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Music Education Students' Perceptions of Curriculum Relevance

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The purpose of this study was to examine undergraduate music education majors' perceived relevance of the courses required to complete their bachelor's degree in music education. Music education majors (N = 162) from three institutions with similar music education curricula completed a survey in which they rated each course/course area in the curriculum on the importance of the course as it related/will relate to their future as a music educator. In examining the data, courses were grouped into three categories: (a) general studies, (b) music focused courses, and (c) education focused courses. Students rated music focused courses as being the most important, followed by education focused courses and general studies. The courses "student teaching/internship" and "conducting" were rated highest among the individual courses evaluated, while "science" and "math" were rated lowest. The results of a MANOVA revealed that females rated education-focused courses higher than males. No significance was found for the effect of academic level, nor were any interactions uncovered. Results also suggested some effect of institution on the ratings of course importance.

The academic path of an undergraduate music education student is both challenging and diverse. In addition to the general studies classes required by the student's university, the music education curriculum possesses a duality between music focused courses and education focused courses that can seem daunting to some students. In navigating this experience, students may question the value of particular required courses. Specifically, students may be left wondering how some of the courses they are being asked to complete will make them a better music teacher. An examination of students' perceptions of the value of specific courses and course areas of the music education curriculum may lead to a better academic experience for all parties involved.

Research focusing on the content and impact of teacher training programs has flourished over the last half-century (Colwell, 1985). Leglar (1993) found that research discussing these important curricular issues of music teacher training programs constituted the largest percentage of all music teacher research completed between 1960 and 1993. More recently, Bidner (2001) and Conway (2003) have suggested revising music education curricula with recent trends in technology, field experiences, and mentoring in mind.

In attempting to gauge the successes and failures of the music teacher training experience, some researchers have focused on new inservice teachers.

Conway (2002) found that first-year music teachers regarded guided teaching experiences and ensemble participation as the most valuable components of their teacher training. The least valuable components were unguided teaching experiences, non-music focused education courses, and methods course inconsistency. These findings are consistent with previous research concerning young teachers' reflections on the importance of their teacher training (Cuttieta, 2000; Legette, 1997, Kelly, 1998).

Conway (2002) also examined the views of administrators and mentor teachers regarding the music teacher training process. These individuals expressed a need for more field experiences, as well as a need for some training in the administrative responsibilities associated with teaching. Concerns were also raised regarding the classes required of music education students, the order those classes are taken by the students, and the practical applications of the courses in general. The opinions of young teachers, administrators, and mentor teachers regarding preservice training are valuable tools in respect to advancing the teacher education process; however, it may be beneficial to start exploring these ideas at an earlier stage of teacher development.

The examination of preservice teachers' attitudes regarding their beliefs, behaviors, and developments during the teacher training process has proven useful to some researchers. Kagan (1992) highlighted twenty-seven studies in which preservice teachers served as focus material in an attempt to gauge a variety of topics centered around professional development. More recently, Reynolds (2003) surveyed students in order to examine their perspectives on the use of electronic portfolios. In a study focused on music teaching, Teachout (1997) examined both preservice and inservice teachers opinions on what qualities were important to successful music teaching in the first three years of experience. These studies have consistently demonstrated the value of gathering the opinions of preservice teachers when considering an alteration of teacher training programs and curricula.

The purpose of this study was to examine undergraduate music education majors' perceptions of the courses required to complete a bachelor's degree in music education. Specifically, student perceptions were examined in order to determine what they believe are the most important and least important courses in the curriculum as related to becoming a successful music teacher. A secondary purpose was to examine the effect of academic level and gender on these perceptions. In discovering the specific attitudinal shifts between young students, advanced students, and young teachers, as well as gender, a clearer picture may emerge in regards to the courses included in the curriculum.

Method

Participants

All participants (N = 162) were undergraduate music education students from three Southeastern universities of varying size. Each university's music education curriculum was comprehensive and included similar course

requirements in the areas of liberal studies courses, courses specifically focused on music, and courses focused on educational training. Additionally, each program was certified by the National Association of Schools of Music at the time the research was completed. The sizes of the institutions varied, with total enrollment ranging from approximately 13,000 students at the smallest institution to over 40,000 students at the largest institution. The music units of each university also varied in size, with the number of music majors ranging from less than 60 at the smallest institution to more than 1100 at the largest institution

Survey Construction and Administration

A survey was constructed to measure participants' perceptions of three broad categories of courses included in their music education curriculum. These categories included courses in liberal studies, educational training, and musical training. Specific courses/course areas representing curricular requirements common to all three institutions were identified after an examination of the institutions' degree plans and course catalogs. Using a Likert-type scale, participants were asked to rate the importance of these courses from 1 = *not important* to 7 = *very important* regarding the impact of these courses on the participants' development as music educators. Demographic information relating to gender and academic level were also requested on the survey (see Appendix A). It should be noted that the student teaching experience was evaluated separately from the three broad categories being investigated due to the cumulative nature of that aspect of teacher training.

The survey was piloted using undergraduate music education students (n = 6) from one of the three institutions being examined. These individuals did not participate in the full administration of the survey. The pilot was conducted in order to determine if the survey's directions and items could be clearly understood, while also assessing the ability of students to complete the survey without assistance from the administrator. Insights from the pilot resulted in the following adjustments to the survey: (a) three courses were given further description regarding the specific type of course being addressed, and (b) one course was removed from the survey completely.

Following the pilot procedure, three different versions of the survey were constructed to minimize any potential order bias. The nineteen courses being evaluated were ordered randomly using the random sequence generator from the website www.random.org. Students who were enrolled in a combination of academic classes and performing ensembles within each university were invited to voluntarily participate in the survey. The researcher personally distributed and administered the written surveys to each participant.

Results

The survey was administered to 168 undergraduate music education students. Six surveys were not fully completed, resulting in a total of 162 usable surveys (96.42% completion rate). From the total number of students who completed the survey (N = 162), the academic levels included freshman (n = 42), sophomores (n = 33), juniors (n = 52) and seniors (n = 35). The gender breakdown of the sample was 91 males and 71 females. The total number of students responding from each institution varied, with 31 participants from Institution A, 120 participants from Institution B, and 11 participants from Institution C.

Survey responses (N = 162) yielded a mean importance rating for each of the nineteen courses evaluated. Additionally, scores of the six courses representing general studies, six courses representing musical training, and six courses representing educational training were each summed to create aggregate scores to be used for statistical comparisons. Specifically, the collapsing of data allowed for the use of a MANOVA to compare the three course categories. Overall, participants rated courses focused on musical training as highest in importance (M = 37.93, SD = 3.51), followed by courses focused on educational training (M = 34.63, SD = 4.48) and courses in the area of general studies (M = 24.47, SD = 6.80). Across all three categories of courses, the top rated courses in importance were "student teaching," "conducting," and "classroom management." The three courses rated lowest in importance, all from the area of general studies, were "science," "math," and "history." Unlisted courses mentioned by students as being important included "class piano" and "jazz techniques." Table 1 shows importance ratings of all nineteen course areas evaluated in rank order, as well as additional courses provided by participants.

A two-way MANOVA was used to examine the effects of gender and academic level on importance ratings assigned for each large category of courses examined. A significant main effect for the variable of gender was found, F (1, 157) = 4.66, $p < .01$, $\eta_p^2 = .10$. Follow-up univariate tests indicated that the effect of gender was significant in evaluations of the importance of educational training, F (1, 160) = 10.21, $p < .01$, $\eta_p^2 = .06$, with females (M = 35.88, SD = 3.96) giving higher ratings to these courses than males (M = 33.67, SD = 4.67). No significance was found between gender and ratings of general studies courses, F (1, 160) = .004, p = .95, or between gender and ratings of music focused courses, F (1, 160) = .356 p = .55. Additionally, no significant effects were found for the variable of academic level, F (1, 155) = .649, p = .80, nor were any significant interactions found.

Differences among participant groups from the three universities were examined. The number of participants from each institution varied in such a way

that statistical comparisons were inappropriate; however, visual inspection of ratings for each large category found some differences among institutions. Music focused courses were rated lower by respondents at Institution B (M = 37.35, SD = 3.62) than by those at Institution A (M = 39.19, SD = 2.67) and Institution C (M = 40.45, SD = 2.33). Conversely, respondents at Institution B (M = 35.37, SD = 4.12) rated education focused courses as more important than those at Institution A (M = 31.58, SD = 4.59) and Institution C (M = 35.27, SD = 4.96). Minimal differences were found among importance ratings assigned to the general studies courses.

