curriculum and traditional music culture, and the lack of a class guarantee of music that is actually traditional. These problems mainly manifest in two aspects—one is the insufficiency of a safeguard of traditional music teaching's "material entity". This includes teaching-related external resources (folk songs, operas, instrumental music, dance music, and other audio, video, and text reference materials, etc.), teaching facilities (concert halls, multimedia classrooms, cultural centers, etc.), teaching equipment (folk instruments, clothing, etc.), and the arrangement of music courses, amongst others. Secondly, the traditional music teaching's "external concept" of guidance is also insufficient. At present, there is still insufficient attention paid by schools, parents, and society to ethnic music culture and its teaching in schools, which also produces an atmosphere and external environment that are not conducive to effective ethnic music teaching. The external support problem cannot be directly intervened and influenced by the internal factors of classroom teaching; instead, fixing them is restricted by external "management" and "social factors".

## **4 Discussions and suggestions**

### **4.1 Grasping the key elements: Highlighting the important value of people as the subject of aesthetic education with the goal of literacy improvement**

*The Compulsory Education Music Curriculum Standard* [义务教育音乐课程标准 (2011 版)] pointed out that excellent traditional music is an important part of music teaching, and that, through learning, students familiar with and loving the motherland's music culture enhance traditional consciousness and cultivate patriotism. *The Ordinary High School Music Curriculum Standard* [普通高中音乐课程标准 (2017 版)] also pointed out that students, through traditional music learning and artistic practice, become familiar with and love the music culture of the motherland, enhance traditional cultural confidence, and cultivate patriotism. The curriculum also pointed out that students need to accept the influence of traditional music culture from childhood, establishing the importance of inheriting traditional music culture consciousness. Although the curriculum standard does not specify the requirements of teachers' traditional music literacy, there is no doubt that their own traditional music literacy and understanding have a key impact on the effectiveness of teaching.

In order to improve the traditional music literacy of students and teachers, this study believes that, at the conceptual level, teachers and students must establish the subject consciousness of their own traditional music culture, and enhance the identity consciousness and inheritance consciousness of said culture. Only with such an understanding and concepts as the premise can the practice of traditional music teaching be truly implemented. At the content level, the "repertoire form" (genre, form, means of expression, etc.) and "cultural connotation" (style, habit, emotion, etc.) of traditional music embodied in and required by music teaching materials and curriculum standards should be used as the main indicators of students' development and teachers' teaching, and the generation of "teaching content" based on "material" should be emphasized. At the method level, we should strengthen the training of teachers when it comes to traditional music, as well as the scope of teaching and research, so that they can play the guiding role of teachers to students, enriching the methods and paths for improving students' traditional music literacy.

### **4.2 Focusing on the core content: Improving the key ability of traditional music teaching based on traditional music PCK**

At the core dimension of the problem, it can be seen that the solution of the current issues in the classroom should focus on teachers, improve the "key" ability of teaching through the development of teachers' own traditional music pedagogical content knowledge (PCK) and realize the "substantive" solution of traditional music classroom teaching problems. From the data analysis, it can be seen that the core problem highlighted in the classroom teaching of

traditional music in primary and secondary schools in China is the embodiment of the specific elements and basic connotations of traditional music PCK.

PCK makes up the core knowledge of teachers' teaching, which determines the core competence of such teaching. It was proposed in 1986 by Shulman, an American scholar, and has been rapidly developed and applied in China since 2000. PCK is based on the consideration of students' development, emphasizing that "teachers transform the knowledge of the subject into the process of students' understanding/internalization of knowledge when teaching specific content" (Chen, D. L. & Zhang, Y. Z., 2016). So, traditional music PCK is the core knowledge teachers have when teaching within the theme of "traditional music". It is the combination of the concept of "leading" in traditional music teaching, the knowledge of traditional music content, the cognition of students' traditional music learning, and the strategy needed by teachers of traditional music in a classroom setting. Understanding the PCK of the concept is the attribute of "knowledge", but it implicitly reflects a tendency of "ability", which has been agreed on by relevant scholars (Veal, 1999; Mavhunga & Rollnick, 2013).

Improving teachers' "key" teaching ability based on traditional music PCK is the core path to solving the current problems. Students themselves have "to be developed" and focus on "development". To truly solve the problems present in classroom teaching, we should start from the perspective of teachers and improve their ability to transform traditional music teaching. As Wang Cesan, a famous educator in China, said, "Teachers determine the direction, content, method, process, result and quality of teaching. Students are developing and growing, and all aspects are not mature. Their learning motivation, action mode and result cannot be subjectively self-generated and spontaneous, and they are mainly affected by teachers" (Wang, C. S., 1983 & 2018). The traditional music PCK is the core embodiment of teachers' traditional music teaching ability. This key ability based on the traditional music PCK is the "comprehensive ability" to solve students' traditional music learning difficulties and problems through the use of the corresponding traditional music teaching strategies for establishing the cognition of students' traditional music learning, guided by the dominant concept of traditional music teaching, and taking the "teaching content" of traditional music as the carrier.

### **4.3 Strengthening the guarantee of external support: Promoting the efficient operation of traditional music aesthetic education classroom in schools**

The importance of traditional music teaching, the guarantee of teaching resources, and the guarantee of traditional music class hours are determined by external management departments or social influences. Only by increasing the emphasis on traditional music education, strengthening investments in education funds, and improving the conditions and equipment support can we ensure the scientificity, rationality, and diversity of classroom teaching, ensuring its smooth development (Wan, P. G., Li, Y. F., & Chen, F. M., 2019). *The Compulsory Education Music Curriculum Standard* [义务教育音乐课程标准 (2011 版)] points out that "music teaching equipment is the guarantee to achieve curriculum objectives, should be configured according to the needs of different students of all kinds of teaching equipment." At the same time, we should strengthen the positive guidance of the social and cultural environment for teaching ethnic music in schools. In today's society, the influence the ideas of "modern popular culture" and "Western mainstream culture" have on the teaching of ethnic music is still serious, and the use of a "Western discourse system" in the teaching of ethnic music still exists. In the face of today's new situation, it is necessary to strengthen the support and guarantee of school music aesthetic education, improve the understanding and support of the concept of Chinese traditional music teaching, and take the teaching concepts of "Chinese culture as the mother tongue" or "Chinese music school" as construction goals. Education administrative departments at all levels, ethnomusicologists, music educators, and composers should take the policy and concept guidance as a starting point, drawing the blueprint of traditional music education in China (Zhang, L. H. & Yin, A. Q., 2012). In this way, the efficient development of school aesthetic education can be realized, the cultural education

value of Chinese traditional music teaching can be achieved, and the understanding, identification, and practice of traditional culture can be realized.

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## Musical Characteristics of Improvised Songs of 1-2 Years Old Infant

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### Abstract

The purpose of this study is to clarify the musical characteristics of improvised songs of 1-2 years old infants. It provides suggestions for clarifying aspects of music development in 1-2 years old infants.

Video recording of a typically developing infant, girl A (1 year 11 months to 2 years 6 months) was provided by her parents for me, and I obtained samples of 4 songs. In addition, I obtained samples of 4 songs of another typically developing infant, girl B (1 year 10 months to 1 year 11 months), whose video is distributed in "Musical Expressions of infants and young children" (supervised by The Japanese Society of Baby Science). A total of 8 sample songs were obtained from the two girls, and by transcribing them, musical characteristics were extracted from the melody, language, and rhythm categories.

As a result, the following three points were shown: (1) In the melody, there was shown to be a mixture of atonality, tonality, and uncertain pitch. This is considered to indicate the early stage of music development, (2) In the language, there was a mixture of song and word, lyrics that are not word, and onomatopoeia. This is considered to be a characteristic of the early stage of development during the language acquisition period where language and music are undifferentiated. In addition, some individual differences in the language development of the target infants were also appearing, (3) In the rhythm, no beat, 2 or 4 beats were mixed. This is also considered to indicate the early stage of music development.

From these results, it is shown that improvised songs of 1- 2 years old infants tend to have musical characteristics specific to the early stage of development and the language acquisition period. It provides suggestions for clarifying the process of music development in 1-2 years old infants and is thought to be useful for understanding infant music development during parenting and early childhood education.

*Keywords:* musical characteristic, improvised song, 1-2 years old infants, language acquisition period, development.

### Introduction

The purpose of this study is to focus on the musical expression of improvised song in 1-2 years old children during the language acquisition period, and to clarify its musical characteristics.

During the language acquisition period, young children often sing improved songs in their everyday life. Some of the intonation and prosody of words sound like rhythms, while others sound like melodies. Furthermore, some sound like the existing songs, while some sound like the impromptu songs. These improvised songs which sung by the young children were both song-like and word-like.

Nagata (1981a) observed musical expressions of children aged from 0 to 4 years old, and he clarified the developmental stage of the musical expression of infants and young children, which develops into "babbling expression", "speaking expression", "playing expression", "singing expression" and "improvisational expression". "Improvisational expression", which is synonymous with improvised songs, is observed from the latter half of the age of one, which coincides with the language acquisition period of aged about one to three years. In this study, I focus on 1-2 years old infants when improvisational expression begins, and attempt to clarify the musical characteristics of improvised songs during that period. Furthermore, Dowling (2002) showed "the development of the ability to control

attention in relation to the temporal sequence of event” and “the development of the ability to remember and reproduce rhythmic pattern” as aspects of the rhythm development of infant songs. In this study, I also examine whether the improvised songs of 1-2 years old infants have similar aspects.

It may be possible to find a part of the infant's musical development by identifying the improvised song of the infant as a musical expression specific to the language acquisition period and the early developmental stage and clarifying its musical characteristics.

## Methodology

The parents provided me with the video recording of improvised songs by a typically developing infant girl A (1 year 11 months to 2 years 6 months) and samples of 4 songs (Sample 1 to Sample 4, see the results and Table 1) were obtained. In addition, I obtained samples of 4 songs (Sample 5 to Sample 8, see the results and Table 1) of a typically developing infant girl B (1 year 10 months to 1 year 11 months), whose video is distributed in “Musical Expressions of infants and young children” (Konishi et al.2016) .

A total of 8 song samples were obtained from the 2 girls, and by transcribing them, musical characteristics were extracted from the categories of melody, language and rhythm. Due to the limited number of charts that can be shown, transcription examples of all sample songs cannot be shown. Therefore, the musical content of the song is described in the context in which the song was sung. It should be noted that permission for research and presentation was obtained from the parents.

## Results

The song context, musical content, and extracted musical characteristics of the eight sample songs are shown below.

### (1) Sample 1

This is a song that Girl A sang at 1 year and 11 months. She was piggybacked by her father and sang for 25 seconds. The tempo was about  $\downarrow = 135$ . She was piggybacked by her father and was shaken by her father from below and started singing happily. The first two bars of the singing could be transcribed as 2 or 4 beats in B-dur. I was able to transcribe the first two bars of the song, but after that it was more like a cheer than a song, and I couldn't hear the lyrics, so I couldn't transcribe many parts. The song she sang was in sync with the speed at which her father shook. In the middle of the song, as her father moved faster, her song became faster accordingly. At the end of the song, as the father rocked her faster, her cheering section was synchronized with it. At the end, the song ended with the father pulling her off his shoulder.

This song has the following five musical characteristics:

- Tonality, uncertain pitch
- Lyrics that are not words
- No beat, 2 or 4 beat

### (2) Sample 2

This is a song that Girl A sang at 2 years and 0 months. She sang it for about 12 seconds, like a monologue, while walking alone on the grass in the park. I couldn't feel the tonality of this song. I couldn't hear the lyrics as words, but at the end of the song, I could hear “Cook cook cook, cook cook cook(onomatopoeia)”. Finally, she stepped off the curb and shouted, “Ah!”. And she finished her song. The tempo was about  $\downarrow = 75$ , which was synchronized with the walking speed of the girl, so a feeling of 2 or 4 beats was felt.

This song has the following four musical characteristics:

- Atonality
- Lyrics that are not words, onomatopoeia
- 2 or 4 beat

### (3) Sample 3

This is a song that Girl A sang at 1 year and 11 months. In the same context as Sample 2, she sang like a monologue and the song was sung about 7 seconds. I couldn't feel the tonality of this song. Furthermore, the lyrics could not be heard as words. The tempo of the song was about  $\downarrow = 75$ , which was also synchronized with the walking speed of the girl, so the feeling of 2 or 4 beats was felt.

This song has the following three musical characteristics:

- Atonality
- Lyrics that are not words
- 2 or 4 beat

### (4) Sample 4

This is a song that Girl A sang at the age of 2 years and 6 months. She sang this song while spending time with her family and friends. The transcription clearly showed the tonality of D-dur and the feeling of 2 or 4 beats. She repeated the phrase "Eho, eho(onomatopoeia). Otukaida(Japanese).", and inserted another melody in between. I couldn't hear any words other than the lyrics shown above. The tempo was about  $\downarrow = 120$ . The video ended after 1 minute 27 seconds, but the song continued. Her "Eho, eho. Otukaida" sound representation was strong, and her father called her in the middle of her singing the song, but she responded and continued the song.

This song has the following four musical characteristics:

- Tonality
- Lyrics that are not words, onomatopoeia
- 2 or 4 beat

### (5) Sample 5

This is a song that Girl B sang at 1 year and 10 months. She sang this song like a monologue in the park at dusk. The tempo of this song was about  $\downarrow = 75$ , which was a slow tempo for about 48 seconds. The melody was dominated by semitone progression, and atonality was felt. The lyrics of the first two bars were unclear. After those two bars, it became her monologue. Her voice became stronger compared in when she started singing, as triggered by the words "Hira,hira(onomatopoeia)", and she sang "Hira, hira" in chromatic scales A and As, and continued to sing. After that, the song she continued with "Moiya...(not word)" felt like F-moll when transcribed. The melody of "Sugee, mei(not word)" decreased in a semitone, and the end of the song ended with Ges. As she sang, the song turned into words, which returned to the song. I couldn't feel regular beats in this song.

This song has the following five musical characteristics:

- Atonality
- Mixture of songs and words, lyrics that are not words , onomatopoeia
- No beat

### (6) Sample 6

This is a song that Girl B sang at 1 year and 10 months. She sang while spending time with her family in her home living room. There is no stable pitch in this song, but the 2 or 4 beats was clearly shown. The tempo is about  $\downarrow = 90$ , and it is a rhythmic song for about 44 seconds. She sang with the onomatopoeia of the drum "Tantatatan". She repeated the rhythm of  $\downarrow \text{♪♪} \downarrow$  five times. She changed the expression of the song by changing the position of the accent in the fifth bar. She raised the pitch of the 10th bar, divided the rhythm into 8th notes with  $\downarrow \text{♪♪♪♪♪♪}$ , and extended the 11th bar with a high note to express the excitement of the song. She raised the pitch of the 10th bar, divided the rhythm into  $\downarrow \text{♪♪♪♪♪}$ , and extended the 11th bar with a high pitch "Taan" to express the excitement of the song. At the end, her father joined in and sang the song with her and they laughed at each other to finish the song.

