

ELLIS
ML
1
.M178
v. 40
2003

M J R M E

MISSOURI JOURNAL
OF
RESEARCH
IN
MUSIC EDUCATION

NUMBER 40
2003

PUBLISHED BY THE
MISSOURI MUSIC EDUCATORS ASSOCIATION

Missouri journal of research
in music education.
Received on: 07-23-04
University of Missouri -
Columbia

EDITOR

WILLIAM E. FREDRICKSON
University of Missouri-Kansas City

MANAGING EDITOR

SUZANNE RITA BYRNES
Kansas City, MO

EDITOR ELECT

CAROL MCDOWELL
Southeast Missouri State University

EDITORIAL COMMITTEE

ROBERT GROENE
University of Missouri-Kansas City

RANDALL G. PEMBROOK
University of Missouri-Kansas City

NORMA MCCLELLAN
Southwest Missouri State University

PAUL HENLEY
Southwest Missouri State University

FRED WILLMAN
University of Missouri-St. Louis

MARTIN BERGEE
University of Missouri-Columbia

WENDY SIMS, MMEA Research Chair (Ex Officio)
University of Missouri-Columbia

BUSINESS OFFICE

Missouri Music Educators Association
3140-K East Raynell
Springfield, MO 65804

EDITORIAL OFFICE

Conservatory of Music
University of Missouri-Kansas City
4949 Cherry
Kansas City, MO 64110-2229

Copyright © 2003 by the Missouri Music Educators Association, ISSN 00085-350X. The *Missouri Journal of Research in Music Education* is published annually and is a publication of the Missouri Music Educators Association. Copies can be obtained by sending \$5.00 (cash, check, or money order, payable to Missouri Music Educators Association) to William E. Fredrickson, Editor, *MJRME*, University of Missouri-Kansas City, Conservatory of Music, 4949 Cherry Street, Kansas City, MO 64110-2229. Inquiries relating to the availability and cost of back issues should also be directed to the editor. The *MJRME* is being listed in the INTERNATIONAL INDEX OF MUSIC PERIODICALS, THE MUSIC INDEX, the RILM ABSTRACTS OF MUSIC LITERATURE, and the BELL & HOWELL INFORMATION AND LEARNING HUMANITIES INDEX.

Missouri Journal of Research in Music Education

CONTENTS

Number 40

2003

FEATURE ARTICLES

- | | | |
|----------------------------|----|--|
| <i>Roy M. Legette</i> | 4 | The Effect of Music Instruction on Student Self-Concept and Motivation |
| <i>Cathi C. Wilson</i> | 16 | The National Standards for Music Education: Awareness of, and Attitudes Toward, by Secondary Music Educators in Missouri |
| <i>Mark C. Ellis</i> | 34 | The Effect of a Music Appreciation Course on the Ability of Students to Recognize Music Notation Examples |
| <i>Emily Megan Freeman</i> | 46 | The Effect of Tempo and Tonality on the Color Associations of Elementary Students when Listening to Music |

MISSOURI STUDENT ABSTRACTS

- | | | |
|----------------------------|----|--|
| <i>Paul Allen Clements</i> | 60 | The Effect of Phrase Expansion Recognition on Melodic Dictation Accuracy |
| <i>Rhonda S. Hackworth</i> | 61 | The Effect of Vocal Hygiene and Behavior Modification Instruction on the Self-Reported Vocal Health Habits of Public School Music Teachers |
| <i>Daniel Ligon</i> | 62 | Examining the Role of Popular Music in Education: A Quasi-Experimental Study Investigating Retention in Rural Southwest Missouri Middle School |
| <i>Cathi Wilson</i> | 63 | The Effects of Background Music on Viewers' Perceptions of Political Campaign Television Advertisements |

NEWS BRIEFS

- 64 Announcement from the *MayDay Group*
- 65 Table of Contents (Feature Articles), *Journal of Historical Research in Music Education*, Vol. XXV:1, October 2003

The Effect of Music Instruction on Student Self-Concept and Motivation

Roy M. Legette
The University of Georgia

This study was designed to examine the effect of music instruction on student self-concept and motivation. Subjects (N = 358) enrolled in music class at 2 elementary schools were pretested using the Piers-Harris Children's Self-Concept Scale and the Asmus Music Attribution Orientation Scale. Subjects from the experimental school received music instruction from an elementary music specialist once a week for 9 months. Subjects at the control school were without a music specialist. Both scales were readministered at the conclusion of treatment as posttests. Findings revealed no significant difference between groups on the Piers-Harris Scale for most subscales. A significant difference between groups was found for the Popularity subscale with a higher score shown for the music specialist group. There was no significant difference between groups on the Music Attribution Orientation Scale. Implications for teaching and future research are discussed.

