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

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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.