This song has the following four musical characteristics:

- Uncertain pitch

- Mixture of songs and words, onomatopoeia
- 2 or 4 beat

### (7) Sample 7

This is a song that Girl B sang at 1 year and 10 months. She sang while interacting with her father. The speed of the song was about  $\text{♩} = 105$ , and the song lasted about 1 minute and 19 seconds. Most of her songs had no tonality, regular beats, or words. She began singing “Kaa kaa kaa(not word)” in F, F, Es. In the third bar, the pitch was unstable, but her song changed to humming, and in the fourth and fifth bars, she sang in the Es and G pitches. After humming in 6th bar, she lowered the pitch with portamento from an indefinite high note. The lyrics of her song changed to the pronunciation “Bar bar (not word)”. In addition, she changed her pronunciation to “Daa daa daa(not word)” in bars 7 and 8. After that, the conversation between the girl and her father continued, saying “Utaeta(Japanese)” and “Utaetane(Japanese)”. She sang with clear pitches of G, Es, and G. The conversation between the child and the father continued. After that, her father sang with a clear pitch, “Uta-chan, kawaiiina, Uta-chan, kawaiiine(Japanese)”. After that, she sang “Nagagagagaa(not word)” at the pitches of C, Es, D, Es, and D, and then changed to humming with an unstable pitch that then became the phrase “Uta, tosan yobuno(Japanese)” in “Kotori no uta (Japanese nursery rhyme)”. Her father continued it, singing, “Yobunomo utade yob(Japanese)” and then “Pipipipipi, chichichichichi(onomatopoeia)”.

This song has the following five musical characteristics:

- Atonality, uncertain pitch
- Mixture of songs and words, lyrics that are not words
- No beat

### (8) Sample 8

This is a song that Girl B sang at 1 year and 11 months. She sang like a monologue in her home room. The tempo of the song was about  $\text{♩} = 90$ , and the song lasted for about 26 seconds. The prosody of words forms a melody, from the transcription example, the tonality of traditional Japanese music (tetrachord) could be seen. Additionally, at the end of the song was a word, and the onomatopoeia of “Tantaan” was seen. It can be inferred that her time signature is irregular because she freely stretches songs and breathes. Figure 1 shows an example of a transcription from this song (lyrics are in Japanese).

This song has the following four musical characteristics:

- Tonality
- Mixture of songs and words, onomatopoeia
- No beat

One day, a little bird came fly.

Improvised song by 1year 11months girl  
Transcription by Hirata Yoshiyuki

Vocal A ru hi ko to ri ga ton de ki ta

Vox. Son to ri wa o zi to un

Vox. So re wa o to o san ga "Otoochan" "Tantaan"

Fig.1 Example of a transcription of sample 8

Table 1 shows the list of extracted musical characteristics (real numbers and percentages). For example, four characteristics of atonality are found in all eight samples, indicating a percentage of 50%.

Table 1 List of extracted musical characteristics (real numbers and percentages)

	Melody			Language			Rhythm	
	Atonality	Tonality	Uncertain pitch	Mixture of song and word	Lyrics that are not word	Onomatopoeia	No beat	2 or 4 beats
Sample1		○	○		○		○	○
Sample2	○				○	○		○
Sample3	○				○			○
Sample4		○			○	○		○
Sample5	○			○	○	○	○	
Sample6			○	○		○		○
Sample7	○		○	○	○		○	
Sample8		○		○		○	○	
(Real number)	4	3	3	4	6	5	4	6
(Percentage)	50%	38%	38%	50%	75%	63%	50%	75%

## Discussion

In the melody, it had a mixture of atonality, tonality, and uncertain pitch. Rutkowski (1997) proposed nine stages of singing development in early childhood, and positioned “waivers between speaking and singing voice and use a limited range when in singing voice” in stage 2.5. In addition, Stadler Elmer (2011) proposed seven stages of singing development in infancy, and positioned “Intention to produce singing-like or speech-like vocalization” in stage 3. Thus, in early childhood, the ability to properly use speaking and singing voices is underdeveloped, and the mixture of atonality, tonality, and uncertain pitches is thought to indicate the characteristics of the early developmental stage. In the final samples (Sample 4, Sample 8), in which both the subjects A and B were older, tonality was found in the melody, which also indicates the developmental stage.

In the language, it had a mixture of mixture songs and words, lyrics that were not words, and onomatopoeia. Sonobe (1975) pointed out the existence of “non-songs, non-musical music, or pre-song songs, pre-musical music in the process of language life and development of language activities”. Sonobe named it “Ur-Music” and suggested that “Ur-Music”, the primitive musicality of infants, is an undifferentiated version of infants' language and music. Considering the concept of “Ur-Music” that Sonobe describes, Infant's improvised songs are considered to be an “intermediate” between music and language born from “Ur-Music”, whose music and language are undifferentiated. The linguistic characteristics of the eight sample songs shown above are thought to indicate the undifferentiation between music and language in early childhood. Lyrics that are not words and onomatopoeia show the characteristics specific to the language acquisition period. There were also some individual differences in language development between the two target children.

In the rhythm, it had a mixture of No beat, 2 or 4 beat rhythmic feelings, but regular beats that could be transcribed were found in all samples. And from the eight sample songs in this study, “ability to control attention” and “ability to remember and reproduce rhythmic pattern” shown by Dowling were found. It is thought that the musical characteristics specific to the early musical development period were also shown here.

As mentioned above, the improved song of 1-2 years old infants is a musical expression in which music and language are undifferentiated, which is specific to the early developmental stage of language acquisition. It is thought that a part of the musical development of young children was found here.

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## **The Becoming of Sounds in The Earth-Sky World: Against Tim Ingold's "Four Objections to the Concept of Soundscape"**

**Kento Takahashi**

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### **Abstract**

In recent years, the British social anthropologist Tim Ingold has given a great influence to wide range of fields such as philosophy, aesthetics, social psychology and so on. He criticized European concept of art. According to Aristoteles, for example, to make a work of art was considered as imposing forms internal to the mind upon external world. Ingold observes that both materials and humans are always immersed in the flow of air, therefore art is process of correspondence that grows while materials and humans are intertwined, in the flow of air. The concept of soundscape advocated by the Canadian composer R. M. Schafer (2005), who points out that music has been isolated from contact with other subjects such as the other arts and the environment, was criticized by Ingold. Ingold (2011) points out: 1) The landscape is not tied to any specific sensory register. In ordinary perceptual practice those registers cooperate so closely, and with such overlap of function; 2) We should not fall into the thinking that the power of hearing is inherent in the recordings, following the false idea of studies in visual culture that the power of sight is inherent in the images; 3) Sound and light are not the objects but the medium of our perception, we see in light and hear in sound; 4) Sound and light are infusions of the medium in which we find our being and through which we move. In order to clarify Schafer's contribution towards music education, this paper attempted to consider whether these objections are valid by corresponds to the original ideas of Schafer. An intensive literature research was undertaken as a method in order to elucidate Schafer's perception of the environment and sound education. *The Soundscape, The Thinking Ear* and *A Little Sound Education* by Schafer was examined. The findings were: Schafer attaches great importance to phenomenon such as rain and wind caused by air flow as the source of hearing and music making, and he was aiming for integrated art education to sharpen total sensorial acuity, without separating the functions of each sensory register. In conclusion, the author argued that Ingold's objections are not valid. On the contrary, the concept of soundscape is compatible with Ingold's ideas. The Sound education by Schafer has a potential that evolves into integrated art education that allows us to learn to correspond with materials in the flow of air with total senses. Both visual arts and music educators should apply sound education to integrated art education. It contributes to the interdisciplinary nature of music education.

*Keywords:* correspondence, environment, medium, soundscape, sound education.

### **Introduction**

#### **Ingold's Theory of Art**

In recent years, the British social anthropologist Tim Ingold has given a great influence to wide range of fields such as philosophy, aesthetics, social psychology and so on. A characteristic of his thought is that he considers anthropology and art to be an affinity. Anthropology is not study of and learning about people, but studying with and learning from them. Anthropologist goes forward on the process of life and transform within that process, with people. This method of research is called participant observation. Similarly, art is

studying with and learning from materials. Ingold describes art practice as following materials. Ingold (2011: 216) says:

.....the role of the artist – as that of any skilled practitioner – is not to give effect to a preconceived idea, novel or not, but to join with and follow the forces and flows of material that bring the form of the work into being.

What is important for all skilled practitioners, not just anthropologists and artists, is the art of inquiry. In the relationship between humans and materials in the environment, the process of inquiry and the process of making are synchronized. Ingold seeks to overcome the European concept of art. According to Aristoteles, for example, to make a work of art was considered as imposing forms internal to the mind upon external world. Ingold observes that both materials and humans are always immersed in the flow of air, therefore art is process of correspondence that grows while materials and humans are intertwined, in the flow of air. Ingold (2013: 108) says:

To correspond with the world, in short, is not to describe it, or to represent it, but to answer to it. ....it is to mix the movements of one's own sentient awareness with the flows and currents of animate life. Such mixture, where sentience and materials twine around one another on their double thread until – like lovers' eye-beams – they become indistinguishable, is of the essence of making.

Here, Ingold dares to avoid interaction, which has been used as a concept to indicate the relationship between two parties, and introduces the concept of correspondence. The implication of the prefix inter-, in interaction, is that the interacting parties are closed to one another, as if they could only be connected through some kind of bridging operation. In correspondence, by contrast, points are set in motion to describe lines that wrap around one another like melodies in counterpoint. What allows material and human to intertwine is the air that immerses them both equally. In other words, the air is the medium that makes perception possible in between the perceiver and what is perceived.

### The Medium in Gibson's Theory of Perception

It was James J. Gibson, an ecological psychologist, who discovered the importance of the medium in perceptual practice. What Gibson envisions is not a world made up of equivalently measurable space and time, but an "environment" as "the surroundings of those organism that perceive and behave" (Gibson 1985: 7). This environment is interdependent with the perceiver who moves around in it and perceives. The environment in which a particular community is formed and the members of that community are also interdependent. Therefore, the inhabitants of a particular place will have a way of behaving that is rooted in that place. Gibson's environment is described by the medium, substance, and the surfaces that separate them. The medium is the air for terrestrial organisms and the water for aquatic organisms. The first important characteristic of the medium is that it allows animals to breathe. Terrestrial organisms take in oxygen through inhalation and exhalation. In other words, without the medium, animals cannot survive. Second, the medium allows the organism to move. Animals that are not attached to the ground in a terrestrial environment, or to the sea floor or lake bed in an underwater environment, can move freely through the medium. Third, the medium reflects light, vibrates, and allows volatiles to diffuse through it, allowing the animal to see, hear, and smell. By being guided by the information in the medium, animals can control their own movement and behavior (Ibid:18). The medium is often filled with light, sound, or smell. Their information is inexhaustible. The observation of

the perceiver who perceives it will continue unceasingly as long as he lives. To live is to be keep on noting the facts of the world in which we live.

In active perception, information in the environment is not acquired by the receptors of the ear, skin, nose, tongue, and eye for each of the five senses, which have been assumed by conventional perception theories. This is because information is not constructed from the stimuli received by the receptors, but is already inherent in the environment, and the perceiver acquires it kinaesthetically in movement. The body of the perceiver does not have localized receptors as its parts, but the entire body operates in response to changes in the environment, constituting a system that continues to acquire information. Gibson (1966) proposed the five perceptual systems as an alternative concept to receptors: the orienting system, the auditory system, the haptic system, the taste-smell system, and the visual system. These systems work together against the same environment and pick up the same information.

## Weather-World

Ingold proposed the concept of "weather-world" to describe the world, emphasizing the importance of the medium (Ingold 2011: 96-97). The most important function of the medium, according to Gibson, is that it reflects light, vibrates, and allows volatiles to diffuse through it. However, the medium not only allows light, sound, and volatiles to pass through it, but also steepens in the perceivers entire being in it at all times. Ingold (2017: 40) says:

It (the air, added by the author) is not so much what he perceives as what he perceives *in*. Likewise, we see in sunlight whose shades and colours reveal more about the composition and textures of the ground surface than about the shapes of objects; we hear these textures in the rain from the sounds of drops falling on diverse materials; and we touch and smell in the keen wind that piercing the body - opens it up and sharpens its haptic and olfactory responses.

When humans relate to things in the medium, the quality of the relationship is tempered by the behavior of the medium, that is, the weather. Things are transformed by the behavior of the medium of weather. For humans and other terrestrial organisms, the medium of flux is the atmosphere. The word atmosphere is used in both physical and psychic contexts. However, Ingold (ibid: 79) considers the atmosphere to be neither, but a fusion of the cosmic and the affective. Atmospheric phenomena registered in the tempering or attunement of human moods and motivations to fluxes of the medium, and their mixture. Ingold defines light and sound as atmospheric phenomena themselves. They do not, as Gibson argued, reach the point of observation from a light source or sound source through a medium. They radiate from a source or sources and, as fluctuations in the medium, steepens in the perceiver and the perceived.

In the field of perception, there is neither a physical perceptual object nor a psychological perceptual subject, but only an atmospheric phenomenon that connects the affective and the cosmic. Ingold describes "fission / fusion reaction" as occurring between the perceiver and the perceived in the in-between region called the atmosphere. Ingold (2017: 99) says:

...in fusion, the star or the sun is *with* me, in my eyes. If stone touches through hands that have become stone-like, and if thunder listens through thunderstruck ears, then so, too, the sun and the stars.....look through sun-like and starstruck eyes. But in fission, I have escaped from myself and am abroad in the-cosmos, in among the elements. I am *with* them – *with* the sun and the stars, *with* wind and storm, *with* stone -while my body has become a ghost.

An example of “fission / fusion reaction” is a practice of sound art. The Japanese sound artist Akio Suzuki undertook an event entitled “*Hinatabokko no Kuukan* (the space of sunlight).” In 1988 he built two parallel brick walls on a mountainside in Kyoto. He simply set down between wall-to-wall from the sun rise and the sun set and opens his ears to the acoustic environment. He mentioned his experience in an interview by Shin Nakagawa (2007):

He noticed that he was indicating these sound sources such as the lark singing and wind blew up the trees by words while listening. He, therefore, tried very hard to not observe the acoustic environment. As a result of his obsession with listening to the whole acoustic environment, he could not listen to any sounds at all. However, he was relieved of his obsession when he heard the sirens from the seaport that afternoon. At that point, he decided to forget too much thinking and relax himself. And then his ears unfolded into the world like Gulliver's body growing into a giant in Swift's *Gulliver's Travels*. His whole body became ears. Since his ears infolded into the world, he could listen to a car kicking some pebbles on the other side of the mountain. His presence diffused in the sound of bouncing pebbles. Conversely, it was an experience in which he found himself in the sound.

### **Purpose and Method**

The concept of soundscape advocated by the Canadian composer R. M. Schafer (2005), who points out that music has been isolated from contact with other subjects such as the other arts and the environment. Nonetheless, this concept was criticized by Ingold devoting all chapter11 of his main book, *Being Alive*. Ingold (2011) points out:

- 1) The landscape is not tied to any specific sensory register. In ordinary perceptual practice those registers cooperate so closely, and with such overlap of function.
- 2) We should not fall into the thinking that the power of hearing is inherent in the recordings, following the false idea of studies in visual culture that the power of sight is inherent in the images.
- 3) Sound and light are not the objects but the medium of our perception, we see in light and hear in sound.
- 4) Sound and light are infusions of the medium in which we find our being and through which we move.