Factors that contribute to the success of students in school settings have long been a concern of educators. Some students do as much as they can to perform successfully, regardless of the circumstances or obstacles, while others do little, citing time demands or personal limitations. Perhaps the real reason behind this disparity is related to one's beliefs about his or her ability to be successful. In many instances, school failure is not attributed to a lack of ability but has more to do with the way students feel about themselves in that particular context (Metcalfe, 1981). It is generally accepted that students must believe in themselves in order to perform confidently and successfully in school. Some believe that high self-esteem pro-

motes happiness, social acceptance, and success, whereas low self-esteem contributes to failure (Rubin, Dorle, & Sandidge, 1977). Self-concept is increasingly gaining attention as a factor that influences many areas in the lives of children and how they perceive themselves in relation to their environments.

The relationship between self-concept and academic achievement is well documented, with some researchers theorizing that there is a definite relationship between these two variables (Altman & Dupont, 1988; Andrews, 1971; Black, 1974; Lee, 1986; Marsh, 1990; Mayberry, 1986; Mboya, 1986). In addition, self-concept has also been linked to related factors such as enhanced cognitive ability (Bourjally, 1984), future academic achievement (Jones & Grieneeks, 1970) and differences in academic achievement between genders (Spaights, Kenner, & Dixon, 1986).

Music Instruction and Self-Concept

Music educators have long recognized the positive benefits that accrue to individuals who participate in music educational experiences, and the effect of music instruction on the self-concept of students has become a growing area of interest. In research conducted by Nolin and Vander Ark (1977), involving junior high school choir and band students, findings revealed that students participating in such ensembles demonstrated a significantly higher level of self-esteem than their nonmusic counterparts.

Michel and Farrel (1970) found that students who received ukulele lessons made greater gains in self-esteem than students who did not receive such instruction. Similar findings were made in a subsequent study involving guitar instruction (Michel, 1971). Greenberg (1970) found that improvements in singing seemed to promote a more positive student self-concept, while findings in a study conducted by Costa-Giomi (1998) revealed that piano instruction had a positive effect on children's self-esteem.

Linch (1993) investigated differences in levels of self-esteem and academic achievement among high school partici-

pants in instrumental music, nonparticipants, and students who discontinue instrumental music education. Findings revealed no significant difference among groups.

Music Instruction and Student Motivation

In light of the fact that motivation has been cited by some researchers as accounting for as much as 25% in the variance in music and academic achievement (Caimi, 1981; Cattel, Barton, & Dielman, 1972; Chandler, Chiarella, & Auria, 1988), factors that influence student motivation have become an issue of growing concern for music educators. In many of today's classrooms an inequality of student motivation tends to exist. Some students strive and work for the sake of personal fulfillment while others work because they are required to and do not believe that their actions are related to success and failure. Research involving attribution theory has helped to bring some understanding to this complex area.

One of the major tenets of attribution theory is that motivation and achievement are influenced by individual beliefs about the causes of success or failure at given tasks (Weiner, 1972a, 1972b, 1979). The four attributions commonly associated with this theory are ability, effort, task difficulty, and luck. Ability is considered to be internal-stable (originating from the individual and unchangeable over time) while effort is perceived to be internal-unstable (originating from the individual and changeable over time). The causal attributions of task difficulty and luck are considered to be external because they are perceived as events happening outside of the individual's control.

In music education, considerable attention has been given to both effort and ability as causal attributions. Findings in a study conducted by Riemer (1975) revealed that subjects given instruction involving ability and effort reported more positive affect than those receiving instruction involving task difficulty and luck. Asmus (1985, 1986b) found that students often select effort and ability as causal attributions for success or failure in music, and that success or failure was strongly

attributed to task difficulty when students talked about themselves and to effort when they talked about others (Asmus, 1986a). In examining factors that influence student perceptions of causal attributions, some researchers have cited classroom goal structure (Austin & Vispoel, 1992), gender, grade level, and school system (Legette, 1993, 1998).

