THE EFFECTIVENESS OF COMPUTER-ASSISTED INSTRUCTION ON THE DEVELOPMENT OF RHYTHM READING SKILLS AMONG MIDDLE SCHOOL INSTRUMENTAL STUDENTS

Presented at Michigan Music Educators Conference on Friday, January 20, 2006

Abstract:

This study investigated the possible improvement of middle school instrumental students’ abilities to read and perform rhythm notation based on receiving computer-assisted instruction (CAI). This study also investigated the possible relationship between student cognitive style as indicated by Field dependence/independence (FDI) and the effectiveness of CAI to teach rhythm reading and performing skills.

120 middle school instrumental music students were divided into four groups based on quartile scores from the Group Embedded Figures Test, which measures FDI. These four groups were randomly divided in half. One half was assigned to an experimental group (receiving CAI) and the other to a control group (receiving no CAI).

The experimental group used Music Ace 2 computer software for training in the ability to read and perform musical rhythms. This instruction was administered for half an hour a week over the course of eight weeks.

A test instrument was developed by the researcher to measure rhythm reading accuracy. This measure was given to participants in the study as a pretest and post-test. Results were analyzed using a repeated measures ANOVA. Scores on the rhythm test were found to be significantly higher on the posttest than the pretest for the entire sample (n=120) indicating that students’ abilities to read and perform rhythms improved over the course of the study. No significant evidence was found to show that the experimental group improved more than the control group. Students demonstrating strong field independence did perform better on the rhythm performance test than field dependent students. Findings of a post-experimental survey indicated that student attitudes toward the software and toward participation in the study may have influenced the findings of the study.

Further Reading:


Contact Information:

Kenneth H. Smith, Ph. D.
Assistant Professor, Music Education
Western Michigan University
Kalamazoo, Michigan 49008-5134
Office phone: (616) 387-4621
Email: kenneth.smith@wmich.edu
Web: http://homepages.wmich.edu/~khsmith/