

## THESIS ABSTRACT

The problem of this study was to develop a contextual, interactive technological application for beginning instrumental instruction and to describe and understand the feasibility of its design, its effect on rote song performance, and the resulting attitudes of all involved parties. In the current study, the following research questions were explored: (1) What is the feasibility and evolution of a contextual interactive technological application for beginning instrumental instruction in terms of design considerations, user access, and user training?; (2) How are parent/student/teacher attitudes regarding instrumental music, technology, and cognition influenced through participation in such a program?; and (3) What are the tonal, rhythmic, and expressive rote song achievement levels of students participating in such a program?

A preexperimental case study design with quantitative elements was initially selected for the current study to address feasibility and design issues as well as to examine performance-based results. In response to the growing need for a multisensory home-based learning tool to supplement in-class instruction within a musical context, the researcher used *Hyperstudio 4*, a commercially-available multimedia authoring program, to create an instructional web site for beginning recorder students. The instructional web site was designed for use with audiation-based methods, and was based on lessons 1A-3B of *Jump Right In: The Instrumental Series-Soprano Recorder* by Grunow, Gordon, and Azzara (1998, GIA Publications, Inc.). Throughout the design phase, qualitative data were collected through journal entries and observations to examine program design and feasibility.

The participants in this study (n = 3) were fifth-graders found within a preexisting beginning recorder class (n = 14) at a nonsectarian private school in suburban Rochester, NY. At the same time that students began in-class study of the recorder, the researcher-created instructional web site was set up to assist the students with the recorder techniques learned at each lesson. Students were granted unlimited access to the web site for their own use outside of class. Throughout the duration of the targeted lessons, parents were asked to monitor their child's use of the web site and to assist their child with any difficulties. Students were encouraged to use the web site each day for at least fifteen minutes, and parents were asked to help promote consistent practice.

At the conclusion of the treatment period, it was discovered that issues of student motivation and program accessibility prevented the participants from utilizing the instructional web site properly. Nevertheless, qualitative data collected in surveys, observations, and journal entries were catalogued and analyzed.

The results of data analysis revealed that use of the instructional web site for beginning recorder instruction promoted positive attitude levels for the cooperating teacher and students involved in the study. Further, the development of the web site using *Hyperstudio 4* was found to be feasible, with design priorities evolving from technical matters to issues of program accessibility and student motivation. Due to the small sample size, generalization of findings to other populations was not recommended. Recommendations for further research and practice are extended at the conclusion of the study.