In order to clarify Schafer's contribution towards music education, this paper attempted to consider whether these objections are valid by corresponds to the original ideas of Schafer. An intensive literature research was undertaken as a method in order to elucidate Schafer's perception of the environment and sound education. *The Soundscape*, *The Thinking Ear* and *A Little Sound Education* by Schafer was examined.

### **Result**

#### **Soundscape Design**

*The Soundscape* is a book about acoustic ecology, which Schafer founded. Acoustic ecology is the study of the effects of the acoustic environment or soundscape on the physical responses or behavioral characteristics of creatures living within it. Contrary to Ingold's criticism, Schafer considers music and other human acoustic activities as a correspondence with the acoustic environment. Schafer (1994: 42) suggests that “listening” and “music making” are two sides of the same coin with onomatopoeia as an example:

In onomatopoeic vocabulary, man unites himself with the soundscape about him, echoing back its elements. The impression is taken in; the expression is thrown back in return. But the soundscape is far too complex for human speech to duplicate, and so it is in music alone that man finds that true harmony of the inner and outer world. It will be in music too that he will create his most perfect models of the ideal soundscape of the imagination.

When he coined the term soundscape in the late 1960s, the world's soundscape was in a state of deterioration. Since the industrial revolution, the soundscape has been filled with an excess of artificial sounds, both in terms of volume and density. These artificial sounds, with their loudness and flatness, masked local sounds and diminished the ability to hear, what he calls "clairiaudience", of the people who lived there. The devastation of the soundscape caused by noise is not simply a matter of a physical increase in artificial sounds. The most serious problem is the vicious circle in which the degradation of people's clairiaudience caused by noise leads to their widespread indifference to sound. Schafer (1994: 4) says:

Noise pollution results when man does not listen carefully. Noises are the sounds we have learned to ignore.

Mere physical noise regulation is a negative approach to the noise problem and cannot be a fundamental solution to the loss of clairiaudience. Schafer therefore advocated a positive approach to the problem of noise: soundscape design. For he, the soundscape is "the world as a huge musical composition, unfolding around us ceaselessly" (Schafer, 1994: 205). It is not artwork as a final product, but continues to be composed within the movement. It has no beginning and no end, and every human being is an audience, a performer and a composer. All the activities of all the people who live in the world make some kind of sound, and they intertwine to compose soundscape.

Therefore, the most important aspect of soundscape design is the education of children and the general public. The educational programme, Schafer devised for this purpose is the sound education. In *A Sound Education*, a collection of exercises, Schafer (1992: 11) mentions soundscape design:

To me soundscape design is not design from above or abroad but from within, achieved by stimulating larger and larger numbers of people to listen to the sounds about them with greater critical attention.

First of all, it is the teacher of the sound education who must become a soundscape designer before all others. He has to become a facilitator who supports each participant on his or her way to becoming a soundscape designer.

## Sound Education

*A Sound Education* consists of the following components:

- 1) Listening and the imagination of listening
- 2) Making of sounds
- 3) Sound and its socio-cultural settings

As an example of the first component, teachers might say to students, “Now take a sheet of paper and write down all the sounds you hear” or “Let’s go outside to a street corner. Stand on the corner for few moments with your eyes closed, listening to all the sounds moving around you.” The Sound education begins with listening carefully to the soundscape of the classroom, the space of students’ daily lives. Proceeding from a “listening walk” to sound guessing games, students turn their consciousness to some sound that is present in their daily lives. In that state, they might recall the experience brought on by some sound that they had heard previously along with the pleasure of that time, or they might discover a new dimension of a sound that they had previously heard only habitually. Furthermore, if they practice exercises (e.g., Sound Diary) or make a list of sounds they hear at home, listening who learned in a classroom spreads to all of life.

The second component is an activity in which the students themselves making of sounds. For example, teachers might say to students, “Imagine that this sheet of paper is a musical instrument.” In this exercise, students in a circle pass the paper around one by one, trying not to make a sound. By being conscious of not making noise, students become aware of the qualities of paper as a material and explore how they can correspond to the paper and their own bodies. And then, students have to find a sound that is different from the others. In the previous exercise, the students learned kinaesthetically about the feel, weight and resistance of paper. They create new sounds in the world through the path of their own correspondence with the paper, learned from their experience.

Students learn the third component—sound and socio-cultural settings—via exercises, such as, “Can you think of a pretty sound you could add to your room so that every time you opened the door you could hear it?” Soundscapes are full of inexhaustible possibilities for listening, and humans have the perceptual capacity to explore them and create new sounds. Students who are aware of these facts will continue to develop small practices of soundscape design in their everyday lives.

Schafer use of the concept of soundscape is not necessarily linked to a bias towards auditory. Schafer (1994: 237) says:

If the acoustic designer favors the ear, it is only as an antidote to the visual steress of modern times and in anticipation of the ultimate reintegration of all the senses.

he was aiming for integrated art education to sharpen total sensorial acuity, without separating the functions of each sensory register. For example, while working at Simon Fraser University, Schafer collaborated with the painter Joel Smith, and invited hairdressers and entomologists to teach courses on the sense of smell. Schafer (1994: 248) says:

For the child of five, art is life and life is art. Experience for a child is a kaleidoscopic and synaesthetic fluid. Look at children playing and try to delimit their activities by the categories of the known art-forms. Impossible. Yet as soon as those children enter school, art becomes art and life becomes life. .... I suggest this shattering of the total sensorium is the most traumatic experience of a young child's life.

### Against Tim Ingold’s Four Objections

In this section attempted to consider whether Ingold’s objections are valid by corresponds to the original ideas of Schafer. On the first objection, Schafer aimed reintegration of all the senses through soundscape design. In educational practice for soundscape design, he tried to prevent that children's experiences as a synaesthetic fluid would be sliced up along the line of the sensory pathways. On the second objection, Schafer, like Ingold, believes that the ears are not instruments of playback recorded sounds, but organs of careful observation.

He proposed the concept of soundscape and the practice acoustic ecology, soundscape design, sound education in order to regain the power of hearing. On the third and fourth objection, Schafer places great emphasis on the medium for human auditory practice. In the first chapter of *The Soundscape*, 'The Natural Soundscape', voices of the sea, the transformation of water and voices of the wind are mentioned. By quoting myths, poems and novels from all over the world, he describes the relationship between atmospheric phenomena in flux and the human beings who live immersed in them. Phenomena such as waves, snow and wind create a variety of rhythms in the world. By responding to these rhythms, the rhythms of the people living in the land are created. One of the exercises in *A Sound Education*, a "listening walk", makes the children aware of the variety of sounds they hear in the medium. Then, they experience a fusion with the soundscape.

## Conclusions

In conclusion, the author argued that Ingold's objections are not valid. On the contrary, the concept of soundscape is compatible with Ingold's ideas. The sound education by Schafer has a potential that evolves into integrated art education that allows us to learn to correspond with materials in the flow of air with total senses. Both visual arts and music educators should apply sound education to integrated art education. It contributes to the interdisciplinary nature of music education.

## Acknowledgements

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## **Exploring the Relationship between Music and Language: The Concept of Image by Gaston Bachelard and Ethnomethodology**

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### **Abstract**

The term “image” is highly ambiguous and can be interpreted by various meanings in our common conversation. In music education, the term image has been also used in a variety of scenes. There are many practical studies, which aim to take advantage of image in Japan. However, the question of what is image has no definite answer and few qualitative studies about image has been undertaken (Tange and Doi, 1981). Referring to the concept of image proposed by the French philosopher Gaston Bachelard, this research firstly revealed the nature of musical image in order to identify the problem of transforming image intendedly. And then I interviewed (semi-structured interview on one-to-one) a senior student at Hirosaki University in ethnomethodological approach. The interviewee freely talked about his musical image. Our conversation was recorded and analyzed. On this research, it was revealed that image was ambiguous and the degree how the interviewee could comfortably talk about image depended on the context including the relationship between interviewer and interviewee as well as interviewee’s musical preferences and so on. As a result, the following point of view came into being: Image is essentially changeable, amorphous and ambiguous, and has no particular meaning, therefore, it is danger to translate image of music into composers’ thoughts and messages, for example. Since we cannot describe the image of music precisely and strictly by words, music teachers should be more sensitive in terms of the use of the term image. In order to associate with music more musically, we music teachers should pay more attention to the relationship between music and language. My research attempted to enter that discourse. Prospects for my future research will be to attempt developing the methods, which can possibly handle the relationship between music and image (or presumably language), based on ethnomethodological approach.

*Keywords:* image, language, Gaston Bachelard, ethnomethodology.

### **Introduction**

The main objective of this paper is to survey the way people talk about musical image. Today, we could not ignore image when we think about music education at schools. It is because that “image” has been using widely in various situations. In Japan, image has not a little influence on school music education. There are so many researchers’ reports about musical image and many music teachers practice their music classes with using image in various ways. For example, students listen to music works and they express their images by playing the musical instruments, drawing pictures or writing reports according to their impressions. However, no teacher can explain exactly about what musical image is. What is image?

The Course of Study (the governmental curriculum, 2008, 2018) often uses the term image in order to explain the aim and methods for school music education. In the earlier edition, it was emphasized that students should perceive images when they listen to musical works. The COS (2008) also suggested that students should share their images thorough creative music making. In addition, the COS emphasized that students should actively perceive images through their appreciations and create their own works of music based their images. Shimizu (2017) pointed out that the COS considers image as indispensable for music education. He continued that music is not directly produced from image, but image can merely work as a suggestion. Ino et. al: (2018, p.50) explains:

Image is ambiguous impression imagined in students' minds like "feeling happy and lively," "it seemed as if taking a nap beside window on sunny day," "starting quietly, becoming gradually intensified and then, finished calmly," and it plays a role as the source of creative activity. (Translation mine.)

As it is mentioned above, the term image gives a quite strong impact on school music education. Tange and Doi (1981) pointed out that music teachers and pedagogues had no articulate definition regarding musical images. They undertook a questionnaire survey in order to analyze how people perceive their images through their musical experiences. As a result, images from a work of music are so different from person to person. For example, one imagined sunlight of spring and another imagined autumn atmosphere from the same works of music. They also pointed out that a famous musical work tends to give people a similar image, and individual preference of music influences on image. Tange and Doi concluded that research on music image had been undeveloped. Their research carried out more than 30 years ago. However, today's situation has not yet changed. Few studies have focused on musical image.

In this study, the author investigated the relationship between music and its image based on Bachelard's theory of arts and Garfinkel's ethnomethodology.

### **Ethnomethodology as a Method**

Bachelard is known as a philosopher of *Épistémologie* and Poetics. He worked to investigate of poem based on psychoanalysis and phenomenology, and developed the original theory of image, which focuses on material. Sakamoto (1968) noted that Bachelard tried to solve the problem of human creativity in both scientific and literary fields. Though his concept has sometimes been understood in the wrong way, since he gave his position as a phenomenologist, and criticized severely, some researchers put his theory remarkable significance in new ways in those days.

Bachelard focused on material image how the image appears on the text. He also investigated about what kind of image is experienced by readers. Bachelard defined imagination as two types in his early work *L'eau et les Rêves*, concerned with form and material (*l'imagination de la formelle / l'imagination de la matiere*). In addition, he classified images as form and material. Form - image is what usually we call "image," as visual image, for instance color or shape. On the other hand, material - image could be caught by four senses except for sense of sight, which carries texture, smell, weight. Bachelard said in preface of *La Poétique de L'espace* that he would adopt phenomenology as a research method on poem and its image. He noted that a superior poetic image brings astonishment to readers. Astonishment is equivalent to pleasure, because readers find completely flesh image, which they have never recognized. Astonishment creates happy experience in which we can have dynamic image. A human who recognizes image in a phenomenological manner accepts image as directly without through language. Furthermore, the image stimulates readers' creativity and takes the reader to revel of creator. The point is that an image generated by a great poet is enable to the reader to create image, as if the reader his/herself becomes poet, and the reader is noticed that his or her desire to produce something. A superior image reveals one's creativity, and poem which contains such images can be considered as fine poem.

Bachelard's latter thoughts have suggested some significant points of view in considering matter of the whole art, not only literature. First, astonishment reveals one's creativity. Bachelard stated that fine art works provoke a positive thinking that "I want to create something" and "It may be possible for me to create such a work". It indicates that the acceptance towards works of fine art can work positively. Bachelard suggests that the image of a certain work of music has nothing to do with the composer's thought. Thus, the relationship between musical works and its image can be considered arbitrary. He also thinks that the meaning of image cannot be defined by language.

The problems, which Bachelard pointed out can possibly be solved by ethnomethodology. Ethnomethodology was proposed by the American sociologist Harold Garfinkel, who began to survey the way people perform their daily actions. Garfinkel thought that people surely have some methods to carry out their social activities such as conversations and greetings. Based on a Garfinkel's theory it could be thought that people have some methods to talk about a work of music and its image.

In the next section, the author shows the results of an interview survey based on ethnomethodology.

## Analysis and Results

This survey targeted a senior student K and carried out as below:

Process1: K listened to five different pieces of music\*<sup>1</sup> and wrote his images freely.

Process2: K got a semi-structured interview\*<sup>2</sup>.

Question1: Please tell me whether you feel easy or difficult to describe the image of music.

Question2: Please tell me how you grab the image of music.

K is a senior student who majors in mathematics education. He was not good at music when he was a primary and junior high school student. After entering a high school, he joined school wind orchestra and started playing the instruments. He is not so knowledgeable about classical music and does not listen to music regularly.

K answered the two questions above: "It is not difficult for me to write the image down since I had been instructed the same thing exactly at my school periods. However, it is not easy for me to explain what image is about in the words. This is because image I felt were actually fuzzy and ambiguous. When I tried to describe image, I couldn't help thinking that there was no correct description of the image". It seemed that K was easily able to describe image of piece1, 2 and 4. Regarding piece1, he explained: "I associated the brasses' violent sounds and repeated rhythm with giant animals' roar and forced labor". As for piece2, he imagined a boy who takes a walk on a street on Sunday. K gave an account of piece4 *Fumon*: I know the piece so that I have never imagined with freedom. He said that he had been obsessed with image of a blowing wind while he listened to *Fumon* (in Japanese "fumon" means a pattern which drawn by winds on sandy place). K had a trouble to talk about image of piece3 and piece5. Regarding piece3, he stated, "I felt a vague impression, like mooning mood, wind blowing mildly, but I couldn't imagine anything anymore. At first, I imagined a sleeping baby, however, I also thought it was not necessary to be a baby. It was difficult for me to imagine a specific scene because the piece has not characteristic features but a simple structure." What he meant was that there is no correct image. After talking about the images of each piece, K listened to piece2 *Dolomiti Spring* ("dolomiti" means a part of the Eastern Alps) again, and mentioned that his image had changed. The followings are his new images: "a cool place with some mountain huts, flowers and filled in nature." In addition, he told that if he listened to the piece in different place on a different day, he would not surely perceive the first impression.