Researchers and educators place great importance on the role that self-concept and motivation play in student success. Therefore the purpose of this study was to examine the effect of school music instruction on student self-concept and motivation. Specifically, the following questions were investigated:

1. Is there a significant difference in student self-concept between students provided school music instruction by an elementary music specialist and those who are not provided such instruction?
2. Is there a significant difference in music success or failure causal attributions between students provided school music instruction by an elementary music specialist and those who are not provided such instruction?
3. What causes do elementary public school students attribute most to success and failure in music?

Method

Subjects were 358 fourth- and fifth-grade public school students attending two elementary schools in the southeastern United States. The sample was comprised of 185 males and 173 females. Both schools were similar in size and demographic make-up. Fifty percent of the subjects were Caucasian while 43% were African American. All subjects were administered the *Piers-Harris Children's Self-Concept Scale* and Asmus' (1986c) *Music Attribution Orientation Scale (MAOS)* as pretests at the beginning of the school year during their regularly scheduled music lesson. The *Piers-Harris Children's Self-Concept Scale* is self-report measure consisting of first person declarative statements to which children

circle a response as to how they feel about themselves. Self-concept is categorized into six classifications: Behavior, Intellectual and School Status, Physical Appearance and Attributes, Anxiety, Popularity, and Happiness and Satisfaction. The *Piers-Harris Scale* was preferred for this study because it focuses on children's conscious self-perceptions, rather than attempting to infer how they feel about themselves from their behaviors or the attributions of others. The *Piers-Harris Scale* has yielded internal consistency coefficients that range from .89 to .93. Test-retest correlations have been found to range from .42 to .90, and correlations with other self-concept measures tend to range from .32 to .85 (La Greca, 1990). The *MAOS* is a motivation measure comprised of 35 items divided into five different subscales: effort, background, classroom environment, musical ability, and affect for music. Issues addressed by the *MAOS* are quite varied and include items such as "having musical parents," "practicing a lot," and "liking the teacher." There are seven questions corresponding to each subscale. Asmus has determined reliabilities for each subscale as follows: effort (.82), background (.77), classroom environment (.76), musical ability (.77), and affect for music (.69). Subjects were asked to indicate how important they thought each item was on a scale of 1 to 5 with 5 being extremely important and 1 not being important at all. The *MAOS* was chosen for this study because, unlike Weiner's (1972) model, it is germane to music and has a wider range of causal attributions. An analysis of pretest scores revealed no significant difference between groups on the *Piers-Harris Children's Self-Concept Scale*, $t(294) = 1.50$, $p = .13$, or the *Music Attribution Orientation Scale*, $t(294) = 1.64$, $p = .10$. A cover sheet was attached to each instrument to acquire demographic information.

Subjects from the treatment school received 40-minute music lessons from an elementary music specialist (music teacher with a degree in music education) once a week for 9 months (one school year). Instruction consisted of student work at electronic keyboards and traditional elementary music activities (singing, performance on classroom instruments, movement, etc.). Using the progress report schedule of the

local school system as a guide, observations were made at both schools by the researcher once per 6-week period. Subjects at the control school did not have a music specialist but were provided some musical experiences by the classroom teacher (e.g., singing and movement) for approximately 10 to 15 minutes, two to three times per week. The classroom teacher did not have a music degree. All subjects were readministered the Piers-Harris Children's Self-Concept Scale and the MAOS at the conclusion of the study as posttests. In analyzing the data, only scores from subjects who completed both the pretests and posttests were considered. The study uses a quasi-experimental design (Campbell & Stanley, 1963) due to school constraints that necessitated the use of intact classrooms and precluded the randomization of subjects.

Results

To determine whether there was any significant difference in self-concept and causal attributions between students provided school music instruction by an elementary music specialist and those who were not, a *t* test for independent samples was used to compare mean gain scores for each group. Because inflation of the error rate was a concern due to multiple test comparisons, the initial alpha level of .05 was adjusted using the *Bonferroni Technique*, resulting in a probability of .01. Means and standard deviations are provided in Table 1.