Table 1. *Mean Importance Ratings of Course Areas Evaluated in Rank Order*

Course/ Course Area	Mean	Standard Deviation	Category
Student Teaching	6.90	0.31	Independent
Conducting	6.76	0.58	Music
Classroom Management	6.49	0.84	Education
Ensemble Participation	6.41	0.87	Music
Applied Lessons	6.41	0.86	Music
Music Theory	6.32	0.94	Music
Aural Training	6.23	0.98	Music
Methods Courses	6.21	0.94	Education
Music History	5.77	1.16	Music
Edu./Child Psychology	5.68	1.27	Education
Sociology	5.64	1.27	Education
Special Needs	5.47	1.21	Education
Assessment/Grading	5.16	1.33	Education
English Language	4.85	1.53	General
Literature	4.38	1.53	General
Social Sciences	4.14	1.4	General
History	3.98	1.44	General
Math	3.73	1.54	General
Science	3.36	1.34	General

Note. Response scale from 1=low to 7=high. Unlisted courses cited by participants included: class piano, jazz techniques, wind literature, arranging, orchestration, and physical education

Discussion

The results of this study indicate that music education students view courses in music as being the most important courses in their curriculum, as it relates to their becoming a quality music teacher. This finding seems to merit attention, in part because it may suggest that these students view themselves as musicians who teach, as opposed to teachers focusing on the subject of music.

These results support previous research demonstrating the self-identification of musician or musician-performer as being the most common identity chosen by music education students (Cox, 1997; Isbell, 2008; L'Roy 1983; Roberts, 1991). The fact that many music education students may be prioritizing their music classes ahead of their classes focused on educational training is consistent with Conway's (2002) exploration of first year music teachers' perceptions of music teacher preparation. The low ratings of importance given to the education courses addressing "assessment/grading" and "special needs in education" may explain some of the challenges of the first few years of teaching identified by mentors and administrators in previous research (Conway, 2002; Conway, 2003).

Results of gender comparisons indicated that males gave lower importance ratings to education courses than their female peers. This result was statistically significant, though it should be noted that the effect size of gender ($\eta_p^2 = .10$) was not large; however, it should be considered that this result may be related to the self-identification of preservice teachers. Currently the majority of secondary school teachers in the United States are women, with males comprising 43.1% of high school teaching positions and only 19.1% of elementary and middle school teaching positions in the year 2007 (Nelson, 2009). This discrepancy in gender balance may result in male music education students viewing these courses as less important based on their inability to see themselves in these roles. Roulston and Mills (1998) found the issue of identity to be one of many contributing to perceptions of male music educators, as well as male music students.

The lack of significant differences between academic levels was an interesting result in this study. Though some academic level differences emerged between ratings of aural training and methods courses, differences were not found to be statistically significant. The fact that ratings of importance stay relatively constant throughout the educational sequence may indicate a lack of growth in terms of individuals' personal and professional perspective. It may also be a self-fulfilling prophecy resulting from a student's inability to perceive a course as important after having previously deemed it unimportant. Regardless, it is important to consider the implications this finding and any impact on decisions related to teacher education curricula or the development of music education students as a professional community within the collegiate setting.

While the differences found in inter-institutional comparisons of importance ratings must be viewed cautiously due to the variation in sample sizes, they do raise some questions that deserve further examination. Students at Institution B rated music courses lower, and education courses higher, than their counterparts at Institutions A and C. Education focused courses at Institution B are taught, primarily, by music education faculty, while similar courses at Institutions A and C are taught by faculty from their respective schools of education. Though many variables may be contributing to this finding within the context of

the present study, this result suggests a need for further exploration on the potential effects of institution and institutional distribution of education courses on music education students. When music education professors teach education focused courses to music education students, does this result in the students considering these courses to be of greater importance? At institutions where it is not practical for music education faculty to teach these courses are there better ways to help students relate to the content of these courses?

As a profession, music teacher education often functions as a partnership that includes collegiate faculty in music, music education, and education along with music supervisors, other administrators, and music teachers in the public schools. These various constituents already work together in the preparation of music teachers, but the current study is just one of many which indicate that the way in which the various groups view each other may have a negative impact on preservice music teachers' perceptions of the degree curriculum. These negative perceptions may also create long-term bias that perpetuates itself in the profession. Future research in this area should continue to not only investigate college music education student perceptions, but also perceptions of the various groups providing their guidance at various points in the educational process. An understanding of these perceptions will promote further communication and integration of content, pedagogy, and field experiences in a way that will better prepare our future music educators.

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Appendix A

Survey Copy

CIRCLE APPROPRIATE INFORMATION/ANSWERS

Level: **Freshman** **Sophomore** **Junior** **Senior**
Sex: **Male** **Female**

Instrument/Voice Type _____

The following list includes courses and/or course descriptions of the requirements necessary to complete an undergraduate degree in music education.

Please rate each course by circling the appropriate number from 1 (not important) to 7 (very important) in regards to how important you believe each of the following courses will be/have been in your development as a music educator.

	Not Important						Very Important
English language/composition	1	2	3	4	5	6	7
Music Theory	1	2	3	4	5	6	7
Classroom management	1	2	3	4	5	6	7
Math	1	2	3	4	5	6	7
Applied lessons	1	2	3	4	5	6	7
Educational/child psychology	1	2	3	4	5	6	7
Literature	1	2	3	4	5	6	7
Music history	1	2	3	4	5	6	7
Assessment/Grading/Test Design	1	2	3	4	5	6	7
Methods courses	1	2	3	4	5	6	7
Social sciences	1	2	3	4	5	6	7
Aural training	1	2	3	4	5	6	7
Ensemble participation	1	2	3	4	5	6	7
History (American, European, etc.)	1	2	3	4	5	6	7
Special needs in education	1	2	3	4	5	6	7
Science	1	2	3	4	5	6	7
Sociology(Mus. Ed. in Amer. Society, etc.)	1	2	3	4	5	6	7
Conducting	1	2	3	4	5	6	7
Student teaching/internship	1	2	3	4	5	6	7
Other/unlisted course_____	1	2	3	4	5	6	7

Appendix B

Categorization of Curriculum by Category and Subcategory

Category	Subcategories
Liberal Studies	English language/composition math literature social sciences history (American, world, European, etc.) science
Musical Training	theory aural training music history applied lessons ensemble participation conducting
Educational Training	assessment classroom management educational psychology special needs in education sociology methods courses
Final Field Experience	student teaching/internship

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Factors Concerning Student Participation in Summer Band Camps

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The purpose of this study was to investigate factors concerning participants' decisions to attend summer band camp. High school band students (N = 910) attending summer band camps at four comprehensive universities in different geographical regions of the United States completed a researcher-designed open-ended questionnaire. Content of written responses was analyzed and categories were chosen that emerged from the answers. Results indicated that band directors and friends exerted the most influence in developing the interest to attend a summer band camp and were also the most frequent sources of specific information. Respondents stated that proximity and camp reputation were the most important reasons for choosing a particular camp. Findings further revealed that a majority of instrumentalists attended summer band camps to further their musical development. Implications for university band camp directors, band directors, and students are provided.

For almost a century and a half, school-aged children in the United States have been attending summer camps. Since the first organized American camp was founded in 1861 (Smith, 2002), summer camps have evolved into a plethora of experiences for students with diverse interests and needs, including computers, math, science, and disabilities. In fact, the American Camp Association (ACA) reports that there are over 12,000 camps nationwide ("CampLog," 2005), and the latest data suggest more than 7,000,000 students, between 6 and 16, attend each year (Smith, 2005).

In 1928, music educators Joseph Maddy and Thaddeus Giddings founded the National High School Orchestra Camp ("History," n.d.), possibly the earliest music camp in the United States. The inaugural eight-week camp (Hash, 2009), which in 1962 became the Interlochen Arts Academy (Birge, 1966), hosted 115 students and 20 faculty from across the country ("History," n.d.). Since that time, the number of American music camps has burgeoned. In fact, Kelly and Juchniewicz (2009) suggest there are currently hundreds of music camps in the United States, with thousands of students enrolling.

The abundance of music camps offered, coupled with the large attendance numbers, would seem to indicate that both music educators and students value the activity. However, although several articles concerning summer music camps have been published in practitioner journals (e.g., Brandt, 1989; Ponick, Harlow, Horman, & Machover, 1997; Taylor, 2005), there appears to be a dearth of research studies. To date, an extensive review of the literature reveals only

three research-based examinations related to possible student motivation for attending these camps (Dilley, 1982; Hampton, 2008; Kelly & Juchniewicz, 2009).