## Conclusions

Through this research, it was found that piece titles would strongly influence listener's image. K had already known piece4 and it seemed difficult for him to create a new image freely. Concerning piece2, his original image turned to another image, and this change was seemed irreversible. K judged piece1 and piece2 as plain, in other words easy to understand, and piece3 and piece5 as incomprehensible. It may be caused by musical structure. K seemed to produce image with help of musical features such as brasses' timbre ("giant animals' cry") or monotonous repeated rhythm ("labor facility"). As piece2 is made of a pentatonic scale which has ethnic vibes, it might be impressive and easy to imagine visually. Piece3 and

piece5 have fewer distinctive features, especially piece5 is a contemporary music piece so that it might be difficult for him to perceive any images. This study aimed to qualitative approach on interview. It is also necessary to elaborate analysis methods for interview data.

\*1 piece1: A.Mosorov, *Zavod* (Iron Foundry). piece2: Yasuaki Shimizu, *Dolomiti Spring*. piece3: D.Severac, *Les caresses de Grand 'Maman* (The caresses of Grandma). piece4: Hiroshi Hoshina, *Fumon* (Wind Ripples). piece5: Dai Fujikura, *Rare Gravity*.

\*2 Semi-structured interview is one of survey methods which has some prepared questions. In terms of the qualitative interview methods, Sakurai suggests the idea of interactive constructivism (2011). There are two features of interactive constructivism. First, it focuses on not only the content of the dialogue but also the style of speaker talking. Second, interviewees are respected, although they had been neglected. Sakurai states that speaker's talking is the temporary structure which produced by collaborative work of interviewer and interviewee. He also points out that one's experience is variable. It is because talking is under the rule of language so that speaker's experience is changeable unconsciously in dialogue. Sakurai applies ethnomethodology to his interview survey in order to analysis the way people talk about their experiences. This study refers to Sakurai's thought.

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## **Analyzing the Role of IT in Music Education Based on the Concept of Media by McLuhan**

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### **Abstract**

In the whirlpool of Covid-19, various music activities utilizing IT are being attempted. However, most of them have never escaped from an established system in music so far. Many music activities have been premised on other people. Thus, any music has been produced, developed, consumed and appreciated based on the socio-cultural settings. Because of the COVID-19 pandemic, we have an opportunity to rethink on what "music" is through IT. According to the Canadian philosopher and media specialist Marshall McLuhan (1964), media refers to everything that extends the human body and sensations (or the nervous system that underlies them) beyond their reach. McLuhan talks about how the medium affects human social life: He devised the laws of media based on four items: extension; obsolescence; retrieval; and reversal. A certain media goes through the simultaneous action of extension, obsolescence and retrieval, and then, its new potential is realized. While at the same time, reversal to another form as a new media is occurred. In this paper, the author clarified the effects of IT on music activities by applying it to the laws of the media in order to propose a brand-new music education curriculum based the use of IT. Literature research based on the concept of media proposed by McLuhan was undertaken as a method. The findings of this paper are:

- 1) IT extends musical activities. This extension process reconstructs the relationship between the sound and the body.
- 2) This process can also be as a shift from synchronicity to diachronicity.
- 3) IT plays an important role to regain the gestures and facial expressions, which was lost due to non-face-to-face or wearing a mask to the visual space.
- 4) IT, at the same time, diminishes the relationship between the sound and the body: we cannot expect a real human touch form virtual communication by tablet, for example.

In conclusion, the author pointed out that IT works to strengthen its diachronic aspect. It cannot be considered as a supplementation of musical activities, that is to say, no reversal by McLuhan has yet happened. Taking advantage of IT, we music educators, therefore, should attempt to create a more creative and productive "reversal" for children in music education.

*Keywords:* IT, Marshall McLuhan, the COVID-19 pandemic, media, reversal

## Introduction

The Covid-19 pandemic has made us separated from our physical connection. Some university classes and urban jobs are now done remotely. This newly imposed environment made the previous communication uncomfortable in many places. This is no exception in the field of music education. In the music activities, our physical as voice, gesture, facial expression, that is, body can be consider as important elements. Since we can't get together in the same space, we had to consider alternative way. Regardless of the Covid-19 pandemic, our lives are becoming more and more monopolized by IT. For example, smartphone get connecting our existence even far distance. Television and YouTube videos show us events on the other side of the world. Nowadays, buying and selling are done on the web, and we can also do a simple medical examination and prescription. So, the quickest and the most familiar way to do this was the use of IT. The same thing applies to music activities. We are trying various music activities utilizing IT. But these activities are merely considered as an extension of the familiar usage of technology. Most of them have not escaped from an established system in music so far. As the phone nullified the distance and make lost people's expression, IT affects us something. Is it a musical activity to perform individually and later edit them on the web? Is music something that can be satisfied by inconvenient IT? We can remind that our music activities assume others. Any music has been produced, developed, consumed and appreciated based on the socio-cultural settings. Imada (2015, p.87 translation mine) states:

We don't receive certain music as an acoustical signal, like a fax transmission, there are trying to decipher the various images that ring out from it. For there is no evidence that cultural heritage is imprinted in DNA and inherited, especially in music education, we can only explain the inside of music through its outside, culture, society, and environment.

It is the words that explain it. However, just as music has an "inexpressible emotion," there is a cliché (Imada, 2015, p.88) that says, "Music cannot be explained by words." McLuhan (1989, p.18) said:

• • • as the new artifact from or technology pervades the host culture as a new cliché, it displace, in the process, the old cliché or homeostasis to the cultural rag-and-bone shop, and older clichés are retrieved both as inherent principles that inform the new ground and new awareness, and as archetypal nostalgia figures in relationship to the new ground - all of which is accomplished with transformed meaning.

In music, what are the "older clichés" that can be recovered through the penetration of new technologies. We have an opportunity to reconsider what is music thanks to inconvenient music activities using IT.

## Methodology

According to the Canadian philosopher and media specialist Marshall McLuhan (1964), media refers to everything that extends the human body and sensations (or the nervous system that underlies them) beyond their territory. McLuhan talks about how the medium affects human social life: He devised the laws of media based on the following four items: extension; obsolescence; retrieval; and reversal. A certain media goes through the simultaneous action of extension, obsolescence and retrieval, and then, its new potential is realized. While at the same time, reversal to another form as a new media is occurred. McLuhan (1989, p.3) states:

Technology stresses and emphasizes some one function of man's senses; at the same time, other senses are dimmed down or temporarily obsolesced. The process retrieves man's propensity to worship extensions of himself as a form of divinity. Carried far enough man thus become a "creature of his own machine."

He describes these four functions in the structure of a tetrad (see Figure 1). They each point to the followings (McLuhan, 1989, p.9):

- A: What does any artifact enlarge or enhance?
- B: What does it erode or obsolesce?
- C: What does it retrieve that had been earlier obsolesced?
- D: What does it reverse or flip into when pushed to the limits of its potential (chiasmus)?

The chief utility is that it raises the hidden ground to visibility, enabling the analyst to perceive the double action of the visual (left hemisphere) and the acoustic (right hemisphere) in the life of the artifact or media (McLuhan, 1989, p.9). Schafer (1977, p.110) points out about Satie's furniture music.

When Satie designed this entertainment for the intermission of a play at a Paris art gallery in 1920, he intended that the spectators should move about and ignore the music, which was to be regarded merely as so much upholstery. Unfortunately, everyone stopped to listen. Music was then still something to be prized; it had not yet flipped over to its new function as background drool; and Satie had to rush about crying, "Parlez! Parlez!"

This example shows that they are only aware of the visual effects of the new medium of Moozak. Visual space brings us to sequential understandings such as the music which built on the strength and weakness like a perspective. On the other hand, acoustic space brings us to simultaneous relationships, for example, such as acoustics themselves. By the laws of media, we will be able to recognize the influence of certain media total comprehensive. A certain media goes through the simultaneous action of extension, obsolescence and retrieval, and then, its new potential is realized. While at the same time, reversal to another form as a new media is occurred. In this sense, Marcel Duchamp's fountains and contemporary background music listening are reversals of figure and ground. This idea of figure and ground is also used by McLuhan in many of his books. Schafer (1977, p.152) describes this concept as follows:

According to the gestalt psychologists, who introduced the distinction, figure is the focus of interest and ground is the setting or context. --- In the visual figure-ground perception test, the figure and ground may be reversed but they cannot both be perceived simultaneously. --- Whether a sound is figure or ground has partly to do with acculturation (trained habits), partly with the individual's state of mind (mood, interest) and partly with the individual's relation to the field (native, outsider). It has nothing to do with the physical dimensions of the sound,

The laws of media attempt to perceive this supposedly imperceptible figure and ground at the same time. Our eyes, looking in the rear-view mirror (McLuhan, 1989, p.149), will always notice new situations later on. What McLuhan refers to as "reversal" occurs as a result of the figure and ground switching positions and acting in a complementary manner. The simultaneous will emerge from the sequential, the mythic from the historic, acoustic from visual space (McLuhan, 1989, p.107). "Reversal" may be the possibility of new music. From here, it will clarify the effects of IT on music activities by applying it to the laws of the media.

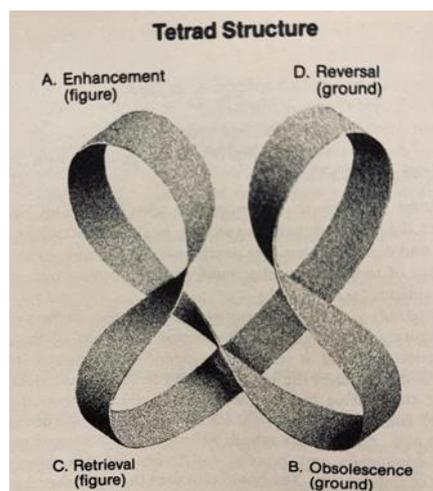


Figure 1. Tetrad Structure.

## Result

First, points of extension by IT are “space and time” on our music activities, in short visual properties. We needed to get together in same space and time on conventional music activities. For example, that is music room. IT made music room in virtual space, In the sense that we can get activities likewise we are all there even if it is in a different space and time. Even if not at the same time, the individual performances can be edited and combined into a single performance, allowing the overall performance to be reproduced and shared after the fact, as well as having archival value as a teaching tool. In this sense, we can get a "vision" that transcends space and time. If the gathered participants have never met before, what is displayed on the screen was a uniform size image of the participants, their names, affiliations and so on. The participants will suddenly see on the device screen the diachronic aspects that they have understood in the process of the activities. Before the individual body enters into a relationship, it can judge and perceives others through its enhanced "vision." The next point to obsolesce is "auditory and tactile." IT enables place and time unbound musical activities, but elaborate activities are still technically difficult. The activities in virtual space are crude compared to the actual sound environment, and the timing is disturbed by the quality of the Internet environment. The virtual space makes it difficult to feel the gestures, breaths, and air vibrations of others while singing or playing. In addition, communication that used to be done by talking with others, calling their names, or tapping them on the shoulder is now done by raising hand marks or chatting. If there are dozens of participants, it will take some time to distinguish whose voices it is when someone speaks with the mute off. The point to retrieval is the process of regaining a sense of "Individual" through the decline of the conventional groups. The communication that we used to take for granted will be obsoleted, and this will be accomplished inconveniently by IT. This can be described as a reaffirmation of the physicality by the Internet environment. Depending on the points of extension and obsolesce that, the authoritative relationship between teacher and student, between senior and junior, and the structural relationship between presenter and listener that presently exist in the music room will be made more unified in the virtual space. We reaffirm the collective through the individual. For example, although it is not something that should be encouraged, we can watch videos that interest you on YouTube while attending online classes. In this way, extension, obsolesce, and retrieval are simultaneously and that is a complex inextricable part of the other. When these are pushed to the limits of their potential, they reversal into something else. Verifiable event has not yet occurred to about reversal. As mentioned in obsolesce, the time lag that occurs unintentionally due to a good or bad Internet environment can be interpreted as a reversal by considering it as an interesting rhythm that occurred by chance (serendipity).

## Conclusions

From the above, it can be inferred that IT causes a transformation of the ratio of auditory space to visual space for musical activities. According to McLuhan (1989, p8), visual space has connected of things sequentially, and it has various centres that are separated by fixed boundaries. On the other hand, in auditory space, various processes are concurrently related to each other, have no boundaries, and have centres everywhere. By the relationships that have been simultaneous and coexistent in the auditory space are uniformly placed on the screen, or to transform the time axis into a sequential one by reconfiguring it through the integration of recordings and sound recordings, extension of space and time has made possible. Extension is achieved by treating the conventional sound and body visually, that is, by thinking like placing notes on a musical score. What obsolete is precisely the auditory space lost through extension. Initially, the point of retrieval was thought to our communications lost by the Covid-19 pandemic. But the essence of the matter is that we have regained our individualities. We are now trying to use IT to regain the lost communication. The musical activities that take place there are tools for communication. There is no need to use IT if you don't assume the presence of others. Conversely, it can be said that the existence of others and the way we relate to others in our current musical activities are determined in such a way. Although a clear reversal has not yet occurred, it may be represented by a change in people's perceptions, such that they interpret the coincidence of IT as serendipity. In the future, we should try to use IT to achieve a more creative and productive "reversal" for children in music education.

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## The Combination of Chinese Traditional Opera "Tea Picking" and Contemporary Music Lesson

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### Abstract

This paper takes the music class of Fuzhou Preschool Normal College, Jiangxi Province, China as a case study to analyze the different attitudes of students to the traditional Chinese opera—Fuzhou tea-picking opera which has been introduced into the music class of the school. The purpose of this study is to meet the needs of local cultural inheritance, 150 local college students who are non-music major were selected from three classes to carry out the music course inheritance practice for four months in Fuzhou Preschool Normal College. This course practice is divided into three stages, namely: 1) student evaluation, 2) teaching practice, 3) assessment of learning results. The aim of this study is to compare the attitude changes of participants before and after taking the course through a questionnaire. In addition, analyze the main factors that affect participants' attitudes through the results of the questionnaire. I used SPSS17.0 to analyze the reliability of the questionnaire. Mixed-methods design is employed within the study. Quantitative research method approach is used for data statistics of questionnaire results. Qualitative research method approach focuses on analysis the meaning of the of statistical data results. The study found that the implementation of the course significantly improved students' positive attitude towards Fuzhou tea-picking opera, and curriculum recognition and cultural recognition are two key factors that affect students' positive attitude towards Fuzhou tea-picking opera. The implementation of the course has played a positive role in promoting the inheritance of the tea-picking opera. Although this is a study on the inheritance of traditional Chinese music course, the ideas of course design and research results are applicable to other traditional Chinese music, and even to other countries which have needs for the inheritance of traditional music.

*Keywords:* Fuzhou tea-picking opera, Attitude, Curriculum recognition, Culture recognition, Inheritance

### Introduction

There is a natural connection between curriculum and culture (Li, 2011). Huang (2002) stated that curriculum culture is in essence, a kind of spiritual wealth. This spiritual wealth is not only manifested in the implicit ideology such as curriculum consciousness, curriculum thought and curriculum value, but also in the explicit institutionalized form such as curriculum system and curriculum policy. Before the existence of an institutionalized form of education, people learnt culture through the rote method. (Jin & Yang, 1997).

Music curriculum is an important aspect of music education, and plays a vital role in disseminating the culture to the people. According to Zhang and Wang, (2011) Chinese music education system is "imported" from abroad and therefore, lacks "Chinese characteristics" and "originality". This has also been corroborated by Zhang & Yin, (2012) as they too believe that most Chinese students are educated by a Westernized music education system that has led to a gap in the appreciation of traditional Chinese art forms.