Findings in Table 1 show that there was no significant difference between groups for the subscales: Behavior, Intellectual and School Status, Physical Appearance and Attributes, Anxiety, Happiness and Satisfaction. A significant difference between groups, however, was found for the popularity subscale with a slightly higher score shown for the music specialist group.

Further analyses were conducted to determine whether there was a significant difference in causal attributions between groups. Descriptive statistics are provided in Table 2. There was no significant difference between groups for any of the subscales.

Table 1

Comparison of Pretest-Posttest Mean Gain Scores For Each Variable on the Piers-Harris Children's Self-Concept Scale

Variable	Music Specialist Students (n = 210)		Classroom Teacher Students (n = 86)		r*
	M	SD	M	SD	
Composite score	0.62	0.65	0.63	0.65	0.95
Behavior	0.77	0.90	0.63	0.85	0.98
Intellectual & school status	0.80	1.19	0.69	1.05	0.53
Physical appearance and attributes	0.89	1.20	0.80	1.16	0.60
Anxiety	0.12	0.94	-0.21	0.89	0.26
Popularity	0.05	0.94	-0.92	1.00	0.00*
Happiness and satisfaction	0.81	0.73	0.73	0.92	0.58

Note. The range of scores from low to high is -0.92 to 0.89.

* $p < .0007$.

Table 2

Comparisons of Pretest-Posttest Mean Gain Scores for Each Variable of the Music Attribution Orientation Scale

Variable	Music Specialist Students (n = 210)		Classroom Teacher Students (n = 86)		r*
	M	SD	M	SD	
Effort	-0.10	0.87	-0.31	1.03	0.07
Background	-0.36	1.11	-0.41	1.11	0.69
Class environment	-0.26	0.99	-0.36	0.95	0.42
Musical ability	-0.04	1.00	-0.06	1.15	0.91
Affect for Music	-0.25	1.05	-0.24	1.11	0.95

Note. The range of scores from low to high is -0.41 to -0.04.

*not significant ($p > .01$).

The final research question examined causes that elementary public school students attribute most to success or failure in music. Means and standard deviations for all student re-

sponses within each subscale are provided in Table 3. As shown, effort with a mean of 4.14 was the most important causal attribution cited followed by musical ability with a mean of 4.11.

Table 3

Means and Standard Deviations for all Student Responses on the Music Attribution Orientation Scale

Variable	<i>M</i>	<i>SD</i>
Effort	4.14	0.85
Background	3.32	1.04
Class environment	3.89	0.86
Musical ability	4.11	0.86
Affect for music	3.71	0.97

Discussion

The results of this study show that, with the exception of the popularity subscale, there generally was no significant difference in self-concept between students who were provided music instruction by an elementary music specialist and those who were not provided such instruction. It is difficult to explain why there was a significant difference for the popularity subscale in favor of the music specialist group. Perhaps the specialized attention (i.e. time spent engaging children in focused group music activities) provided by the music specialist was a contributing factor. This premise is similar to that of Costa-Giomi (1998) and Dixon (1994) involving the effect of teacher behavior on a student's self-esteem. Future research might further examine the role and background of the music teacher on student self-concept.

As stated previously, test-retest reliabilities for the *Piers-Harris Children's Self-Concept Scale* ranged from .42 to .90. While there was no significant difference in pretest scores for this particular measure, it is possible that a low test-retest correlation in this instance could have contributed to the final

results.

It was interesting to note that there was no significant difference in music success or failure attributions between groups. This leads one to think that teacher background has no effect on how students perceive the causes of their success or failure in music. The results of research conducted by Lamar (1989) revealed that the music training background of the teacher had a significant effect on the music achievement of elementary school children. Perhaps a replication of the present study with a larger sample size and varying grade levels would yield a result different from the current findings.

The results of this study indicate that elementary students tend to place more importance on ability and effort as causal attributions for success or failure in music, consistent with the findings of previous research. A central implication for teaching is that causal attributions may influence the likelihood of students engaging in challenging music activities, as well as their willingness to persist in the face of failure.

