

# **The Effects of Peer Teaching and Peer Collaboration on Students' Achievement and Attitude Toward Keyboard Skills**

Nan Baker & Jane Cassidy  
Louisiana State University

The purpose of this investigation was to examine how practical experience affects undergraduate group piano students' attitude and achievement toward selected keyboard skills. If music students are to reach their keyboard potential, they must not only practice to become proficient at the keyboard, but also place *value* in learning piano skills. While research has been conducted concerning group piano classes in many areas, few studies have examined the degree to which music students value the skills they are learning in addition to their knowledge of the skills. This study focused on two particular keyboard skills taught in group piano: accompanying and performing cadential chord progressions in major keys.

It would be difficult to argue that the primary goal of all music education programs is to prepare beginning music teachers for success in the classroom. Field experiences have become an integral component of the curricular requirements for pre-service music teachers. The ability to develop teaching skills, demonstrate the use of knowledge attained through coursework, and acclimate to the leadership role of "teacher" provide the underlying rationale for requiring field work prior to student teaching. It seems necessary, then, to investigate the effects of practical experience in group piano classes as they correlate to students' knowing and valuing basic keyboard skills. Given the lack of research in this area, an exploratory investigation was undertaken. To further this inquiry, the following research questions were addressed:

- (1) Does peer teaching affect students' achievement in performing simple cadences?
- (2) Does peer collaboration affect students' achievement in accompanying?
- (3) Does peer teaching affect students' attitudes toward performing cadences?
- (4) Does peer collaboration affect students' attitudes toward accompanying?
- (5) After students have been guided through incremental instructional objectives for peer teaching or peer collaboration, what do they do when left to their own devices?

Participants in this study ( $N = 29$ ) were undergraduate group piano students enrolled in the fourth semester of group piano at a large university in the southern part of the United States. All participants signed an IRB consent form and all of the data gathered from the participants were obtained from assignments and activities already included in the course syllabus. Three groups comprised this study: (1) a contact control group ( $n = 12$ ); (2) a group receiving peer

teaching treatment ( $n = 8$ ); and (3) a group receiving peer collaboration treatment ( $n = 9$ ).

Participants from all groups were involved in a pre-test that consisted of the following: (a) completion of a survey that questioned student attitudes and abilities toward specific keyboard skills (b) a video-taped performance in which students played a two-handed accompaniment with a soloist (c) a video-taped performance where students played major I-IV(6/4)-I-V(6/5)-I cadences beginning on black keys. Additionally, all three groups received a 45-minute lecture on skills used accompanying and the pedagogy of teaching cadences.

All participants who received the peer teaching treatment were involved in two 15-minute video-taped peer teaching sessions. Each participant was paired with a student enrolled in the second semester of group piano at the same university, and both 15-minute sessions required the more advanced group piano student to teach and guide the other student in accurately playing major I-IV(6/4)-I-V(6/5)-I cadences beginning on black keys. All participants who received peer collaboration treatment were paired with a beginning brass student from the same university. Each pair was video-taped during two different 15-minute peer collaboration sessions in which the students rehearsed an arrangement of *American Patrol* for piano and euphonium.

The posttest was comprised of the same three components as the pretest. Repeated-measure ANOVAs revealed that none of the groups were significantly affected by the treatment. Attitudinal results, however, yielded increased confidence and ability levels among treatment groups for selected survey items. For example, the peer teaching group averaged a higher confidence level than the other groups when responding to the question: "I feel confident that I could teach basic piano skills to a beginner either individually or in a group setting." Examination of treatment videotapes provided valuable insight regarding the information presented in class that transferred to a practical setting outside of the class. Thus, investigating cooperative learning behaviors outside the classroom is essential to providing effective instruction inside the classroom.

This study adds to the limited amount of research available in group piano pedagogy. Additionally, it lays a foundation for empirically based research investigating the effects of cooperative learning on attitude and achievement in the group piano environment. While the skills of accompanying and performing cadences were chosen for this study, further research should investigate the effects of peer collaboration and peer teaching concerning other functional

keyboard skills.