The aim of this paper is to study the perceptions of students towards Fuzhou tea-picking opera, and to explore the factors affecting the learning attitudes of students. The paper was guided by the following research questions:

1. What are students' perceptions towards Fuzhou tea-picking opera prior to participating in the lessons?
2. What are the main factors that affect students' perceptions of Fuzhou tea-picking opera?
3. What is the influence on the inheritance and development of Fuzhou tea-picking opera after it has been set as a music course?

## Methodology

A survey was conducted in Fuzhou, Jiangxi, China, on 150 college students aged between 18 to 21, in three classes of Fuzhou Preschool Normal College, which is a university that specializes in training kindergarten and primary school teachers. These participants were non music major students who had no prior knowledge of Fuzhou tea-picking opera. They underwent four-months of training on Fuzhou tea-picking opera. The researcher conducted this study using a mixed-method approach involving quantitative and qualitative data collection via a questionnaire (Colwell, 2006; Creswell, 2015; Hartwig, 2014;).

The course was designed in three stages. 1)The first stage was student assessment. This stage adopted the form of questionnaire survey. The goal was to understand the students' basic musical ability, as well as their attitude towards Fuzhou tea-picking opera. 2)The second stage was the curriculum teaching. In this stage, Kodaly teaching methods were applied to teaching practice. The goal was for students to achieve the ability to recognize, read, sing, and write music notes and also be able to act out simple scenes of Fuzhou tea-picking opera. 3) The third stage was the results stage: assessment of learning results. Questionnaire survey and interview were adopted in this stage. The objective of this stage was to understand students' mastery of the course, and to compare the changes in students' attitudes before and after learning the art form along with the factors affecting the changes in students' attitudes.

### First Stage : Student Assessment

The questionnaire consisted of three components, and required participants to give their response according to the differential scale:

1. Demographic information, which included the age and gender.
2. Participants' basic cognition of music, which included their awareness of music notation.
3. Participants' attitude, which included their knowledge about Fuzhou tea-picking opera.

A total of 150 participants were asked to complete the questionnaire; the resulting sample was composed of 139 participants (with a response rate of 92.6%). I used SPSS17.0 to analyze the reliability of the questionnaire. The results show that the reliability of the questionnaire was (r=0.818). According to Devellis (1991) a data of questionnaire between (r= 0.80~0.90) is high reliability.

Table 1. Student Assessment Questionnaire of Fuzhou tea-peaking opera

Questionnaire Topic	100-80% agree	79-60% agree	59-40% agree	39-20% agree	19-0% agree
I can read music score	4.32%	10.07%	10.07%	58.99%	16.55%
Don't know it's intangible cultural heritage	31.65%	32.37%	20.14%	10.79%	5.04%
Unpleasant to hear	18.71%	23.02%	31.65%	20.86%	5.76%

I like this art form	13.67%	14.36%	42.45%	21.58%	7.91%
Can accept its singing	11.51%	19.42%	34.53%	25.18%	9.35%
The melody is good	12.23%	33.09%	33.09%	16.55%	5.04%
I often listen to Fuzhou tea-picking opera	2.88%	11.51%	22.30%	27.34%	35.97%
I like lyrics	8.63%	13.67%	35.97%	24.46%	17.27%
I hope to open a course on Fuzhou tea picking opera	10.07%	18.71%	27.34%	28.78%	15.11%
its necessary to open this course	10.07%	24.46%	30.22%	25.90%	9.35%
It is necessary to set up a music class of the nationality	15.11%	28.78%	30.94%	20.86%	4.32%

### Second Stage : teaching practicing

This course was taught using the Kodaly method. The Kodaly method is an approach to music education that is rooted in the believe that music should be a social and cultural experience (Zhang, 2016). One of the main features of the Kodaly method is the emphasis on using folk songs to teach music. Therefore, it was most apt to adopt the Kodaly method to teach Fuzhou tea-picking opera to the participants of this research. Singing was an important element that was used to teach this cultural art form which also in line with Kodaly's method. Finally the use of Tonic sol-fa to teach singing is also part of the Kodaly teaching principal. Kodaly used the Tonic sol-fa, which is consistent with the concept of the traditional Chinese pentatonic scale's Tonic sol-fa. The researcher used the same Tonic sol-fa concept to teach the notes of Fuzhou tea-picking opera along with John Curwen gestures to help participants establish the concept of pitch. The teaching plan was divided into 4 steps, as explained below.

1. The use of alphabets to represent different pitches. Chinese traditional music uses mostly numeric numbers like 1,2,3,4,5,6,7 to represent the seven different pitches, with the zero for a rest. The Kodaly method used alphabetic music score of do,re,mi,fa,so,la,ti to represent the seven different pitches in the Western music scale. In this research, the researcher used the Kodaly method of teaching of alphabetic music score.

2. Pitch recognition. The musical gesture diagrams of John Colvin was used in the course to help participants understand pitch positions.

3. The recognition of rhythm. The rhythm reading method of Chinese musician Du Yaxiong was used to help participants identify rhythm. For example, the whole note "X---" is pronounced "Chang(长)-ang-ang-ang"; the rhythmic representation of the quarter note "X" is pronounced "Chang(长)"; the eighth note with a half beat "X" is pronounced "Duan(短)"; and a quarter beat sixteenth note "X" is pronounced "Cu(促)", etc.

4. The singing of Fuzhou tea picking opera. Most of the singing of Fuzhou tea-picking opera are based on traditional Chinese pentatonic scales, namely gong (宫), shang (商), jiao (角), zheng (徵) and yu (羽) which represents do, re, mi, so and la respectively. The core of this scale organization is a group of three adjacent notes. Such the Fu tune "The good life in these few years is because of my intelligence", which is a three adjacent notes with so-mi-re and do-la-so as the core. The participants were trained in a three adjacent notes of solfeggio before singing.

### Third Stage : Assessment of Learning Results.

This stage looks at the responses from the participants after completing the course on tea-picking opera. Assessment of learning refers to the measurement of the degree to which students demonstrate their achievement of the intended learning outcomes of a course of study as demonstrated by their performance in assessment tasks (Lebler, 2008). Importantly, assessment practices can be used to shape not just what students learn, but how they go about that learning (Biggs, 1987; Prosser & Trigwell, 1999).

The same number of participants were asked to complete a follow up questionnaire on their experience after completing the course on Fuzhou tea-picking opera. The 139 participants who completed the questionnaire the first time were asked to complete the second questionnaire; the resulting sample was composed of 138 participants (with a response rate of 99.28%). The questionnaire was aimed to illicit information from the following three main areas:

1. Assess participants' mastery of the course;
2. Compare the changes of participants' attitudes before and after learning
3. Factors affecting the change of participants' attitude.

Table 2. Assessment of Learning Results Questionnaire

Questionnaire Topic	100-80% agree	79-60% agree	59-40% agree	39-20% agree	19-0% agree
I dislike this art form	3.62%	7.25%	39.86%	34.78%	14.49 %
I can sing 4 kinds of singing	17.93%	23.91%	35.51%	12.32%	10.87 %
I hope to set up this course	6.52%	30.43%	40.58%	13.04%	9.42%
I can singing not because of cultural recognition	10.14%	23.19%	31.16%	22.46%	13.04 %
I can singing not because of simple course design	6.52%	18.84%	36.96%	28.99%	8.07%
The melody is not good	2.9%	5.07%	39.13%	36.23%	16.67 %
I hope to open a course on Fuzhou tea picking opera	6.52%	30.43%	40.58%	13.04%	9.42%

### Result

The results of this study are presented from the data gathered from the questionnaire from the first and third stage. The data of 100%-60% represents a positive attitude to the question, and 59%-0% represents a negative attitude to the question.

### Results of the first stage questionnaire

The results of the questionnaire have reflected the basic musical quality of participants and their understanding of Fuzhou tea-picking opera from six aspects. 1) Can read music score. According to the results of the survey from students in three different classes, only 14.39% of the participants indicated that they were able to read music score, while 85.61% were unable to music score. The cognition and proficiency of music knowledge of participants is much low, and they do not have basic musical ability. 2)The understanding of the concept of intangible

cultural heritage of tea-picking in Fuzhou. Only 36.08% of the participants showed a positive attitude towards having any knowledge of Fuzhou tea-picking opera as an intangible cultural heritage, while 63.92% of the participants have no knowledge of the local intangible cultural heritage. This further illustrates the lack of traditional culture and music education and awareness even among teachers who will eventually be educating the young children in schools. 3) The degree of acceptance of Fuzhou tea-picking opera. Prior to this research, 71.94% of the participants have a negative perception towards tea picking performances in Fuzhou, as only 28.06% of them liked it. 4)Views on melody of Fuzhou tea-picking opera. Before the course began, 54.68% of the participants showed a negative attitude towards the music of the tea-picking art form as many indicated that the melody of Fuzhou tea-picking opera was not beautiful, while only 45.32% of the participants thought the melody was beautiful. It can be seen that most participants do not like Fuzhou tea-picking opera. 5)Views on the lyrics of Fuzhou tea-picking opera. To this question, 77.7% of the participants showed a negative attitude towards the content of the lyrics. The reason was that most of the participants who have been interviewed thought the lyrics were old-fashioned and outdated. 6)The willingness to set up a course on Fuzhou tea-picking opera. Before the course was offered, 71% of participants indicated that there was no need to set up a course on tea-picking opera as they did not see the need for it. Only 28.78% of the participants were in favour of setting up a course. This indicated a low expectation for the Fuzhou tea-picking opera art form.

### **Results of the third stage questionnaire**

Before the course began, the participants' enthusiasm for Fuzhou tea-picking opera was not high. However as the course progressed there was an increase in the enthusiasm level among the participants. By the end of the program, 89.13% of participants showed a positive attitude towards Fuzhou tea-picking opera. The data was increased about 3 times as much as before the course began, as the acceptance level of participants increased significantly. In this practice, participants learned 4 different Fuzhou tea-picking opera singing, This course has achieved good learning effects. 77.35% of participants showed a positive attitude because the level of 40%-100% means they can sing more than 2 kinds of singing.

From a semi-structured interview with 138 participants after the course, could be concluded that cultural identity, curriculum design, teachers' factors, students' internal factors and other five aspects are the main factors which have resulted participants' positive attitude towards learning. A further investigation of the five factors showed that 35% of the participants were motivated by the simple course design, while 32% of the participants were motivated by the recognition of the culture. 21% of the participants think that the key factor in increasing an appreciation for Fuzhou tea-picking opera is in the ability of the teacher to sing well and demonstrate the right techniques. After the program, 9% of the participants indicated that they were interested to perform tea-picking opera.

The questionnaires also asked participants on their willingness to set up a Fuzhou tea-picking opera courses. At the end of the course, the willingness of participants increased. The number of participants who specifically opposed to set up courses decreased from 15.11% to 6.52%. Participants who opposed to take the course decreased from 28.78% to 13.04%, indicating that the program had a positive impact on participants' perception towards Fuzhou tea-picking opera.

### **Discussion**

After the Fuzhou tea-picking opera course was implemented, the attitude of students towards Fuzhou tea-picking opera has changed from negative to positive. The results of the student assessment questionnaire in the first stage has shown that before the course has been set up, 85.61% of the participants could not read music score and 64.02% were not familiar with

Fuzhou tea-picking opera, which led to 71% of the participants indicating a lack of interest towards the course. For a long time, the context in which we learn the music of our mother tongue has been "replaced" this is because music education in schools tends to use western major and minor scales instead of traditional Chinese pentatonic scales for practice of Chinese traditional music. As students learn Chinese music in the western language environment, they become unfamiliar and repelled to traditional Chinese music (Guan, 2002).

This course of Fuzhou tea-picking which used the Kodaly teaching method supplemented by the Curwen gesture for teaching showed a tremendous impact on the way the participants improved their musical ability. Participants not only understand the traditional Chinese scale system but also have the concept of traditional Chinese melody. During the teaching periods, the aesthetic thought of "watching, tasting and consciousness" of Chinese traditional aesthetics has been always permeated, which creates a positive attitude of music acceptance for students.

Questionnaire data before the opening of the course has showed that students who opposed to taking the course decreased from 28.78% before the course started to 13.04% after the course began. The students' negative attitude towards this course declined. This process has taken four months. It attests that attitude is shaped by an individual's experience; it is stable but can be modified (Han & Leung, 2015).

The design of music course is factor that can influence students' acquisition of Chinese folk music. As indicated by Xi, (2007) the course of Fuzhou tea-picking opera is committed to shaping the spirit and culture of Fuzhou tea-picking opera, at the same time, emphasizing the music quality and national spirit of learners.

The teacher designed the music lesson is not merely providing students with relaxation but it is also about nurturing students' musical identities through learning Chinese folk music (Green, 2011; Walker, 2007) The data collected before this course began showed that 71.94% of the students did not like or approve the Fuzhou tea-picking opera, but with the deepening of teaching, this figure began to decrease. At the end of the course, there were only 10.87% of the students who continued disliked Fuzhou tea-picking opera. This can be attributed to the student's personal preference towards the music. As for the reasons for the positive changed of students' attitude, 74.02% of the students thought it is related to the simple course design

The establishment of students' cultural recognition is another factor that can influence students' acquisition of Chinese folk music. The design of the music class of Fuzhou tea-picking opera emphasizes the combination of music culture and local culture to cultivate students' love for national culture, thus affirming Hoffer's claims about the relationship between music and culture. Among the reasons for the change of students' attitude towards Fuzhou tea-picking opera, 66.66% of the students thought it was the result of identification with the local folk music culture. It could be seen that the establishment of students' cultural recognition was another key factor affecting students' learning attitude.

There is a natural connection between curriculum and culture. In terms of historical development, curriculum originates from the need of cultural inheritance, and there would be no curriculum without culture (Li, 2011). The design of Fuzhou tea-picking opera course is to impart the most important traditions, experiences and skills in music culture to the educators so that they can obtain systematic music knowledge to the maximum extent in the shortest time, and ensure the relative stability of local style characteristics in the continuation and inheritance of Fuzhou tea-picking opera. Before the opening of the course, 45.32% of the students thought the melody was good, while 54.68% thought the melody was boring and old fashioned. However, by the end of the course, only 7.97% of students thought the melody was

not good. Students' recognition of the melody of Fuzhou tea-picking opera has been conducive to the popularization and inheritance of Fuzhou tea-picking art.

Implementation of Fuzhou tea-picking opera course has acted a positive role in promoting the inheritance of Fuzhou tea-picking opera. Education promotes the development of culture and human beings by selecting culture, inheriting culture and creating culture. The content conveyed by Fuzhou tea-picking opera course to learners has a high degree of generality. The course of Fuzhou tea-picking opera is conducive to the development of culture by education, and it is the unavoidable mission of education to cultivate people who have unified with local culture.

The research reveals how culture and music are intertwined and when presented in the right manner has the potential to garner positive results. The aim of introducing and changing the perception of participants towards Fuzhou tea-picking opera revealed that through prolonged exposure and though the correct methods, a person's perception about traditional art forms can be altered.