The effect of various music education activities on student self-concept and motivation is fertile ground for research. While this study did not find that music instruction has a direct influence on these areas, further investigation could prove most beneficial for teachers, researchers, and ultimately the students that we serve. In that some researchers have cited a relationship among arts activities, self-concept, and motivation (Trusty & Oliva, 1994), further study is warranted. In the area of motivation, it is encouraging to see that students perceive effort as a viable alternative to ability. This is particularly important when one considers the many motivational forces that may be at work in a teacher's classroom at a given time. While perception of ability might function as a major motivator for some students, other students might be more motivated by the belief that success or failure is based on one's efforts. If indeed Attribution Theory is a significant factor in student learning and achievement in the music classroom, it seems reasonable to suggest that music teachers should focus more on determining the success and failure causal attributions of those they teach, and on using these attributions as guides in

lesson planning and instruction. Specific strategies in this regard could be quite varied. One approach that addresses both motivation and self-concept is to simply recognize the progress of students in a positive manner. Children enjoy hearing that they have the right answer, they are meeting or exceeding expectations, or that their behavior is exceptional. In instrument performance, teachers might emphasize ability and effort related attributions by creating a cooperative learning setting. Children are often motivated to learn new music skills and repertoire by sharing what they have learned previously with each other. Perhaps it would be beneficial if educators involved students more in class planning, organization, and decision making. This is in keeping with a basic premise of Attribution Theory. That is, if you really want to know what is important to students, ask students.

Encouragement and enthusiasm from the teacher are effective tools in promoting student motivation and self-concept. Small tasks should be awarded praise as they are mastered, with praise being carefully given as students rise to higher levels of accomplishment. It is important for students to believe that they can be successful, that they retain some control of the learning process, their failure situation is not permanent, and that they can positively influence the outcomes of future tasks. Given the importance placed by the music education profession on the achievement of students, and the abundance of research that shows a relationship between self-concept, motivation, and student achievement, there is a definite need for considerably more data to expand our knowledge as to what factors influence self-concept and motivation, as they relate to the positive development of children.

References

- Altman, H., & Dupont, F. (1988). The relationship between academic self-concept, global self-concept, and academic achievement. *Canadian Journal of Counseling, 22*(3), 345-355.
- Andrews, R. (1971). The self-concepts of good and poor readers. *Slow Learning Child, 18*(3), 160-166.
- Asmus, E. (1985). Sixth-graders achievement motivation: Their views of

- success and failure in music. *Bulletin of the Council for Research in Music Education*, 85, 1-13.
- Asmus, E. (1986a). Achievement motivation characteristics of education and music therapy students as identified by attribution theory. *Bulletin of the Council for Research in Music Education*, 86, 71-85.
- Asmus, E. (1986b). Student beliefs about the causes of success and failure in music: A study of achievement motivation. *Journal of Research in Music Education* 34, 262-278.
- Asmus, E. (1986c). *Factors students believe to be the causes of success or failure in music*. Paper presented at the National Biennial In-Service Conference of the Music Educators National Conference, Anaheim, CA.
- Austin, J., & Vispoel, W. (1992). Motivation after failure in school music performance classes: The facilitative efforts of strategy attribution. *Bulletin of the Council for Research in Music Education*, 111, 1-23.
- Black, W. (1974). Self-concept as related to achievement and age in learning-disabled children. *Child Development*, 45, 1137-1140.
- Bourjally, A. (1984). The relationship among self-concept, achievement, and occupational aspirations of high school seniors. *Dissertation Abstracts International*, 45, 801A.
- Caimi, F. (1981). Relationships between motivation variables and selected criterion measures of high school band directing success. *Journal of Research in Music Education*, 29, 183-193.
- Campbell, D., & Stanley, C. (1963). *Experimental and quasi-experimental designs for research*. Boston: Houghton Mifflin.
- Cattel, R., Barton, K., & Dielman, T. (1972). Prediction of school achievement from motivation, personality, and ability measures. *Psychology Reports*, 30, 35-43.
- Chandler, T., Chiarella, D., & Auria, C. (1988). Performance expectancy, success, satisfaction, and attributions as variables in band challenges. *Journal of Research in Music Education*, 25(2), 249-258.
- Costa-Giomi, E. (1998). *The McGill Piano Project: Effects of three years of piano instruction on children's cognitive abilities, academic achievement and self-esteem*. Unpublished manuscript, McGill University.
- Dixon, J. (1994). An investigation of teacher behavior and student's perceptions of teacher behavior in an inner city independent school eighth-grade classroom. *Dissertation Abstracts International*, 55, 3741A.
- Greenberg, M. (1970). Musical achievement and the self-concept. *Journal of Research in Music Education*, 18(1), 57-64.
- Jones, J., & Grieneeks, L. (1970). Measures of self-perception as predictors of scholastic achievement. *Journal of Educational Research*, 63(9), 201-203.
- La Greca, A. (1990). *Through the eyes of the child: Obtaining self-reports from children and adolescents*. Boston: Allyn and Bacon.
- Lamar, H. (1989). An examination of the congruency of music aptitude scores and mathematics and reading achievement scores of elementary children. *Dissertation Abstracts International*, 51, 778A.
- Lee, R. (1986). An investigation of the personality, academic and social background characteristics of highly successful, moderately successful,