One investigation attempted to ascertain the effect of summer band camp attendance on various aspects of student performance. In 1982, Dilley sought to determine if enrollment in summer band camp would impact selected aspects of high school band members' musical competence. Results suggested that participation in a one-week summer band camp did not have a significant impact on sight-reading ability or the capacity to perceive elements of expressive performance. However, Dilley stated that attendance may have increased individual confidence in performance ability and engendered more positive attitudes toward music and music making. Two studies examined students' views regarding various aspects of summer band camp attendance. Hampton (2008) attempted to ascertain information concerning the camp's influence on participants' college choice. Results indicated that perception about the quality (i.e., reputation, challenging but professional teaching interactions) of participating faculty members was the most important factor affecting college choice, followed closely by opinions regarding strong academic programs across the university. Kelly and Juchniewicz (2009) investigated particular musical and social objectives middle and high school students wished to accomplish through attendance at a summer music camp. The researchers determined that these instrumentalists' musical goals were significantly more important than were their social objectives. Specifically, data showed that participants aimed to develop and enhance their music skills through participation in what they perceived to be musical experiences of the highest merit. Further, grade level, sex, and previous summer camp attendance had no effect on students' goals.

There remain a plethora of questions to be answered about summer band camp experiences. Because these camps are in many ways a joint endeavor among students, band directors, and host colleges or universities, it seems important to gather data that might prove informative for all involved. As a result, the purpose of this study was to examine a number of factors that influence and impact instrumentalists' participation in summer band camps. The following research questions were investigated: (a) Why do students initially become interested in attending a summer band camp? (b) How did they first hear about the specific band camp they choose to attend? (c) Who most influences that decision? (d) What are their personal reasons for attending a specific summer band camp? (e) What are their goals for attendance?

Method

Participants

Participants (N = 953) were high school band students (wind players and percussionists) attending summer band camps at four large universities, each in different geographical regions of the United States. All camps have been in existence for over half a century and have a week-long duration. They all enroll instrumentalists (in this study, "instrumentalists" refers to wind and percussion students) with varying musical abilities, disparate developmental statuses, and diverse cultural and ethnic backgrounds. Camp admission does not require an audition; however, once students arrive on campus, they perform for ensemble placement. The camps are comprehensive and provide varying musical experiences, including traditional large-group performance ensembles, private lessons, and electives (i.e., conducting, reed making, world drumming). Although most participants are overnight campers, students may also enroll as day students. A variety of social and recreational activities are provided daily.

Development and Administration of Research Instrument

The format sought responses that might reflect the opinions of the respondents most accurately. A number of researchers (Conway, 2002; Gangi, 1998; Madsen & Geringer, 2008) have used open-ended questionnaires and have concluded they provide insightful and often unexpected information, which proved valuable for their examinations. Consequently, information was gathered via participant response in an open-ended format. Based on prior similar inquiries (e.g., Kelly & Juchniewicz, 2009; Spaulding, 2008; "Summer Day Camp," 2005), an open-ended written questionnaire was constructed consisting of five questions and demographic information concerning grade, sex, and years enrolled in previous summer music camps (see Appendix A).

The initially developed questionnaire was used as a pilot with high school music students (N = 37) attending a comparable summer music camp not involved in the present study. Results suggested that students had no problems following the directions and could successfully complete the questionnaire within five minutes.

At the beginning of the first rehearsal at each summer band camp site, students were provided with a copy of the survey and a pencil. Camp directors then read the following directions:

> *You should have received a camp questionnaire and a pencil. If you haven't, please raise your hand now. (Pause) Please fill in the answers to the questions as completely as possible. There are no right or wrong answers, so please be honest. If*

> *you do not wish to complete the questionnaire, you do not have to. When you have finished, please raise your hand, and a camp counselor will retrieve the questionnaire. If you have questions, please ask them now.*

No other instructions were given. When students finished, camp directors collected the questionnaires and returned them for subsequent analysis.

Data Analysis

For purposes of identification, participants were randomly assigned a number between 1 and 910 (26 students choose not to answer the questionnaire, and 17 did not answer all the questions). Responses from all questionnaire respondents were reviewed and coded. The first step was discerning categories that emerged from the students' written responses. After reading the data from the present study several times, an initial set of broad categories was developed for answers to each question. Then, in collaboration with a graduate music education student, the list of coding categories was reviewed, revised as necessary, and made more succinct. After my initial categorization of the students' written responses, a second graduate music education student used the designated coding categories to independently analyze 25% (n = 228) of all the questionnaires. Reliability, determined by dividing total agreements by agreements plus disagreements, was calculated to be .96. Within each category, summed responses from all four research sites were divided by total participants (N = 910) to compute percentages.

Results

Of the 910 students completing the research questionnaire, 50.7 (n = 461) were female and 49.3% (n = 449) were male. Four hundred thirty-nine (48.2%) participants were in 9th and 10th grades, while 471 (51.8%) were in 11th and 12th grades. In addition, 54.8% (n = 499) of the instrumentalists had attended a previous summer band camp, and 45.2% (n = 411) indicated they were first-time campers. Visual analysis of the responses revealed very little differences among the various demographic groups. For example, answers to Question 2 [How did you initially hear about the University of _____ Summer Band Camp?] showed that 90 (39.0%) 11th and 12th grade boys and 85 (38.1%) 9th and 10th grade girls denoted their band directors first notified them about camp. Similarly, replies to Question 4 [Please describe your most important personal reason for selecting the University of _____ Summer Band Camp?] indicated 24.9% (n = 124) of students with previous camp experience and 25.6% (n = 105) of students without prior camp attendance chose the particular camps based on close proximity to home. As a result, I combined the data from the different demographic categories for further analysis.

In response to Question 1 [Please describe how or why you first become interested in attending a summer band camp.], students indicated band directors (n = 260; 28.6%) and friends (n = 221; 24.3%) were the most influential sources for stimulating initial interest in attending a summer band camp. Additional factors included the desire to continue musical development over the summer (19.5%; n = 177), suggestion by family members (11.5%; n = 105), and past camp experiences (11.4%; n = 104). Remaining responses (i.e., private teacher recommendation, scholarship, college choice) were combined to form an "other" category (4.7%; n = 43).

Data from responses to the second question [How did you initially hear about the University of _____ Summer Band Camp?] showed that 351 (38.6%) instrumentalists first heard about the respective band camps from their directors. Another 228 (25.1%) were informed by their friends, and 15.9% (n = 145) received information via camp publicity (i.e., advertisement flyers, e-mails, websites). One hundred twenty-three (13.5%) students learned of the specific camps from family members. A number of miscellaneous responses (6.9%; n = 63) were classified as "other" (i.e., private teacher, no recollection, youth minister).

Tabulation of answers to Question 3 [Please list the one person or factor that most influenced your decision to attend the University of _____ Summer Band Camp.] revealed 38.4% (n = 349) of instrumentalists stated their band directors most influenced their decision to attend that specific camp. Friends (27.8%; n =253) had the next largest effect, followed by family members (22.7%; n = 207). The "other" category (n = 101; 11.1%) included a sizeable assortment of various influences (i.e., past experience, social, private teacher, cost).

Analysis of data concerning Question 4 [Please describe your most important personal reason for selecting the University of _____ Summer Band Camp.] indicated close proximity to home (n = 230; 25.3%) was the top reason participants gave for attending the particular camps. Camp reputation (n = 181; 19.9%), university supporter (n = 158; 17.4%), past camp experiences (n = 121; 13.3%), and friends (n = 109; 11.9%) were the categories that received the next highest responses. Again, an "other" category (12.2%; n = 111) was developed for the plethora of disparate reasons (i.e., family, cost, university recruitment efforts, band director).

Finally, answers to Question 5 [What is the most important goal you want to accomplish by attending the University of _____ Summer Band Camp?] revealed that an overwhelming majority of students (85.9%; n = 782) attended the camps for musical purposes. Only 13.0% (n = 118) indicated objectives that were social in nature. Of the remaining 10 instrumentalists, six (0.7%) were scouting college campuses, and four (0.4%) had no goal.

Discussion

In this study, the investigator attempted to ascertain a number of factors that influence high school band students' attendance at summer band camps. Instrumentalists (N = 910) attending summer band camps at comprehensive universities in four different geographical regions of the United States answered five open-ended questions. Written comments were analyzed for content and within each question, categories emerged from the responses.