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## **Musicking to Embody *Kyosei* in the Framework of the Musical Theme and Variation**

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### **Abstract**

This study explores the process of *kyosei* construction in a musicking practice within the framework of the musical theme and variation. *Kyosei* is a philosophical term means harmonious and synergetic interaction (Gordon, 2019). *Kyosei* practice reflect cooperation between and among individuals and communities working together in a variety of environments (Miyazawa, 2017; Kaku, 1997).

This study presents that musicking has universal validity to build a musical community by engaging individuals with different musical skills and interests. Such a voice is echoed by Small (1998) that music is an act for everyone to participate in any capacity of musical lives, which is defined by singing, listening, playing, practicing, composing, dancing and any other methods of participation.

Under the online setting, we divide participants, including the practitioner-researcher, in small groups and create the original variation of *Twinkle Twinkle Little Star*. Mixed instruments, any objects that makes sound, voices, physical movement and technological sound were combined alongside the visual images in creating a uniquely original variation of the *Twinkle Twinkle Little Star*.

Based on the practice, researchers investigate the application of *kyosei* during music teaching and learning. By applying the methodology of Tobin, Hsueh & Karasawa's video-cued multivocal ethnography (2009), we reflect a series of voices all talking about the same practice and experience. A musical community is built without exclusion of different voices as might be expected given the population under consideration. Teachers can imagine the benefits of applying *kyosei* in developing rich and sincere relationships among students in musicking practice. At the end, the study also drew practical applications and process how the teachers could apply musicking in classroom practice and reach out to the communities outside the school.

*Keywords: kyosei, musicking, technology, theme and variation*

### **Introduction**

*Kyosei* (共生), a Japanese term translates as a symbiotic relationship between individuals and the community around them. Kaku (1997) defined *Kyosei* as "spirit of cooperation" both for individuals and organizations to work together for common good. There are three core characteristics of *kyosei*; 1) Understand each other, 2) Leave nobody out, 3) Make friends (Miyazawa, 2011). These characteristics of *Kyosei* represent a structure for application during teaching and learning.

In Musicking practice, we encourage everyone's participation with a special emphasis on embodiment of *kyosei*. *Musicking* is the term originally introduced by Christopher Small

(1998) that simply means the act of music making. For Small (1998), music is not a fixed artwork, but an act, which is defined by singing, listening, playing, practicing, composing and dancing (Small, 1998). Dissanayake (2015) criticized the contemporary changes in the concept of overemphasis on performance outcomes, which, like sports, requires tough competition, and ignores the community sense of musical sharing. According to Dissanayake (2015), in a traditional society in any culture, music was originally shared in community from the religious ceremony to the local carnivals, and there was no wall between performing and listening. Everyone used to participate in music in a shared sense either by singing, dancing, playing instruments, composing and many more. Instead of equally treat every student by offering the same instrument, part and task in a conventional manner, we make fair division of work reflectively with multiple perspective to build a musical community to achieve the *kyosei* direction. The purpose of this study is to demonstrate a practice model of Musicking with a special emphasis on the embodiment of *kyosei*.

In the online Musicking occasion, everyone would participate with her/his specialty from home environment online. In the previous workshops similar to this settings, researchers integrated multiple voices such as *shakuhachi*, violin, human voices, physical movement, technological instrument and sound, and they were combined alongside the visual images in creating a uniquely originated variation of the *Twinkle Twinkle Little Star*. In and through the process of Musicking construction, the authors reflected the series of Musicking practice to reveal how the participants understood each other, and made friends without exclusion to build a musical community. This study also illustrated the process how the teachers understood the related *kyosei* philosophy as a foundation, and seek a possibility to apply Musicking practice in Japanese schools. Although there were quite a few studies that investigated musicking, there was an obvious lack in making connections between philosophy and practice and designing the research-informed practice of Musicking (Nishijima, 2020; Frierson-Campbell, 2016; Golden, 2016).

## Methodology

This study illustrates a case of Musicking which is conducted as online virtual workshop via Zoom on the theme of *Twinkle Twinkle Little Star*. Specifically, as one of the model of this workshop, this paper illustrates one of the most recent case of Musicking by offering an online virtual workshop via Zoom on the theme of *Twinkle Twinkle Little Star* with a participation of local elementary students, including a student with severe and multiple disabilities, and two international students ( $N=27$ ). The authors were originally planning to hold the workshop for 30 elementary students who attend public school in a small town in Japan; however, DOE of the city had to either cancel or postpone the event due to the spread of COVID-19. The author and DOE discussed the issue and decided to hold the workshop online by using Zoom. Because of the decision using the online to hold the workshop, team of the researcher re-invite students of the elementary schools and special schools in this occasion.

The process of the workshop was the following. First, we began the workshop by finding either any choice of musical instruments or any objects that make sound at home. Participants also considered by participating the workshop by singing, dancing, drawing or arranging the melody based on their multiple interests. At the end of the first part of the workshop, we introduced each other with the participants' choice of either musical instruments or any selection of art form.

Next, the researchers arranged the group of three or four via Zoom. The participants including those who also plays musical instruments like recorder or harmonica, and who manages technological devices also participate the group work. The researcher also facilitated the discussion and collaboration. Each group spent time on discussion and rehearsal and created the different variation of *Twinkle Twinkle Little Star* for 30 minutes. Finally, we connected each product of the tune, listen to each group, and connect them to complete our original variation of the *Twinkle Twinkle Little Star*. For this workshop, the use

of computer or laptop or tablet is encouraged instead of mobile phone for better sound quality.

Prior to the above mentioned occasion, the researcher collaborated with the specialists of music education, technology education and special education, and offered several workshops obtaining the same structure and repertoire in elementary school, university and local communities more than 10 times. In the following section, we present one of the practice models to design Musicking online on the theme of Twinkle Twinkle Little Star. In this workshop, after the practice, by applying the methodology of Tobin, Hsueh & Karasawa's video-cued multi-vocal ethnography (2009), we reflect a series of voices all talking about the same practice and experience.

## Case Presentation

In this section, the author describes the case in detail and illustrates the process. The researcher set the purpose of the workshop to provide musical activity that could be enjoyed at home under COVID time. The study also aimed to facilitate international exchange with music. In this workshop, the author collaborated with a local teacher, and music education specialist. Because of the online usage, we were able to invite international participants and guests easily. Ultimately, we set the following objectives: 1) Experience the enjoyment of music by using any instruments or tools at home, 2) Enjoy the ensemble online by overcoming the technical and technological obstacles, 3) Experience musical communication with everyone.

About a month before the workshop, the we asked the participants to prepare any instruments such as recorder, harmonica, also called melodeon, and any musical instruments or non-instrumental objects at home that make any sound. The authors asked the participants to decide what instruments or objects that they would like to play and give a brief advice for each participant either to play melody or rhythm. If no instruments or object, we can also advice how to make the instrument. We also prepared several recordings of the Twinkle Twinkle Little Star in C major. We had discussion on which keys shall we select, and we decided to set the key of C because many Japanese children are familiar with the key of C because every single first grader would learn melodeon in their music classes at elementary schools.

X, who has a severe and multiple disabilities, was also participating the workshop with her mother at home. The researcher delivered the iconic grid instrument with large sized buttons to her home, which was created by Professor Yutaka Nakanishi of Shujitsu University and she and her mother used the tool to participate this time. Since the device was arrived about a week before, she was able to practice the tool to create the tune of Twinkle Twinkle Little Star by herself. Other three students from the special school wanted to use the violin, so the researchers also delivered the violin to their home. The second researcher made a phone call to the caregivers, and asked them not necessary playing the violin, but they could create any sound on the violin like plucking the strings or tapping the body of the instrument.

At the day of the workshop, we first test the internet connection and microphone and speaker. We introduced each other including the guest teachers, two of the authors. The coordinator of the workshop from the city described the purpose and the objectives of the workshop mentioned above.

The authors first explained that any objects could make sound and create the variation based on the tune of Twinkle Twinkle Little Star. Next, the authors demonstrated to add physical movement to the piece. We also provided several examples of trees and created different Twinkle Twinkle Little Star as examples to transform visual images to music. We also showed some rhythmic variations and examples of changes in rhythm to differentiate the character of the piece.

Next, the participants decided what kinds of instruments and they would like to try this time. During the Zoom session, we offered both individual and small group sessions. In the individual session, we offered instrumental lessons to gain knowledge and skills to play in online ensemble settings. In the small group sessions, the authors separated the group with

those who would play the melody lines or rhythmic part. We also asked them to move to music while they are playing, or they could create visual and physical expression if they prefer during the workshop.

At the end of the workshop, instead of playing altogether, the authors explained the way the participants could create the videos in a few weeks after the workshop. They were asked to listen to the sound track created by the researchers by using the ear phone, and perform along with the tune. Some videos were made at a historical building in the city because a first grader thought that the characteristics of the Twinkle and the historical building match perfectly. The student's younger brother and father wore Ninja costume with the handmade fake sword, and moved them responding to the musical sound. Another second grade student decided to wear costume like Hawaiian Hula, because she selected the sound track like Hawaiian, and she found the connection with the musical sound and her memory of her previous visit to Hawaii about a year ago. Her grandmother danced along with the tune. X at home excitedly played the iconic grid instrument and other two of her friends from the special school played the violin by plucking and tapping on the Twinkle's tunes.

## Discussion

This section offers a brief discussion based on the same set of practice to overview the author(s)-designed Musicking practice by reflecting with a special emphasis on investigating the connection between Musicking and kyosei, and of its application to the school music education curriculum in Japan.

In music education settings in Japan, there were a few major problems inherent in the direction of a practice model of musicking for participation within the context of music education. Elliot criticized that "there can be no such thing as a course or class called general music," and said "any kinds of general or liberal education is music must always be a *specialized* music education" (p.56); however, in Japan, all of the music curriculum in schools and preschools were considered general music.

Secondly, a conventional model of music performance and listening are pervasive in Japan music education. Small (1998) criticized the Western tradition of concert music and design of the music performance and listening as to call *auditorium model*. In usual settings in auditoriums, performers are normally on the stage, and audiences just sit quietly and listen to the performance (Small, 1998). Small (1998) observed that "the auditorium's design not only discourages communication among members of the audience but also tells them that they are there to listen and not talk back" (p. 27).

In Japan music education, the auditorium design is so pervasive that musical activities in Japan that "discourage communication among members of the audience but also tell them that they are there to listen and not to talk back" (Small, 1998, p. 27). Such a view is echoed by Shor (1996), in the realm of education in a broader sense, describing students' seating choice named as *Siberian Syndrome*, that is, their learned habit to automatically avoid seating in the front, and sit far from the teachers. Instead of sharing the experience of learning among learners and teachers, there is a unilateral authority for the teacher (Shor, 1996). In contrast, in musicking practice, "such ideas held in common about how people ought to relate to one another..." (Small, 1998, p, 95), and to define a community; thus music is used as an act of affirmation of community. In this study, the author strived to illustrate how a model of musicking invites everyone to participate and to build a musical community.

The use of technology and the development of technology always progress. Having an open mind and to adopt a new idea is the key to expand the possibility of Universal Design in music education. The researchers would now consider the invented devise as a selection of musical instruments like the piano or violin. It certainly enriched musical activity, sound and promotes everyone's participation in musical activity. At the same time, the team of researchers decided to improve the button for some students with physical difficulties who could press the button with less effort.

In this case, although there was a failure to offer an opportunity for everyone to use the iconic grid instrument, the use of the instrument facilitated individual's musical interests and supported the participation. Later, a team of researchers prepared larger buttons and connected the total of eight buttons to the device so that several people could play the instrument at the same time with less physical difficulties.

The study focused on constructing a practice model of musicking for everyone to participate in the context of Japanese music education. After the study overviewed the philosophy of musicking and of its applications, based on the action offered by the author for past 3 years in Japan, the study analyzed the process on how the musicking practice was constructed, and shared in Japanese schools. The collaboration among teachers of the special schools and the researchers of music education and technology successfully opened up the opportunity for more students to participate in the musical activity in a shared sense.

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## **Solfy: An AI Tool for Promoting Singing and Music Literacy**

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### **Abstract**

Singing is part of music curricula in all countries and can lead to excellent benefits for emotional, cognitive, physical, and social health, bringing joy to singers and audiences. Practicing Solfege can open the door to music literacy for most students who do not play a musical instrument. Learning solfege is (almost) equivalent to learning a new language: in our case, the (*intimate*) language of (*Western*) music. Knowing it gives access to Western music literature for learners from cultures not using this music system notation. It can inspire them to try transcribing their local music, preserve, analyze, acknowledge consciously, and transmit it visually – in addition to audible recordings.

An AI tool for promoting singing and music literacy is Solfy, interactive learning software that makes Solfege easy and fun to learn without needing a private human tutor. It walks the student through a series of exercises, wherein each activity, Solfy presents to the student a digital score, sings a reference Solfege from the score, prompts the student to record himself performing, and gives him colorful and easy to understand *feedback* on his performance.

The software includes levels of difficulty, each level containing 26-28 progressive lessons. Game-like elements and pleasant musical accompaniments are integrated into the drilling procedure. It supports class-based learning by keeping records of all the exercises. A teacher assigns drills for home practice and can then monitor his students' progress by listening to their pieces of training and viewing their *feedback*. In addition, Solfy is a self-learning tool, suitable also for very collaborative parents.

Solfy incorporates high-quality singing synthesis for playing the *reference* Solfege and innovative *artificial intelligence* for analyzing the student recording and providing him with visual and aural *feedback*.

A pilot with 30 teachers and 800 students has been running this year in several public schools. We plan to extend the pilot and evaluate Solfy's contribution to music education by comparing the success of students who have been using Solfy to those who have not.

**Keywords:** music education, music literacy, singing Solfege, digital platform, artificial intelligence

### **Introduction**

Extensive research has been carried out on the impact of ICT in music education and the commercial development of software for music composition targeted at various users, from novice students to professional musicians. However, research on music education support tools integrating specific educational methodologies has been limited (Tambouratzis et al., 2008). Technology facilitated learning in music performance classrooms can benefit both teachers and their students and allow more individuals to experience the joy and benefits of active musical participation through performance (Bauer, 2014). Nowadays, information is everywhere, and general music education can benefit from this fact to entertain, educate and raise generations of skilled and literate students - using for these challenges all the valuable resources. The New Media Consortium's Horizon Report suggests that even in 2014, digital media literacy in educators is still not common (Brown, 2014). As music educators, we need to understand better the media they [the students] use and incorporate this technology in our daily teaching to enhance music literacy in our classrooms (Abrahams, 2015).

This paper presents Solfy (<https://www.4solfy.com/>), a didactic solution that includes technological innovations in singing synthesis & analysis and machine learning that integrates

separated analog music learning methods, proposed in the past by Guido D'Arezzo, Glover, Curwen, Kodaly, and others. It "sings" Solfege with a synthesized voice from digital scores, "listens," records, and evaluates users' performances, provides *feedback*, and keeps records on progress. It will help teachers work in the classroom – or online/hybrid, and students to practice singing from the score outside the school.