- and non-successful students. *Dissertation Abstracts International*, 47, 1249A.
- Legette, R. (1993). Causal beliefs of elementary students about success and failure in music. *Southeastern Journal of Music Education*, 5, 98-105.
- Legette, R. (1998). Causal beliefs of public school students about success and failure in music. *Journal of Research in Music Education*, 46(1), 102-111.
- Linch, S. (1993). Differences in academic achievement and level of self-esteem among high school participants and students who discontinue instrumental music education. *Dissertation Abstracts International*, 54, 3362A.
- Marsh, H. (1990). Causal ordering of academic self-concept and academic achievement: A multi-wave longitudinal panel analysis. *Journal of Educational Psychology*, 82(4), 646-656.
- Mayberry, D. (1986). A comparative study of multi-room schools with one room schools in the mid-American union conference of Seventh Day Adventists. *Dissertation Abstracts International*, 47, 1297A.
- Mboya, M. (1986). Black adolescents: A descriptive study of their self-concepts and academic achievement. *Adolescence*, 21(83), 689-696.
- Metcalf, B. (1981). Self-concept and attitude to school. *British Journal of Educational Psychology*, 51, 66-76.
- Michel, D. & Farrel, D. (1970). Music and self-esteem: Disadvantaged problem boys in an all-black elementary school. *Journal of Music Therapy*, 1, 124-127.
- Michel, D. (1971). Self-esteem and academic achievement in black junior high school students: Effects of automated guitar instruction. *Bulletin of the Council for Research in Music Education*, 24, 15-23.
- Nolin, W., & Vander Ark, S. (1977). A pilot study of patterns of attitudes toward school music experiences, self-esteem and socio-economic status in elementary and junior high students. *Contributions to Music Education*, 5, 31-46.
- Reimer, B. (1975). Influence of causal beliefs on affect and expectancy. *Journal of Personality and Social Psychology*, 31(6), 1163-1167.
- Rubin, R., Dorle, J., & Sandidge, S. (1977). Self-esteem and school performance. *Psychology in the Schools*, 14(4), 503-507.
- Spaights, E., Kenner, D., & Dixon, H. (1986). The relationship of self-concept and the academic success of black students in white universities of higher education. *Journal of Instructional Psychology*, 13(3), 111-121.
- Trusty, J., & Oliva, G. (1994). The effect of arts and music education on students' self-concept. *Update: Applications of Research in Music Education*, 13(1), 23-28.
- Weiner, B. (1972a). *Theories of motivation: From mechanism to cognition*. Chicago: Markham.
- Weiner, B. (1972b). Attribution theory, achievement motivation, and the educational process. *Review of Educational Research*, 42(2), 203-215.
- Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology*, 71(1), 1-25.