The findings in the present study support those from other examinations (Bergee, Coffman, Demorest, Humphreys, & Thornton, 2001; Madsen & Kelly, 2002) that suggest music teachers have considerable sway regarding student decisions about plans involving musical development, including which colleges to attend for degree programs and studio instruction. Participants in the current investigation indicated that band directors were influential in stimulating interest to attend a summer camp as well as making the choice to attend the specific camp in which they enrolled. These results seem to suggest a number of implications for host universities as well as secondary-level band directors. First, it appears university camp directors should strive to provide band directors with accurate and current information about camp offerings in a timely manner. Such discourse may assist teachers in deciding if advising instrumentalists to enroll in a summer band camp could be beneficial. In addition, directors might be able to use the information to better guide their students to attend camps that best meet their musical objectives (e.g. jazz, double reed). Second, it may be important for band directors to make a concerted effort to communicate summer band camp information to students involved in their programs. In addition to assisting individual players to meet their personal goals, Kelly and Juchniewicz (2009) posited that continued summer study may impact the overall performance level of the entire ensemble.

Given the age group with which this experiment was conducted, the data concerning the role of friends was not unexpected. In the current study, friends were almost as influential as band directors in both motivation to attend a summer band camp and the choice of specific camp. Although not solicited by this survey, some students (n = 57; 6.3%) suggested prior experience influenced their friends' recommendations. Most students who offered justifications for their colleagues' suggestions indicated excellence of the musical experience was the decisive factor for the recommendation. These data support the results of Hampton's (2008) investigation, which found that campers were most influenced by the quality of faculty members and the host universities perceived robust academic programs. Since nearly 20% of respondents (n = 181) indicated that the camp's reputation was important in their decision to attend, this might suggest that summer band camp directors could consider periodically administering surveys concerning participant camp satisfaction as a way to gather attendee perceptions.

It is perhaps notable that over 25% of respondents (n = 230) stated that camp location was the main reason for enrolling in the specific camp they attended. No students offered clarification for their answers, and this response leads to a number of questions. For instance, are there correlations between band director recommendations and camp proximity? Since this experiment was conducted during a time of recession, were there financial implications? If so, only seven (0.8%) instrumentalists included cost as the determining factor in choosing a specific camp. In addition, only 73 participants (8.0%) were day campers.

For music educators, perhaps the most interesting results gleaned from this investigation is that nearly 90% of participants (n = 782) indicated continued music study over the summer was their impetus for summer band camp attendance. Student responses revealed a plethora of musical goals (i.e., improving characteristic sound, learning to read ledger lines, studying music theory, enhancing rhythmic ability, developing sight-reading skills, increasing articulation performance). Only 118 campers (13.0%) indicated social objectives as the primary reason for going to camp. These results support data from previous studies that show a number of students enroll in summer camps to improve skills (American Camp Association, 2005; Westervelt, Johnson, Westervelt, & Murrill, 1998). Specifically, previous research concerning summer music camps (Kelly & Juchniewicz, 2009) found those students were significantly more focused on musical priorities.

It seems apparent that summer band camps can serve as an important resource in the musical development of secondary band students. Hopefully, the results of this study will prove beneficial to educators at all levels who are concerned about decisions related to summer band camps, including university camp directors as well as secondary band teachers. Given the considerable number of students who participate in summer band camps, the large quantity of camps offered, and the apparent dearth of research-based studies pertaining to these camps, further investigations seem warranted. For example, what are the reasons band directors might suggest their students attend summer band camps? Do they have particular objectives for attendance? Do they prefer to send students to their alma maters? Do they rely on student recommendations or personal observations? Is a personal connection with university faculty a determining factor? Do parents have specific goals for enrolling their children in summer band camps? Do specialized camps (i.e., low brass, double reed, woodwind) develop skills more effectively than do the more generalized camps investigated here? No participants in this examination indicated they had referenced camp information through any social networking sites. Would social media outlets (i.e., Facebook or Twitter) influence camp attendance? Perhaps answers to these and other questions might help summer band camp directors continue to develop experiences that best meet the goals of band directors and students with a variety of ability levels and objectives.

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Appendix A

Band Camp Survey

Your gender: _____Female _____Male

Grade you will enter in the fall: _____9 _____10 _____11 _____12

How many years have you attended a summer band camp (including this one)? _____

****

Please answer the following questions as honestly and completely as possible. If necessary, feel free to use the back of this paper.

1) Please describe how or why you first become interested in attending a summer band camp.

2) How did you initially hear about the University of _____ Summer Band Camp?

3) Please list the one person or factor that most influenced your decision to attend the University of _____ Summer Band Camp?

4) Please describe your most important personal reason for selecting the University of _____ Summer Band Camp?

5) What is the most important goal you want to accomplish by attending the University of _____ Summer Band Camp?

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Dictation Strategies of First-Year University of Music Students

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Participants (N=14) took dictation of a single diatonic, major-key, melodic line played on a piano. Each participant was videotaped individually as he or she listened to the recorded melody four times and wrote on a prepared response form. Participants were observed for specific target behaviors including: (a) starting at the beginning, (b) working in order, (c) starting with note-heads only, (d) starting with rhythms, (e) erasing, (f) singing while writing, (g) singing the melody at a slower tempo, and (h) completing the exercise. Scores on the dictation were compared for those who were enrolled in an aural skills class and those who were not. Scores were also compared for participants who scored at least 70% and those who did not. No significant difference was found in any strategy between those enrolled and not enrolled in an aural skills class. Only one strategy (completing the exercise) produced a significant difference between those who scored over 70% and those who did not. The strategies participants used did not appear to have a direct effect on this dictation task. Further study with a larger sample size may give further insight into this question.

The skills of first-year university music students differ broadly, especially in the area of aural skills. Dictation seems to be particularly difficult for students. Pembrook (1986) tested strategies using multiple groups—each following a different approach in short dictation exercises (6 to 16 notes). Results suggested that participants preferred to write while listening and students who did scored higher than those who did not. He found that subjects who heard the short examples twice did much better than those who heard an example only once. He also found no significant difference between the scores of subjects who sang before writing than those who did not. In fact, some subjects appeared to adversely affect their chances by singing because they sang inaccurate reproductions of the melody. This was later confirmed in Pembrook, 1987, where writing while listening resulted in the highest scores.

Researchers and pedagogues sometimes differ on how students should approach a dictation. Rogers' text on aural instruction (2004) recommends listening first without writing. Refraining from writing may help students hear the big-picture rhythmic and melodic information. Foulkes-Levy (1997) agreed and suggested that listening at the larger, structural level will facilitate understanding. Rogers counters Pembrook's conclusion: "the purpose

of dictation ... is not to produce correct written transcriptions but to produce a certain kind of listener who can hear sound as meaningful patterns" (p. 199).

Several researchers recommend working with the rhythm first. Beckett (1997) had participants listen to three polyphonic dictations: (a) pitch first, (b) rhythm first, and (c) undirected. She found that subjects who worked on the rhythm first were most successful. Potter (1990) observed 25 musicians who "were as good at dictation as we could find" (p. 63). Each participant took dictations with the researcher present and was encouraged to speak about what he or she was doing. Researchers asked probing questions and recorded what was happening and how participants were approaching the assignment. The most successful participants had a good musical memory and a mastery of rhythm. They recognized common patterns, understood scale degree function, and heard harmonic function. They tended to work on rhythms first and to approach problems from multiple angles using several strategies.

In the present study, participants' strategies were studied while taking a dictation assessment. Unlike previous studies, this study utilized a grounded, theory-like approach and sought to observe first without any agenda, then to examine those observations through statistical tests. The purpose of this study was to examine differences in the strategies of those enrolled with those not-yet-enrolled in aural skills class and how they scored on a dictation assessment. It was expected that there would be a difference in strategies between the groups, since one of the groups had received instruction and the other had not.

Method

Participants

Participants (N=14) were volunteer first-year music majors at a large, southwestern university. They were either enrolled in the first class in the theory sequence (n=10) or were not enrolled in any theory and were waiting for the remedial course the following semester (n=4).

Stimulus CD

The dictation material was recorded on a CD. It consisted of a single-line, four-measure melody from an aural training text (Kraft, 1999) played on a piano with 30 seconds of silence between each of the four times the stimulus was heard. The melody was chosen for its use of stepwise motion and skips within the tonic and dominant triads.

