

SPA-186

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

*Su-Young Bae*  
*Dong-A University, South Korea*

*Sumi Kwon*  
*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.