Practicing Solfege, students learn to read/sing the notes, develop rhythmic feeling, learn to intonate, cultivate the vocal expression, develop and calibrate the musical hearing, and form musical thinking. Furthermore, introducing Solfege singing from the elementary level will make the way easier to start studying a musical instrument, and for practitioners of traditional, vocal, or instrumental music, learning to sing Solfege will pave the way to music literacy. Solfy's main challenge is inclusive education, opening to all pupils (from primary school) a new way to achieve music literacy. Learning music literacy is like learning how to read: one learns to identify individual notes and rhythmical patterns (like learning the alphabet and word patterns) and express by voice the written music score (like articulating words and sentences). Such learning is most efficient in the early years of primary school and contributes to cognitive and emotional development. In addition, it is expected that engaging children in singing in a well-organized manner improve their general listening abilities and discipline.

But, the current practice of singing in schools is based on learning songs "by ear," imitating a model and remaining dependent on the model, with very little exposure to music literacy and, in the absence of individual instruction, almost no personal development of singing skills.

Solfy (<https://www.4solfy.com/>) proposes to bridge this gap and aims to change this reality. It brings together pedagogical expertise of music teaching with innovative *AI* methods that give comprehensive *feedback* on one's singing performance. It enables teachers to assign homework to their class while monitoring their students' work and progress.

The need for music teachers to have a modern, intelligent, and valuable teaching tool, and especially for students, to have an interactive and integrative didactic aid for the individual and personalized practice of Solfege, determined a small team to decide to develop it. The *Solfy* initiative includes Tzipi Koren (music teacher, music pedagogy, co-founder), Dr. Adoram Erell (expert in digital voice recognition, analysis, and processing, technical director, co-founder), Dr. Morel Koren (music teacher, music pedagogy, co-founder), and other collaborators. The team started developing the program thanks to financial support received in 2018 and 2019 from The Israel Innovation Authority.

Although still in development, an initial pilot already runs in Romania and Israel with promising results. Solfy addresses primary and secondary school students who learn music under the teacher's guidance and students of other educational levels who want to self-evaluate, study, practice, and progress in music literacy. Vocational school students who have theory and solfege classes in their curricula can use Solfy as an additional (or complementary) teaching support to the existing program. Students, prospective music teachers, educators, or instructors can benefit from Solfy for personal progress, preparing to implement it in their classes.

This paper will present Solfy and some results from the initial pilot. Then, it will launch an open call/proposal for general and vocational teachers to enroll with their classes in a pilot, researching the evolution and progress of their learners from the elementary and secondary public education schools from different regions and countries.

Therefore, the challenge of music teachers should be to bring the learners toward reaching music literacy. "*True music literacy develops the ability to hear what is seen and see what is heard*" (Feierabend,1997).

## **Solfy - description and functionalities**

Minimum technical requirements to use Solfy are:

1. Computer, sound card, laptop, electronic tablet or smartphone, internet.

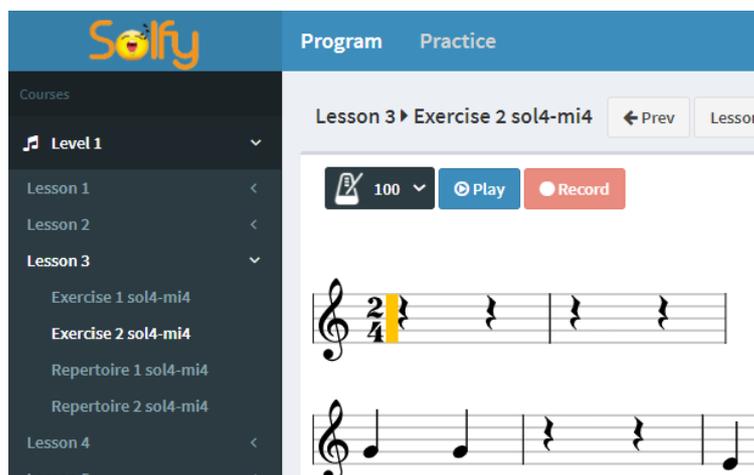
2. Windows™, MacOS™, Android™, with Chrome™. Also, Edge™ and Opera™.

At this time, Solfy has not iOS™ (iPhone, iPad) support.

3. Headset – headphones with a cable connection to the computer or laptop (to avoid wifi interferences or delay), and a microphone near the mouth.

Accessing the site <https://www.4solfy.com/>, on the landing page, Solfy displays two tabs, two functions: *Program* and *Practice*.

Figure 1. *Program* and *Practice* functions



The *Program* function briefly describes what the user will learn in each Level (currently only three, more to be added) and permit to listen without restrictions to the Solfeges - via the “Play” function - but w/o allowing to record them.

The *Practice* function requires registration by filling a standard form. In the registration form, Solfy asks for minimum information about the user and acceptance that the recorded solfeges to be used to improve Solfy’s analysis. In addition, Solfy’s server is protected by the AWS (Amazon Web Services) Standard Security Protocol. The registration form asks for a name, username, password, email address, voice type (children under 12 or mature), and the native language. Upon registration, in the *Your group/class* section, teachers (or independent users) will choose the *Independent* category, and students will tick the name of the *Group* created and communicated in advance by their teacher. Teachers will contact Solfy’s team by email (4solfy@gmail.com) to receive *teacher status*, permitting them to create *group names* by themselves. This status is offered to those who can prove affiliation with an official educational institution.

The *Practice* function allows users to record their performance and receive *feedback* about the accuracy. The “Record” button includes a mini submenu for recording “with MIDI + beats” (audio guide generated by the MIDI synthesizer, and in addition, a synthesized metronome sounds), “with Beats” (metronome sounds only), “with Orchestra” (with an orchestral accompaniment) or “with Mute” (without any audio support, but only visually). After a successful recording of a Solfege, Solfy automatically sounds it back, together with a pleasant accompaniment, rewarding the user “with Orchestra” option – creating at the same time a “*stage performance*” feeling and motivating the user to continue practicing.

The *Practice* function provides *feedback* after each recording. That requires users to use a headset, be in a quiet environment, and go through the exercises and lessons progressively, as required by Solfy in short text messages. In practice mode, the student listens to a Solfege exercise by pressing the “Play” button and visually follows the notes in the digital score. Then, equipped with the audio headset with microphone activates the “Record” button, and sing the respective Solfege, at the end of which, receives *feedback* on the quality of the performance. Inaccuracies in interpretation, such as note names, intonation, duration, and intensity, will appear in the *feedback* in red. The correct versions will be displayed on

green *feedback* and will reward the user with an accompaniment. It will be sounded simultaneously with the recorded Solfege, and the function “with Orchestra” automatically added to the “Record” submenu.

The Solfy accompaniments were created by the composers Bogdan Focșăneanu (Romania, Canada), Michael Dulitsky (Ukraine, Israel), and Inon Zur (Israel, USA), who allows us to use some of his musical pieces as Solfeges, including the original recordings.

The *Review your work* function allows users to check the results of previous recorded Solfeges, both in a statistical table and a traditional score. The *statistical table* shows the name of the exercise, the type of audio guide used, the tempo, the number of successful performances, the tone, the duration, the syllables, and the dynamics errors. Clicking in a row of the table will open the score version allowing revision of the previous recordings, self-evaluation facilitating the comparison between the *Reference* and *Feedback*.

The *Adapt to your Voice* (or Voice Enrollment) function enables advanced users, who already know music notation, to take a short test, consisting of three solfege exercises designed to help Solfy to build an acoustic profile of the user’s voice, needed to assess as much as possible correctly its performance. In addition, the function displays the names of the notes as text to warn the user to pronounce them clearly and firmly.

*My students* function can be accessed by teachers who have received *teacher status* and have groups of students enrolled on the platform. The function allows teachers to organize students into groups, monitor and coordinate their activities remotely, provide asynchronous access to student statistical tables, and received *feedback* (at any time after the student’s activity).

The teacher will use the *In Class* function for teaching in the classroom or online. It allows to listen to the *Reference* Solfege and Record individual learners, a group, or the whole class, to *Play* the Recorded Solfege (for critical constructive analysis or just for fun), but without offering *feedback*. Only the teacher uses the program in the classroom – in conjunction with his existing lessons plans - to exemplify the Solfeges, explain and teach, singing with different groups, and with the whole class for no more than 10–12 minutes, then assign homework. The teacher will monitor and coordinates student’s activities remotely, accessing the results asynchronously. Students will use Solfy at home several times a week, each time for 10-12 minutes, for individual and personalized practice, assisted by the artificial intelligence that provides *feedback* on the correctness of singing Solfege and self-evaluation. Using Solfy for personal training outside the school several times per week will add countless hours of guided music practice to the formal education system.

Fig. 9. *In Class* function (fragment from a Level 3 Solfege)

The screenshot shows the Solfy application interface. At the top, there is a navigation bar with the Solfy logo and menu items: Practice, Review, Adapt to Your Voice, My Students, and Program/In Class. On the left, a sidebar menu lists 'Courses' with 'Level 3' selected, and under it, 'Lesson 2' and 'Exercise 2 si4--la3'. The main content area displays the title 'Lesson 2 - Exercise 2 si4--la3' with navigation buttons for 'Prev', 'Next', and 'Back to Lessons'. Below the title, there are controls for tempo (120), 'Play', and 'Record' buttons. The central part of the screen shows musical notation for the exercise, consisting of four staves of music in 3/4 time. The notation includes various note values, rests, and dynamic markings such as 'p' (piano) and 'f' (forte).

## Results of the initial Pilot in Romania – during COVID-19

Preparing to present the first working version of Solfy at the Colloquium of Musicology and Music Education at the „George Enescu University of Arts“ Iasi, February 2020, we previously initiated its implementation in two classes of the primary cycle, collaborator in this mini-pilot being prof. Ciprian Juncă from “Ion Simionescu” School, Iași. The first results were satisfactory and were presented to the participants at the Colloquium, along with the invitation to test and use it, giving constructive criticism.

The second verification took place between March and July 2020 in collaboration with Dr. Loredana Muntean from the Department of Educational Sciences, The University of Oradea, with students enrolled in the pedagogy of education path (PIPP). The almost immediate reaction to switching to online learning and practice was motivated by her statement: “All digital resources can be used as long as they respect the specific features of the students’ age and the teachers’ aesthetic and didactic criteria. [...] In conclusion, we can assert that digital resources constitute a must-have of a school anchored in the contemporary world, not only because they are part of everyday life, but also because they are beneficial for the education of primary school children.” (Muntean, 2017-1). Regarding the teacher’s role in implementing new technologies, updating and improving the curriculum, she states: “Analyzing the curriculum [Romanian curriculum], you can notice that the employment of ICT resources in the context of musical activities intended for primary school students is not even mentioned as a recommendation. [...] An essential element of the changes is the teacher. Independent, capable of tackling the curriculum with flexibility and liberty, the teacher has the power of continuously shaping the musical teaching process, adapting it to the reality of the children they work with” (Muntean, 2017-2). “In the context of contemporary education, the efficient study of the vast field of music requires the involvement of as many sources of information as possible, sources that are accepted by one’s personality as a whole: intellect, action, and affect. Therefore, the ones teaching musical education must have a close perception of the assets and ways through which the new technology can facilitate access to knowledge [...], placing itself within the field of interest of those with institutional, academic training” (Pop-Sârb, 2017-2).

Solfy was designed to be implemented in an organized educational setting, such as the official education system, long before the pandemic, to give teachers and students the option to teach and practice online. This fact proved helpful during the period of restrictions dictated by COVID-19, and now, it is expected to be even more beneficial in the post-pandemic period.

A second pilot ran until the end of this academic year, June 15, 2021, with more promising results. It includes pupils from public elementary schools, music schools, and students teachers, future educators. The statistical data accumulated by Solfy prove that students’ level of musicality in the same class is heterogeneous. During the academic year 2020-2021, some students completed Level 1 and 2, and others only reached the middle of Level 1 - or even less. Some managed to successfully sing an exercise after 3-6 unsuccessful attempts, while others failed even after 25. Some made about 1000 attempts, and others stopped after 20-100. These data, which are accessible to the teacher, clearly show how important it is for the mentor to monitor and know details about students’ progress to intervene and provide the necessary assistance to those who need it when they need it.

Finally, a few arguments and some points of view were collected from music teachers who have held or hold leadership positions in the educational system. In a series of correspondences on music education before, and during the pandemic, from October 13, 2020, Professor Dr. Viorel Munteanu, composer and musicologist, former rector of the National University of Arts “George Enescu,” Iasi, favors using a digital solfège method - as Solfy, in addressing music literacy in primary music education. Dr. Monica Buhai, the inspector for arts in Tulcea County, mentions in an answer from October 2, 2020, that the most beneficial digital programs help transmit knowledge, develop skills, and evaluate learning results. Further, that „man, regardless of age, is a social being who needs to exercise group membership, to assume collective roles, and to empathize.” In another interview from September 27, 2020, Prof. Nicoleta Țâmpu, a former inspector for music from Bihor County, mentioned that the pandemic practically forced the relocation of online teaching activities using technology, “whether we liked it or not.” In

a similar interview, from September 28, 2020, Dr. Dan Băcilă, music inspector in Timiș County, highlights the potential of digital technology in regaining interest in learning specific basic musical skills, such as Solfege.

For the next pilot, here is Solfy's developers' open call/proposal to the general and vocational teachers to enroll with their classes in a larger pilot in the academic year 2021-2022, promote singing and music literacy in their classes, and research the evolution and progress of their learners - from different regions and countries. We encourage implementing such a pilot in which a significant number of schools from different counties will participate, following the example from the 2007 pilot evaluated by Prof. Graham Welch (Welch, 2011). A detailed description of the pilot's impact appears in several articles, starting with "Researching the First Year of the National Sing Up Singing Program in England: An Initial Impact Assessment" (Welch et al., 2011). In this pilot, have participated in the first stage, 81 schools, with 3,762 students. In the following years, 2008-2011, the participation expanded, comprising approximately 90% of the almost 18,000 primary schools in England - at that time (Welch, 2012).

The authors are open to receive suggestions and constructive criticism from teachers who want to collaborate implementing Solfy in their classes and launch to the music educators community this open invitation/call to participate in the 2021-2022 pilot. Its results will be presented at the next ISME Conference, Brisbane 2022, with learnings, conclusions, and recommendations for the future.

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## **The 21<sup>st</sup> Century Classroom and Beyond: Student-Centered Learning and High-Tech in the Music Classroom**

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### **Abstract**

Innovation in the education has accelerated in the past couple of decades with significant impacts on classroom structure and tools. In particular a transition from teacher-centered to student-centered learning environments and the integration of student choice. These teaching theories have been celebrated by popular teaching models such as the International Baccalaureate and demonstrate high efficacy in student learning. These strategies are also notorious for the demands they put on educator's time and resources. New education technologies have shown their ability to relieve some of this strain on educators particularly in the field of music education and inquiry-based learning. However, it is important to understand the role of these technologies in classroom as tools and aids in the education process meant to supplement and not replace the part of a teacher. This paper is intended to evaluate the role of these technologies as aides in the new teaching landscape of student-centered and inquiry-based learning in order to provide insight into the classrooms of the future. In particular this paper will evaluate them in the context of International Baccalaureate (IB) framework. IB was chosen as the framing for this paper as it utilizes and encourages these teaching theories as well as being one of the most commonly used international education frameworks.