Response Forms

Participants wrote their responses on forms that included only a treble clef, time signature, key signature, and the correct number of bar lines. Each beat of the melody was worth two points, one for rhythm and one for pitch, for a total of 16 points. Following Gillespie's (2001) scoring model for tonal melodies, no partial credit was given for contour or for partially correct rhythms or pitches.

Procedure

Participants sat at a desk with a pencil and the response sheets. They were instructed to process the dictation out loud and were informed that they would hear the recorded sample four times, with 30 seconds of silence after each hearing. The reader then started the recording and left the room. Data were collected from video observations of participants taking the dictation and from their response sheets.

Results

Initial observations of video-recorded data noted behaviors and approaches of participants during the dictation process. From the data, a list was created and organized into five categories: (a) ordering, (b) listening, (c) gesturing, (d) singing and (e) finishing.

Subsequent observations specified particular approaches used by participants in each group (see Table 1). Results compared participants who were enrolled in theory (n=10) and those who were not (n=4) and those who scored higher than 70% on the dictation (n=9) and those who did not (n=5). None of the behaviors were used significantly more or less by the group that was enrolled in theory at the time of the experiment (p<.05, *Fisher's exact test*). Comparisons by score (those who scored above 70% and those who did not) showed no significant difference in any of the approaches except one. Participants who scored above 70% completed the exercise significantly more often than those who did not (p=.027, *Fisher's exact test*).

Table 1. *Behaviors observed during dictation and frequency within each group.*

		Scored >70%	Scored <70%	Enrolled in Theory	Not Enrolled
Ordering	Started in measure one	89%	100%	90%	100%
	Filled in each measure in order	22%	60%	30%	50%
	Filled in note-heads, stems, and barring simultaneously	22%	20%	20%	25%
	Marked noteheads first	44%	20%	30%	50%
	Used an eraser	56%	80%	70%	50%
Listening	Listened without writing	56%	20%	30%	75%
	Listened while writing	44%	100%	60%	75%
	Waited several seconds before writing	22%	20%	10%	50%
Gesturing	Pointed to the beat	33%	20%	40%	0%
	Pointed to the rhythm	33%	0%	20%	25%
	Moved hand to contour	22%	0%	20%	0%
Singing	Sang while listening	11%	0%	10%	0%
	Sang while writing in the same tempo	11%	20%	0%	50%
	Sang while writing in a slower tempo	0%	20%	0%	25%
Finishing	Finished before STOP NOW direction	22%	0%	20%	0%
	Stopped at STOP NOW direction	11%	40%	30%	0%
	Stopped shortly after STOP NOW direction (< 5 seconds)	33%	60%	30%	75%
	Stopped a long time after STOP NOW direction (>5 seconds)	33%	0%	20%	25%
	Completed the exercise	**100%**	**40%**	80%	75%

Discussion

The strategies used in a dictation assessment by music students enrolled in aural skills were compared to music students not yet enrolled in aural skills classes. No significant differences were found in any strategies between the two groups. Strategies were also compared for participants who scored above 70% on the assessment and those who did not. The only significant difference found between these two groups was that higher scoring participants were significantly

more likely to finish the dictation, leaving no parts blank, than lower scoring participants.

Aural skills training did not seem to have an effect on how students approached the task. There were no significant differences noted between those who were enrolled in aural skills training and those who were not. Though all participants in this study were freshmen music majors, the first several weeks of aural training did not appear to affect approach. The only significant difference was found in comparing those who scored higher on the assessment and those who did not. The approaches of the higher scoring and lower scoring groups were compared in the areas of ordering, listening, gesturing, singing, and finishing.

Ordering

No difference was found in the order of approach. Higher scoring participants were no more likely to start at the beginning of the exercise than lower scoring participants. In the same way, neither group was more likely to approach the dictation in order and to deal with one measure only after completing the previous measure. Neither group started with rhythms first or pitches first more than the other. It was expected that participants who started with rhythms first would score better because they would have a framework on which to hang the notes (Pembrook, 1986; Potter, 1990). The benefit of a rhythmic framework was not confirmed in this study.

Listening

Though some suggest listening only, then writing after the music has stopped (Rogers, 2004), in this study neither of the groups followed that advice more than the other. Pembrook (1987) discussed this dilemma:

> One pedagogical problem associated with the various strategies for melodic dictation is that each seems to have its limitations. Immediate writing creates a dual processing problem (listening to a new stimuli while trying to interpret and encode those just heard). . . . On the other hand, 'passive listening' (nonsimultaneous writing) to a melody of many tones leaves the listener with the problem of storage capacity. (p. 156)

Gesturing

Some participants kept track of location in the score by pointing to the beat or tapping the rhythm on the score while listening. No studies have been found that suggest this approach and neither group used it significantly more than the other. The suggestion that students who write the rhythm first have a framework

on which to hang the notes may be applicable to visualizing the notes on the page by pointing to each beat within the score as it occurs in the music. This may also help with the dual processing problem of writing while listening. However, it did not appear to make a difference in accuracy with participants in this study.

Singing

Singing the melody after hearing it did not appear to affect dictation success—nor did singing the notes while writing the melody, either in tempo or at a slower tempo. Neither group did these more than the other. This may suggest that students should neither be encouraged nor discouraged from singing the melody aloud after it has been heard (although singing aloud could be a distraction to other students if the dictation was taken in a group). Singing may, however, be discouraged on the basis of time: If it doesn't help, it may be better to avoid it to have more time for other strategies or approaches. This confirmed previous findings (Berz, 1995; Pembrook, 1987). Hearing internally, or audiating (Gordon, 1997), may be a better recommendation to give students.

Finishing

Participants were observed finishing before, less than five seconds after, more than five seconds after, or exactly at the instruction to stop. No difference was found for when participants finished. Struggling students may have been relieved to hear that the exercise was over, since no low-scoring participants continued to write more than five seconds after the direction to stop. Allowing unlimited time may not be helpful in increasing success.

The only statistically significant factor in this study was completion of the exercise. This is not a surprising finding, but it does have implications for dictation success. This result might suggest that instructors could consider encouraging students to write to the end of the example, even if they are unsure of what to write. It may be better to write something than to write nothing at all. Perhaps participants who have something on paper are more likely to compare what they have written to what they are hearing. Just having an answer may be more assuring than having nothing. Instead of trying to figure out what goes in each measure, students may determine whether what they wrote is what they hear in subsequent listening.

Other Factors

Few participants wrote in solfège syllables on their response forms. One participant wrote out all of the solfège, then erased it and acquired a perfect score on the assignment. Another wrote all the solfège below the staff without

rhythms, but appeared to run out of time, resulting in a lower score. Still another did not write in solfège, but after one measure transposed all pitches up one step.

Several results of this study differed from previous studies. The newness of the medium (a recorded dictation) may have had an effect on these new music students (all were in their first year of music study), most of whom had likely only taken dictations from an acoustic piano prior to the experiment. Asking students to process the dictation out loud may also have affected their performance. This may have distracted them from the dictation task. The difference in the size of the groups was a limitation in this study. There were many more participants enrolled in aural skills than not (n=10 versus n=4) and many more higher scoring participants than lower-scoring participants (n=9 versus n=5). Having more equally sized groups may have shown more of a difference in the effectiveness of strategies.

Conclusion

This study sought to examine strategies and approaches used by first-year music majors taking a melodic dictation. The only strategy found to have a significant effect on dictation success was completing the exercise. This suggests that observable behaviors may not have a significant effect on dictation success. Perhaps instruction should avoid commenting on specific approaches and instead focus on other factors involved in taking dictation.

Future research could replicate this study with a larger sample size. Examining only good dictation takers or only bad dictation takers could also yield valuable data. Researchers could also request that participants follow specific strategies in order to test their effectiveness.

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Interference for Tonal Memory under Varying Harmonic Conditions

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Graduate and undergraduate music students (N = 41) participated in a study designed to compare pitch recall through vocalization before and after the interpolation of a sine tone (A = 440) and various recorded musical excerpts. The excerpts included short samples of music in harmonically related key centers (A Major, E Minor), less related (Eb Major), and atonal conditions. Results indicated significant differences between recall conditions, $F (5, 200) = 11.95$, $p < .001$, $\eta p2 = .23$. The mean deviation for pitch recall from memory (M = 4.7) was significantly higher than for all other conditions. The means for pitch recall after sine tone (M = 3.09) as well as A Major (M = 3.17), were significantly lower than Eb Major (M = 3.93). The mean for Eb Major was significantly higher than atonal (M = 3.40). Findings suggest a general decrease in pitch recall accuracy through time and as harmonic conditions deviated further from the target pitch "A," except for the final condition of atonal. Suggestions for rehearsal settings are included.

Tonal memory might be subject to interference based on several factors; including previous musical experience and harmonic content (Long, 1977), time elapsed between occurrences of reference and comparison tones (Deutsch, 1978a; Williams, 1975), and the presence of competing musical stimuli (Deutsch, 1970; Shatzkin 1981). Improvements in pitch memory have been reported based on the serial placement of test tones within an interpolated sequence (Deutsch, 1972), as well as by the degree of similarity and repetition among test tones within interpolations (Deutsch, 1975). Additionally, discrimination between test and recall melodies is not greatly affected by the interpolation of extremely similar melodies (Madsen & Staumm, 1983).

Some have conducted related studies to determine the effectiveness of various tonal recall strategies. Pembrook (1986, 1987) found that vocalization was not effective in enhancing pitch memory during melodic dictation tasks. Beckett (1997), suggested that rhythm, but not pitch recall, was greatly enhanced when participants attended separately to either element during polyphonic dictation. Elliott (1974) found that regular vocalization resulted in significant improvements in regards to pitch discrimination and tonal memory among beginning level instrumentalists. Other studies suggest that handedness, imagery, and peer-approval and disapproval may affect an individual's performance on pitch related tasks (Bergan, 1967; Deutsch, 1978b; Hanser, 1982).

In ensemble settings, pitch recall strategies are a necessary aspect of accurate musical discrimination, especially as they relate to intonation. Not surprisingly, researchers have found a strong association between perceptions of musical quality and intonation accuracy (Geringer & Madsen, 1981; Madsen & Geringer, 1976). Thus, musicians employ a number of techniques as a means of stabilizing pitch, including calibration of instruments to an electronic or instrument produced reference tone, as well as "matching" to or referencing of an internalized or externalized pitch standard. It is commonly accepted that these methods will help improve intonation, yet research determining the efficacy of these approaches is limited. Specifically, few studies have been conducted on how factors such as unstable or non-functional harmonies might interfere with pitch recall accuracy, with findings based mostly on the effects of stimuli unlikely to be encountered in an actual concert or rehearsal settings. Thus, the purpose of this study was to investigate the effect of interpolating a sine tone and recorded musical excerpts of varying harmonic content on pitch recall accuracy.

Method

Participants

Participants in this study consisted of undergraduate and graduate instrumentalists at a large southeastern university (N=41). The sample included wind, string, and percussion players. Academic experience for the participants ranged from second-year undergraduates to third-year doctoral students.

Procedures

Four excerpts were selected for this study based on key centers and harmonic material. The order of the excerpts reflected increasing harmonic distance from the pitch "A" as tonic. The excerpts were presented in the following order, A Major, E minor, Eb Major, and atonal. The first 10-15 seconds of the following recordings were used as stimuli: (a) Beethoven, Symphony no.7 in A Major, Movement 1, Leonard Bernstein, New York Philharmonic, (b) Tchaikovsky, Symphony no. 5, Movement 1, Herbert von Karajan, Berlin Philharmonic, (c) Holst Suite in Eb, Movement 1, Frederick Fennell, Eastman Wind Ensemble, (d) Webern, Five Pieces, Sehr Fliessend, Christoph Von Dohnanyi, Cleveland Orchestra.

Before beginning the experiment, each participant completed a short questionnaire that included the following questions: (a) Do you have "perfect" or "absolute" pitch? Yes/No, (b) When was the last time you sang or played your instrument today?

After completion of the questionnaire, the researcher read the following directions:

> "This study concerns pitch retention. At the beginning of this experiment you will be asked to sing an "A" from memory to the best of your ability. Shortly afterwards, an A=440 will be played using a Korg portable tuner for approximately five seconds. You will then be asked to sing back the "A" at a comfortable range using the vowel sound "ah" for about three to five seconds. After singing the second "A," four short musical excerpts will be played for you. At the end of each excerpt there will be a short pause and you will then be asked to sing the "A" again to the best of your ability. Are there any questions?"

The experiment took place in a relatively sound proof room at the university's music facility. Participants were requested to sit in a chair approximately five feet from the experimenter and the audio playback equipment. A Sony High Density Linear Converter attached to a Pioneer VSX-406 receiver and Paradigm Speakers was used to play each excerpt. Singing examples were recorded on a Zoom H4 Digital Stereo Recorder and saved as WAV files for further analysis.

WAV files were transferred from the digital recording device to a laptop computer. The pitch for each sample was analyzed using the software program *Wavelab*. The most "stable" 1 to 2 seconds of each recording was used for subsequent analysis. All portions analyzed excluded both the onset and release portion of the tone. Analysis was performed using the "Global Analysis" function of the software. This function analyzes the recorded sample and outputs an "average" pitch in Hz as well as deviation in cents.

Results

Questionnaire responses indicated that two participants reported having absolute pitch. To control for this variable, these participants were removed from any subsequent analysis. Among the remaining sample (N=41), all participants indicated that it had been at least one hour since they had either sung or played their instrument. Data from the pitch samples was recorded as deviation in cents from the pitch "A" for descriptive purposes (see Table 1). Due to violations in normality, however, the data were transformed using a logarithmic scale for statistical analysis. A one-way repeated measures analysis of variance test was used to determine if there were differences between each recall condition (memory, sine tone, A major, E minor, Eb major, atonal). Results indicated significant differences between the six conditions, $F(5, 200) = 11.95$, $p < .001$, $\eta_p^2 = .23$. Pair-wise comparisons were conducted using Fisher's LSD tests. The mean for pitch recall from memory ($M = 4.7$) was significantly higher than for all other conditions. For pitch recall after sine

tone (M = 3.09) as well as A Major (M = 3.17), means were significantly lower than Eb Major (M = 3.93). The mean for Eb Major was significantly higher than atonal (M = 3.40). All other comparisons were non-significant. It should be noted that means reported here are logarithmic transformations of raw data, and thus do not correspond to specific cent deviations from the pitch "A."

Table 1. Means and Standard Deviations of Distance in Cents by Condition

Condition	M (not normalized)	SD	M (normalized)	SD
1. Memory	254.56	237.45	4.72	1.66
2. Sine Tone	56.58	19.15	3.09	1.31
3. A Maj	71.39	23.25	3.17	1.38
4. E Minor	94.34	24.6	3.68	1.38
5. Eb Major	108.24	23.34	3.93	1.39
6. Atonal	74.7	20.67	3.4	1.42

Discussion

The results of this study indicate that recall was closest to the target pitch of "A" immediately after subjects listened to the sine tone, and then became progressively more unstable throughout each condition. These findings are consistent with previous research indicating that recall accuracy is affected by the amount of time between target tones and recall (Williams, 1975), as well as when a target tone is contextualized within harmonically unrelated material (Long, 1977). For this study, however, results suggest that neither length of time (between conditions) nor harmonic material affected recall for the final condition of atonal when compared to all but two conditions: (4) E Minor and (5) Eb Major. This finding is unusual, and might suggest that interference is more distinct during conditions in which target tones are contextualized within tonal versus atonal musical material.

For instrumental musicians, the results from the present study might be useful in clarifying the effectiveness of commonly used intonation strategies within ensemble settings. Specifically, it appears that relying solely on an internalized pitch standard might be detrimental to recall accuracy, as time and harmonic conditions seem to affect overall accuracy in pitch. Furthermore, previous research by Deutsch (1970) indicates that even the presence of other pitch phenomena interferes with recall. Thus, musicians who rely on continuous pitch matching might find that they are more successful at remaining "in-tune" compared to when using other strategies.

In general, implications based on data from the present study should be generalized with caution. The sample size for the study is relatively small,

and it is also possible that each participant's ability to vocalize might be inconsistent with their ability to discriminate or match pitch in other settings. Additionally, research by Deutsch (1970) does not mention the musical training of her subjects, and thus it is probable that participants would be less susceptible to interference from competing musical stimuli as a result of training. Generalization should also be considered in light of the participants' level of familiarity with the selected musical excerpts. It is possible that previous exposure, either through performance or listening, may have affected some participants' abilities to successfully attend to the experimental task.