This paper has been developed as a literature review. Papers used to compile the analysis of digital tools were selected for relevancy to search terms and published within the last 15 years in order to create a current and comprehensive review of the technologies available to enhance instruction in the context music education. The results of this analysis suggest that though these digital tools may aid in developing students' knowledge, understanding, and skills within music and do provide a resource for the inquiry process integral to IB and many other student-centered approaches to learning these tools do not substitute for the interactive and guiding roles played by the physical presence of a teacher in the context of music education. Students still rely on instructors to structure the process and direct them toward useful and appropriate tools for conducting their inquiry.

*Keywords:* education technology, future education, international baccalaureate, technology based classroom, 21<sup>st</sup> Century education.

### **Introduction**

Increasingly education is moving away from traditional models of teaching that were often teacher-centered and towards offering more student-centered environments and more student-choice. IB credits four educational theorists for having a substantial influence on the development of their framework and contributing four critical insights to the IB model of education. These four theorists John Dewey, A.S Neill, Jean Piaget, and Jerome Burner from whom the framework took the following insights: the importance of "tapping into students' natural curiosity," the necessity of "personal freedom" in educations, students learn through a "cognitive cycle", and "learning through doing makes students better problem solvers," respectively form the foundation of IB philosophy (IB Program). As such these four insights have been used to form the basis of the IB model and demonstrate a value of

student-choice and student-centered learning making this framework ideal for analysing the ability of music technologies to match music learning objectives in the contemporary education landscape.

## Methodology

The importance of using objectives to guide learning is well documented (Deri, et al, 2012). Objectives help students and teachers orient learning and gauge progress. As such objectives aid researchers in analysing music teaching effectiveness. The IB Music Guide sets out 4 main assessment objectives (AO).

These objectives being set out by the IB programme and being in alignment with other values critical to this paper such as student-centered learning and student choice have been used to structure the individual analysis of each technology; first elaborating on how the technology might be employed in the music class in an effort to meet these objectives and secondly to discuss their overall potential in actually meeting those objectives.

**Table 1. Assessment Objectives Set Out by IB Music Guide**

<b>Assessment Objective</b>	<b>Sub-criteria</b>
AO1:  Demonstrate knowledge and understanding of specified content, contexts and processes.	a. Explore the relationship between music and its contexts.  b. Identify information from academic and practical inquiry.  c. Present ideas, discoveries and learning in authentic ways.
AO2:  Demonstrate application and analysis of knowledge and understanding.	a. Experiment with musical findings in local and global contexts.  b. Articulate a clear rationale to support the musical decision-making processes.  c. Justify the use of creating and performing elements.
AO3:  Demonstrate synthesis and evaluation	a. communicate and present diverse musical conventions and practices.  b. Purposefully present created and performed works.  c. Make informed choices in communicating and presenting music.  d. Evaluate their own work and the work of others.

<p>AO4:</p> <p style="text-align: center;">Select, use and apply a variety of appropriate skills and techniques</p>	<p>a. Select musical information in academic and practical inquiry through relevant musical skills and techniques.</p> <p>b. Identify, select and apply musical skills and techniques to shape and transform musical material.</p> <p>c. Demonstrate appropriate use of musical conventions and practices when creating and performing in diverse contexts.</p> <p>d. Work collaboratively to achieve defined musical project outcomes (HL only).</p> <p>e. Demonstrate planning, responsibility and ownership in managing and completing a musical project (HL only)</p>
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### *Types of Technology for the Music Classroom*

#### i. Trainers and skills practice

These kinds of tools primarily function as apps that students can use to develop specific musical skills from the initial phases of music learning to more experienced students. Apps that develop articulation and rhyming skills can help younger learners develop the musical linguistics necessary to move on to more advanced musical skills. (Goncharova & Gorbunova, 2020). Ear training apps can be used by students to visualize and check their own work when developing this vital aural skill. Sight training apps can be used to create fun and interactive ways for students to practice notation and the application of this skill to their music playing by gamifying practice and offering immediate feedback. Apps designed for specific instrument skills can offer students guided practice based on their skill level and desired instrument. Teachers can assign these apps to students according to their need and even personalize assignments by recommending different kinds of apps based on the students' needs and abilities (for specific apps see table 2)

#### ii. Digital Instruments

Digital instruments will here be defined as any instrument that uses a digital interface to replicate physical instruments or produce sound in order to be used in the production of music. Almost every physical instrument has the ability to be made into a digital instrument. These tools offer many benefits for teachers who wish to extend the accessibility of musical instruments to their students by being available generally at lower costs, a wider variety of contexts, and for their portability. Music teachers can use these tools in providing more interactive remote learning experiences (Kruse et al, 2013) by adding interactive and collaborative abilities between teacher and student. Students can also experiment with and practice multiple instruments with a single laptop, tablet, or phone rather than having to buy or move around with several instruments. Many digital instruments also provide students the ability to work with others in a collaborative space by allowing students to connect over wireless connections and digital interfaces to play these instruments together in real-time.

### iii. Performance Trackers

These tools offer both student and teachers the ability to monitor progress with specific skills often times offering personalized recommendations based on performance. Many of the training technologies mentioned above will also keep record of students' performance and how well they are doing at meeting the objectives of particular apps. Teachers can use this information to help guide lessons, give feedback, and create content.

### iv. Compositional Tools

Many mobile apps are available for students to learn and perform compositional tasks. Music theory guides, trainers, and practice apps are plentiful. Software for notation writing and sharing can also be useful for students and teachers in sharing their work and turning in assignments. Students can complete notation and composition assignments digitally through these kinds of software making the exchange between teacher and student easier and more convenient for editing work and providing feedback. Digital Audio Workstations (DAWs) provide new ways to present composition to students providing visualization of musical theory elements while allowing students to create precise compositions based on theory as well as integrating elements of improvisation. Additionally, many DAW apps can be used in a collaborative teaching environment by allowing students to create, send, and edit their own as well other people's music.

### V. Communication and social media

Recording and video sharing technology makes it easy for both students and teachers to share content and monitor progress. Students can record their sessions and performance to share with teachers which can be used to give feedback or they can monitor their own performances. Teachers can also make their lessons or content available remotely. Social media provides students a way to share their music and receive feedback from teachers, other students, friends, and other people they may not normally have access to. Some social media apps are specifically designed for sharing music for editing while others are designed for real-time collaboration with other musicians.

**Table 2. Specific Music Education Technologies Based on Function**

Function in Music Education	Examples
Trainers and Skill Practices	Flow Key VoxTrain Youscian Chord! ForScore SimplyPiano (Joy Tunes©) EarMaster
Digital Instruments	MIDI Instruments (drumkits, trumpets keyboards, drum pads, usb pianos) GarageBand AbletonLive AnalogLab Musyc Beatwave

Performance Trackers	MyTractice Tonara Practice Presto
Compositional Tools	Symphonypro Ableton Live MusicScore Tonal Harmony Analysis SoundStorming Trackd
Communication and Social Media	Soundtrap Endless Youtube Video Confrencing Tools (Zoom, Skype, VideoConnect, Facetime) Tonara

## Result

*AO1: : Demonstrate knowledge and understanding of specified content, contexts and processes.*

This AO primarily examines a student's ability to understand and analyse the relationships that exist between music and other contexts as well as to critically think about the process of music making. The sub-criteria in this category emphasize exploration of musical contexts, differentiation between academic and practical applications of musical elements, and authentic expression. For this reason, *Trainer and Skills Practice* as well as *Performance Tracking* technologies have been left out of this analysis. These tools operate in the limited context of training and skill development and do not in themselves promote critical thinking or differentiation on musical application. Additionally, by their nature they do not allow for authentic expression as they are generally predetermined drills and practice lessons with set functions and goals. Compositional tools were also excluded from analysis in this AO as they do not specifically provide an opportunity to help students examine the relationships of music to other contexts.

**II. Digital Instruments.** Digital instruments can help students meet this AO by giving them a tool to present their compositional and performance abilities in authentic ways (c)

**V. Communication and Social Media.** These tools are probably the best suited for this AO as they provide a means to achieving each criteria within the AO. Students can come into contact with music from a wide variety of sources and contexts providing a means for understanding the relationships that exist between music and its context (a). These tools also allow for students to experience music in a more practical sense and compare to an academic context (b) as well as sharing their own music in an authentic context.

*AO2: : Demonstrate application and analysis of knowledge and understanding.*

This AO is primarily concerned with the articulation of music concepts and the decision-making process as well as exposing students to a wider context of music making. Emphasizing experimentations in a variety of contexts, and explanation and justification of

the music making process. Similar to AO1 this objective is not particularly compatible with Trainers and Skills Practice as these technologies do not provide any substantial addition to explanation and justification for musical choices instead serving as a means of skill development. Nor do they promote experimentation in a wider context than the environment provided by the individual technology.

**II. Digital Instruments.** Digital instruments provide students an ability to explore local as global context through their wireless connectivity. Students can perform and compose music together while being in completely different areas in the world as well as right next to each other. This widens students' exposure to music elements, arrangements, and context from around the globe. Thus, it is well suited in meeting criteria (a) of this AO though it does not provide a means of articulating ideas or justifications and therefore is not particularly helpful in meeting criteria (b) and (c)

**III. Performance Trackers.** Performance trackers can provide essential data to students that they can use to explain musical choices (b) and justify the elements they use in designing and performing music (c)

**IV. Compositional Tools.** Similar to performance trackers, digital compositional tools can supply data and evidence for explaining musical choices (b) and justifying the elements they use in designing and performing music (c). Due to the ease with which these tools allow for editing and sharing of material they are especially compatible with experimentation and collaborating with wide audiences which helps students meet criteria (a).

**V. Communication and Social Media.** These tools can aid students in experimenting in a wide variety of contexts by expanding their network of contacts and sources of information to a wider global context with which they can experiment with (a). These tools can also aid students in developing explanation and justification for various musical decisions (b and c).

*AO3: : Demonstrate synthesis and evaluation*

This AO is primarily concerned with presenting and performing music. It emphasizes purposeful, informed, and diverse music performance presentation and communication. Additionally, this AO seeks to assess a student's ability to evaluate musical skills. Due to the AO's emphasis on performance presentation and evaluation of skills Trainers and Skills Practice has again been left out of analysis though some of the data generated through these technologies may be used in evaluation of musical ability this would be duplicated by Performance Trackers.

**II. Digital Instruments.** Digital instruments provide students with a diversity of musical presentation options (a) As well as giving them the ability to more interactively evaluate the musical abilities of others (d)

**III. Performance Trackers.** Performance trackers offer students data in order to evaluate their own work and the work of others (d). These tools might also be used in helping students make informed decisions about their performances (b) by giving them information about their strengths and weaknesses.

**IV. Compositional Tools.** Digital compositional tools allow students a kind of precision and visualization that is not typical of non-digital tools. This can allow them to make more informed musical choices (b) as well as being purposeful in adjustments (c). Additionally, some tools provide analysis of compositional choices students make and help them identify

potential issues and modify their work for the best outcome. Allowing them to make informed decision about their work (b).

**V. Communication and Social Media.** These tools provide students the ability to evaluate a wide audience as well as receive feedback that could help them evaluate their own work (d). These tools also help students create purposeful presentations of their work (c) As well as getting advice from other professionals and feedback on their work that might help them in making more informed decisions in musical presentation (b).

*AO4: Select, use and apply a variety of appropriate skills and techniques*

Within this objective IB identifies 5 criterias that can demonstrate students' ability in meeting this objective (see table 1). The sub-objectives in this category all describe musical skills, techniques, conventions, and project management. Thus, this category can be said to deal with the technical abilities in music. These kinds of technical abilities include instrument utilization, aural skills, application of music theory specifically through arrangement, and composition. For this AO there are many technologies that can be utilized to aid students in their music education such as:

- I. **Trainers and Skills Practice.** Technologies then designed for training and skills practice demonstrate a strong ability to help students meet many of the criteria within this objective. Such as criteria (a) and (b) which require that students be able to select and apply relevant skills to appropriate musical contexts and ability to apply their skills to “transform musical material” (IB guide). Trainers and skills apps are specifically designed to help students practice these skills for application in future contexts. These kinds of technologies also can aid students in achieving criteria (e) dealing with ownership and responsibility in completing tasks as these technologies are best suited to be completed outside of the classroom and often provide a way for students to track their progress and incentives for completing tasks. These technologies are not however best suited in helping students achieve criteria (d) in working collaboratively as many of them are designed for students to work on skills on their own. As well as being ill suited for criteria (e) as students do not gain a great deal of experience developing their skills in diverse contexts. In fact it limits them to the context of the technology and digital interface. Though the skills gained from the technology might be available in different contexts, the technology itself does not provide this opportunity.
- II. **Digital Instruments.** In terms of meeting the criteria of this objective digital instruments offer students a chance to practice skills related to application of musical skills (a). Students can also use digital instruments to demonstrate musical conventions through performance and recording of their digital instrument sessions (c). Digital instruments also allow students to work collaboratively (d). Digital instruments however do not entirely allow for students to achieve criteria (b) and (e). Though digital instruments might be used in a process of “transforming musical material” or in demonstrating.
- III. **Performance Trackers.** Are especially well suited in aiding students in meeting criteria (e) in that they help students maintain ownership over their learning and completing specific tasks which can translate later into tracking their progress in larger projects.
- IV. **Compositional Tools.** Compositional tools can help students meet criteria (a), (b), (c) of this AO quite well (DAWs especially) as they provide students an ability to experiment with different sounds, instruments, and music elements in one interface and allowing for easy editing. Digital compositional tools also offer students the ability to meet criteria (d) as they offer many opportunities to share and collaborate on compositions.

**Communication and Social Media.** These tools can be especially useful for meeting criteria (b) of this AO as they are designed to offer collaboration. Apps that allow students to make

music together in real-time as well as ones that allow them to send their music and comment on each other's work provide many opportunities for collaboration.

## Discussion or Conclusions

### Conclusion

What the above analysis demonstrates is that some objectives are particularly compatible with music technologies for instance AO4 had a wide variety of ways that teachers could use technology to meet objectives with the given technologies as well as a wide variety of technologies that could be used. While other objectives were limited by the types of technologies that could be utilized to meet its criteria. For instance, AO1 only utilized two different types of technologies. Additionally, some technologies are very limited in their ability to meet objectives. For instance, Trainers and Skill Practice tools could only be used in achieving AO4. In all cases what this shows is that in order to meet objectives music technologies need to be used strategically and thus still require orchestration and organization by trained teachers that can guide students when and how to use different technologies.

The analysis done here does not attempt to identify challenges of implementation. Instead, it simply presents the potential role these technologies can play in the classroom and how they might help music teachers meet objectives within the IB framework. It has been discussed in many places (Goncharova& Gorbunova, 2020) That a key factor to success in the implementation of technologies into the classroom is about training teachers. What this paper hopes to do is provide some guidance on how different tools can be utilized to achieve objects as well as demonstrating areas in objectives where technology might fall short.

As mentioned, there are some key challenges to implementation of technology in the music classroom most notable a. financial restrictions, b. Network speeds and c. and the lack of physical interaction. Emerging technologies such as 5G networks and Augmented Reality (AR) may help alleviate issues stemming from b and c. And while these technologies are quite expensive as is the general trend in technology it is likely that as time goes on these technologies will go down in price. (Barate et al, 2019)

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