Much of the research involving interference for musical memory has been conducted using researcher-generated stimuli. Since collegiate ensemble musicians typically encounter music of high complexity and since ensemble rehearsal and performance contexts may involve the use of various pitch discrimination strategies, using musical material from live recordings might be beneficial for investigating the efficacy of these strategies in situations more similar to actual ensemble conditions. Specifically, further studies could address how musicians' perform on pitch discrimination tasks on their primary instrument rather than through vocalization, and the efficacy of various strategies (ex. Matching, internalization of pitch, use of electronic tuners) may be compared. Additionally, thresholds for interference might differ based on primary instrument (winds, percussion and strings) as well as exposure to traditional tuning practices among differing ensembles (bands and orchestras). Further research is needed to determine how these effects function in various settings and among differing populations.

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Appendix A

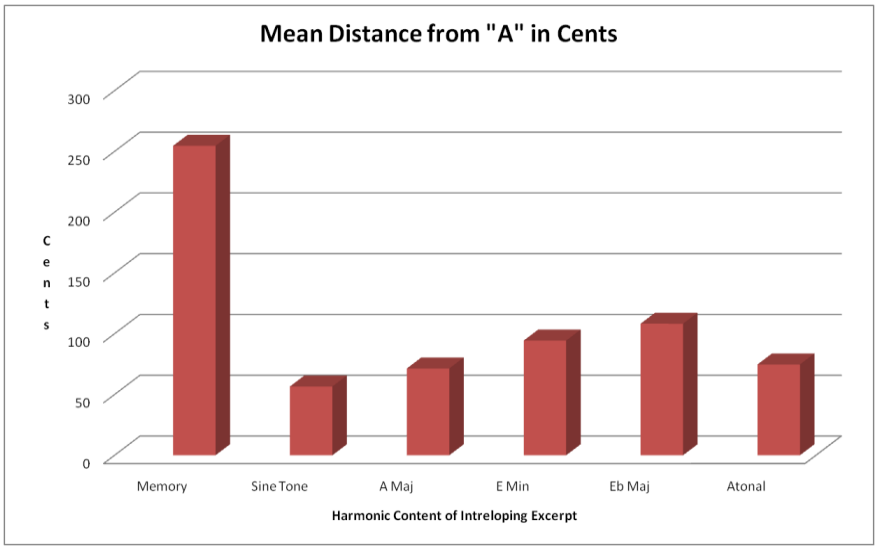
Significant Pairwise Comparisons between Normalized Means in Cents by Condition

Condition	Mean	Significant* Comparison with Mean
1. Mem	4.72	Sine (3.09) A Maj (3.17) E min (3.68) Eb Maj (3.94) Atonal (3.40)
2. Sine	3.09	Mem (4.72) Eb Maj (3.94)
3. AMaj	3.17	Mem (4.72) Eb Maj (3.94)
4. EMin	3.68	Mem (4.72)
5. EbMaj	3.94	Mem (4.72) Sine (3.09) A Maj (3.17) Atonal (3.40)
6. Atonal	3.40	Mem (4.72)

*significant at $p < .05$ using LSD procedure

Appendix B

Mean Distance from “A” in Cents



Alice Parker: American Choral Composer, Arranger, and Educator

Gail Fleming
University of Missouri-St. Louis
August 2005
Committee Chairperson: Fred Willman

Dissertation Abstract:

This investigation is an in-depth examination of Alice Parker's philosophy of music in relation to choral teaching, arranging, and composing. The researcher proposes that within the context of multi-cultural American music, Alice Parker's unique approach to music making and how it is manifested within her choral compositions, arrangements, and teaching techniques is a significant and valuable area of study for music educators and students. Further, it is beneficial to administrators and the general public, as well.

Within the literature review, Alice Parker's unique and effective approach to music making is related to the need for a philosophy of music, educational philosophies in general, the history of music education in American public education, and current trends in choral education, arranging, and composing. The researcher found that Alice Parker's philosophy of music encompasses many effective historical philosophies of music education as well as current trends in successful music education and composition.

The scope of the study includes a detailed analysis and explanation of Alice Parker's philosophy of music, a process that begins with the text and the melody, within three of her diverse choral compositions and arrangements. Her unique method of song leading, known as a SING, is thoroughly examined, utilizing the April 6, 2004, SING, hosted by the researcher, as an example. The effectiveness of the SING begins, once again, with the text and melody and continues with a process, which intertwines teaching, arranging, and composing music. The participants not only engage in singing music but also become music arrangers and composers in the process. Further, they gain first-hand knowledge of an insight into Ms. Parker's own methods of music making.

In addition to positive feedback from participants in Alice Parker's workshops and SINGs, the constructive results of the researcher's own implementation of Ms. Parker's teaching techniques are scrutinized. The appendices include a compete "annotated works" list of Alice Parker's choral arrangements and compositions, two CDs of an interview with Ms. Parker, conducted by the researcher, and a DVD of one of her SINGs.

The research concludes with a discussion of the significance of Alice Parker's theory of text and melody as the basis for successful music making and how music arranging, composing and teaching can be interwoven within the process. The researcher suggests that Ms. Parker's multi-faceted approach to music making prompts questions for further research into more comprehensive-based, rather than strictly performance-oriented, music education.

The Effectiveness of a Unit Study – Technology Approach Within the High School Band Rehearsal Setting

Melissa Gustafson-Hinds
University of Missouri-St. Louis
March 2010
Committee Chairperson: Fred Willman

Dissertation Abstract:

The purpose of this research study was to investigate the usefulness of implementing a Comprehensive Musicianship (CMP) - Unit Study within a high school band rehearsal setting, using music technology as a supplementary tool. While previous studies have emphasized the many benefits of Comprehensive Musicianship, it is not clear how such an approach works alongside a Unit Study using music technology. In contrast, using qualitative and quantitative methods, this study examined student learning and assessment achievements through individual performance, student engagement during band rehearsals, and individual responses to the CMP experience.

This quasi-experimental study was implemented at a Midwestern high school which has a band program of over 200 members, who take part in one of three ability-based concert bands. The middle-level Symphonic Band served as the experimental group, whereas the bottom-level Concert Band and the top-level Wind Ensemble served as control groups. Data included student performance pretests and post tests of all three bands, and the following focused on the CMP experimental group: (a) daily field note observations of CMP instruction, (b) student journal entries, (c) informal and formal teacher interviews, and (d) a post questionnaire.

Statistical tests indicated that the Symphonic Band and Concert Band members both improved their individual musical performance over the semester, ($p < .05$). However, the Symphonic Band (experimental group) did not improve to a greater degree in comparison to the control groups. Nonetheless, descriptive results of the post questionnaire indicated that the majority of Symphonic Band members enjoyed the CMP experience and believed that they increased their musical understanding through the new approach.

In addition, further analysis of band director and student data suggested that student learning was achieved in a variety of ways: (a) the band director maintained focus on student-centered learning, serving as a *learning facilitator* which led to *increased musical understanding* and provided *new insights into music* for the Symphonic Band members; (b) he continually reflected upon the long-term and short-term goals, student journal entries, and student performance in class, in regards to his CMP strategies and delivery (*self-evaluation*), in which the band members were able to monitor and track music learning and progress through the journal entries (*self-evaluation and reflection*); (c) the band director showed how he used transfer effectively with his pleasant demeanor and his fluent conducting (*communication*).

Despite the fact that some music educators may feel that CMP takes away from achieving levels of high performance, this study suggests that students are not only able to master musical concepts, but also improve their technical and skills of musicianship, individually and within a band setting.

Homeschool Parents' Self-Reported Activities and Instructional Methodologies in Music

Stephanie Lynn Myers
University of Missouri-Kansas City
April 2010
Committee Chairperson: Lindsey Williams

Thesis Abstract:

The purpose of this investigation was to examine the music instruction of homeschooled students in a large, Midwestern metropolitan area. The research questions were: (a) What kinds of music activities and instructional methodologies do homeschool parents use to teach their children about music? (b) How do the self-reported minutes of music instruction homeschooled children receive compare with the minutes of instruction recommended by the Missouri Department of Elementary and Secondary Education for public school children? (c) How do homeschool parents' reports of homeschool music instructional goals align with national standards published by the National Association for Music Education? An online survey tool was used to collect data from homeschooling families. Results indicated that most homeschooling parents were musically literate. Their children learned how to read, perform and understand music through private lessons and family activities. Homeschooled children were most likely to study keyboard, voice or stringed instruments. Areas for further research were discussed

Evaluation of a Developmentally-Based Music Therapy Assessment Tool for Children With Autism

Alaine E. Reschke-Hernández
University of Missouri-Kansas City
December 2010
Committee Chairperson: Deanna Hanson-Abromeit

The purpose of this study was to gather sufficient data to determine the statistical reliability of the scores obtained with a new music therapy assessment tool for children with autistic disorder: the Autism Developmental Skillset Assessment (ADSA). Participants included one child with autistic disorder (N = 1, male, age 3) and board certified music therapists (N = 4). Five children enrolled in this study, however, there was a participant attrition rate of 80%. The study was composed of three steps. First, the child with autism was videotaped during one individual music therapy session. Second, video clips from the session were selected and edited. Finally, music therapists utilized these video clips to complete the ADSA and select a primary and secondary goal for the assessed child. The inter-rater reliability of primary goal selection using the ADSA was .50 (N = 4). The inter-rater reliability of secondary goal selection was .50 (N = 4). The overall reliability of the resulting ADSA scores was evaluated using generalizability theory (G-theory) statistical analysis with a fully crossed, single-facet, mixed design (r X i). The g coefficient for the ADSA tool for absolute measurement was 1.00, which surpassed the conventionally accepted reliability value of .80.

An Analysis of Rhythm Systems in the United States: Their Development and Frequency of Use by Teachers, Students, and Authors; and Relation to Perceived Learning Preferences

Paul C. Varley, Jr.
University of Missouri-St. Louis
July 2005
Committee Chairperson: Fred Willman

One of the issues facing music educators is the way in which they teach students to read rhythms accurately. Using the current educational philosophy of differentiation, or teaching a student by appealing to their preferred learning style, as a backdrop, the researcher proposed that music educators tend to teach rhythms using a limited number of systems, thereby failing to utilize many of the available systems.

The researcher examined the published rhythm systems dating back to the early nineteenth century, surveyed band students in grades 7-12 concerning their preferences in learning rhythms and their learning styles, surveyed music teachers concerning their background in teaching rhythms and their preferences, and surveyed the available method books along with many of their authors.

The results of the study showed that music educators, by a large majority, were taught and teach rhythms to their students using the Harr system. To a lesser degree, the Kodály and mnemonic systems are used. Although there seems to a relation between how students were taught to read rhythms and which systems they use, there seems to be no relation to their learning styles.

Although an examination of the available literature revealed that some research has been conducted to determine the effectiveness of certain rhythm systems, the survey indicated that most music educators are unaware of any research in this area. Indeed, when asked if they were presented with research showing another system to be more effective than the one they currently use, most music teachers were unsure if they would switch to the more effective system.

The researcher concluded that more study is needed in the area of rhythm pedagogy to determine different approaches of teaching rhythm in order to appeal to the various learning styles of students.

Missouri Music Educators Association State Conference Research Poster Presentations
January 2011
Osage Beach, MO

Faculty Research

Exploring Service-Learning in Higher Education Music Classes
Melita Belgrave, University of Missouri-Kansas City

Empathy As an Outcome of Learning Harp Therapy
Cynthia Green Libby & Daniel S. Hellman, Missouri State University

How They Decide: A Case Study Examining the Decision Making Process for Keeping or Cutting Music in a K-12 Public School District
Marci L. Major, University of Missouri-Columbia

Undergraduate Assessments of Curricular Preparation and Internship Experiences in Music Education
Dale Misenhelter, University of Arkansas

Pitch-Matching and Video Games
Andrew S. Paney, University of Mississippi

Perceptions of Effective Music Teachers: What do Kids Think?
Joseph Parisi & Charles Robinson, University of Missouri-Kansas City

Undergraduate Music Majors' Perceptions of Instrumental Conducting Curricula
Brian A. Silvey, University of Missouri-Columbia

Exploratory Investigation of Senior Adult Musicians' Perception of Tension
Jeremy F. Lane, University of South Carolina, & Lindsey R. Williams, University of Missouri-Kansas City

Graduate Degree Research

A Performance Analysis of Whirlwind and Shadow Rituals: Ticheli Composition Contest Award Winning Works in 2007
Christopher M. Baumgartner, University of Missouri-Columbia
Master's Thesis completed at Bowling Green State University, OH

Student Projects

Relationships between Gender, Music Experience, School Level, and Vocalist's Ratings of High and Low Quality Voice Performances
Robin E. Anderson, University of Missouri-Columbia

Relationships among Tonal Pattern Practice, Audiation Skills, and Sight-Reading Achievement of Collegiate Brass Players
Christopher M. Baumgartner, University of Missouri-Columbia

An Examination of the Effectiveness of Two Methods of Rhythmic Instruction on Middle-School Instrumentalists
Eric C. Bonds, University of Mississippi

The Effect of Assessment Software on Instrumental Performance Accuracy
Bryan D. Koerner, University of Missouri-Columbia

The Effects of Language on English Language Learners' Music Preference
Pei-Ying Lin, University of Missouri-Columbia

Reading Versus Rote: A Study in Short Pattern Learning
Ryan McLouth, University of Missouri-Columbia

The Effect of Teacher's Verbal Corrections on Students' Perceptions of Choral Rehearsal
Garnet Mowatt, University of Mississippi

The Swinney Conservatory of Music at Central Methodist University: An Historical Study
David Samson, University of Mississippi

Cross-Curricular Applications in Music: Attitudes and Practices
Karen Stafford, University of Kansas

The Effect of Verbal Correction on Students' Demeanor and Achievement
Phillip Stockton, University of Mississippi

Effect of Teacher-Modeled Tempo on Beginning String Student Tempo Acquisition
William Lewis Strozier, University of Missouri-Columbia

Student Attitudes Towards Prodigies and Professionals
Tammy Takaishi, University of Missouri-Columbia

The Effect of Harmonic Accompaniment on the Tonal Achievement of Middle School General Music Students
Randy Tillmutt, University of Mississippi

Effects of Recorded Models and Self-Recording on Students' Sight-Reading and Self-Evaluation
Leigh Anne Torres, University of Missouri-Columbia

Curwen Hand Signs on Pitch Identification
Nathan Trahan, University of Mississippi

History of the Mississippians: The University of Mississippi's Dance/Jazz Ensemble Since 1897
Jonathan Whitmire, University of Mississippi

The Effects of Information on Listeners' Preferences
Cynthia A. Williams, University of Missouri-Columbia

On- Versus Off-Task Behavior of Students Based on Teacher Positioning in the Choral Classroom
Philip Woodmore, University of Missouri-Columbia

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2012 Missouri Music Educators Association
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Those who wish to submit a report for consideration should comply with the following guidelines:

1) There will be three kinds of research accepted for presentation: a) completed master's theses or doctoral dissertations; b) reports of original research studies, and c) student non-degree projects.

2) a) To submit completed master's or doctoral research, it only is necessary to submit a copy of the abstract, a copy of the document's title page, and a copy of the signature page which indicates that the paper was accepted in partial fulfillment of degree requirements. The name of the degree-granting institution should appear on one of these pages, or must be included with the submission, as well as the author's full name and e-mail. If all of the above-mentioned items are included, the completed thesis or dissertation will be guaranteed acceptance for presentation. These may be sent by e-mail to the address on the next page.

b) To submit a report of an original research project, e-mail a copy of the complete paper, including an abstract, in Word.doc (not .docx) format. The project should demonstrate sound research practices and writing style and should be complete. Small scale studies, including action research, are appropriate for this forum. The author's name, address, e-mail, and current school affiliation should appear only on a separate page/file from the abstract and/or manuscript.

c) Students may present non-degree projects that are submitted by faculty at Missouri colleges and Universities. Faculty members should contact Wendy Sims at the address below for further information.

3) Papers presented at conferences other than previous MMEA state conferences *will* be permitted as long as this is clearly indicated in a statement included with the submission.

4) Authors will be apprised of the results of the selection process by e-mail. A hard copy of acceptance letters will be provided upon request.

5) Submissions must arrive at the address below by December 12, 2011. Authors will receive notification of acceptance by the end of December. Address submissions (or questions) to:

Wendy L. Sims, MMEA Research Chair
simsw@missouri.edu

We will look forward to a large number of submissions and to another interesting and lively research session.

INFORMATION TO CONTRIBUTORS

The editorial committee welcomes contributions of a philosophical, historical, or scientific nature, which report the results of research pertinent in any way to instruction in music.

Manuscripts must be submitted through email to the editor, Joseph Parisi, at parisijo@umkc.edu. The manuscript must conform with the most recent style requirements set forth in the PUBLICATIONS MANUAL for the American Psychological Association (APA, Sixth edition). For historical or philosophical papers, Chicago (Turabian) style is also acceptable. An abstract of 150-200 words should accompany the manuscript. All figures and tables should be submitted camera ready.

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