The National Standards for Music Education: Awareness of, and Attitudes Toward, by Secondary Music Educators in Missouri

Cathi C. Wilson
University of Wisconsin-Whitewater

The purpose of the study was to determine the extent to which secondary music educators (high school instrumental and choral directors) in Missouri are aware of the voluntary National Standards for Music Education, and their attitudes toward them. Of equal importance, information was gathered regarding the extent to which implementation is occurring in the classroom for each Standard, and the factors determining implementation decisions. Respondents were also questioned on their knowledge of Missouri's state standards for Fine Arts, the Show-Me Standards. In addition, data were gathered to ascertain how music educators initially came to an awareness of the Standards, what opportunities for further training have been offered by their schools or districts, and whether they have taken advantage of that training. Results indicated that nearly half of the respondents had made no changes in what they teach on a daily basis because of the National Standards. Another one third responded that they had made a few changes. Only 7% of the respondents indicated that they always consider the National Standards when planning their daily lessons, and another 24% stated that they frequently consider them. Standards 1 (singing), 2 (playing instruments), and 5 (reading/notating) are the most addressed standards in these secondary music classrooms, with Standards 3 (improvising) and 4 (composing/arranging) receiving the least attention. About 75% of the respondents had participated, or were participating, in some kind of further training in the National Standards, but of these, over 80% responded that time was a major obstacle in preventing them from obtaining further instruction.

Since music education was introduced into the Boston public schools in 1837, local schools have taken responsibility for crafting their own programs of study, often reflecting the music teacher's background, training, and strengths, rather than following a centralized design. More than a century and a half later, although music is still taught in most American schools, there is wide disparity among programs from state to state and even within individual school districts (MENC, 1994). A primary aim of the current National Standards movement is to set a benchmark for what all students in the U.S. should know and be able to do in a particular discipline. See Figure 1 for the content standards for K-12 music.

1. Singing, alone and with others, a varied repertoire of music
2. Performing on instruments, alone and with others, a varied repertoire of music
3. Improvising melodies, variations, and accompaniments
4. Composing and arranging music within specified guidelines
5. Reading and notating music
6. Listening to, analyzing, and describing music
7. Evaluating music and music performances
8. Understanding relationships between music, the other arts, and disciplines outside the arts
9. Understanding music in relation to history and culture

From *National Standards for Arts Education*. Copyright © 1994 by Music Educators National Conference (MENC). Used by permission. The complete National Arts Standards and additional materials relating to the Standards are available from MENC—The National Association for Music Education, 1806 Robert Fulton Drive, Reston, VA 20191.

FIGURE 1.
The National Standards for Music Education:
Content standards.

At this time of this study, roughly seven years since the voluntary National Standards for Music were introduced, there is little documented information about their actual impact in the classroom. According to Riveire (1997), as of June 1997, there was no published research measuring the extent of use of the Standards in any music classrooms. In 1998, the MENC-

The National Association for Music Education's Research Task Force, under the direction of Carolynn Lindeman, asked the question, "to what extent are the standards being implemented, by whom, and with what result?" (MENC Research Task Force, 1998, p. 7). With this in mind, I wished to contribute to the small but growing body of knowledge by providing information about implementation of the National Standards by high school ensemble directors in Missouri.

Not unexpectedly, lack of time and resources are often mentioned as factors preventing teachers from implementing the Standards more fully in their classrooms (Kirkland, 1996). This situation is not unique to elementary and secondary education. Those who advocate encompassing Standards content in college curricula maintain that time and money are their biggest challenges (Lindeman, 1996). According to Byo (1999), even the best materials and equipment in music classrooms are based on pre-Standards curricula. Lehman (1995), however, admonished schools under budget constraints to move slowly rather than to do nothing at all. He recommended developing a five-year plan to implement the Standards and to persuade local school boards to provide the necessary resources.

Additional factors that shape a teacher's decisions in terms of curricular content include personal interest, professional responsibility, perceived ability, and adequate training (Byo, 1999). Froseth (1996) also identified teachers' values, knowledge, and skills as affecting teachers' curricular decisions with regard to Standards implementation in the classroom.

The value teachers placed on the content of individual standards will determine whether they feel a professional responsibility to implement that standard and ultimately devote instructional time to it in the classroom (Riveire, 1997). In Byo's (1999) survey of Florida elementary music educators and general classroom teachers, music educators rated Standards 1 (singing), 2 (playing instruments), and 5 (reading/notating) highest in terms of interest, responsibility, ability, and training. Participants in Froseth's (1996) study indicated strongest agreement in the value of Standards 1, 2, and 5

as appropriate for music curricula, and moderate agreement for Standards 3 (improvising), 6 (listening/analyzing/describing), 7 (evaluating), 8 (relation to other arts and disciplines), and 9 (history/culture). Many respondents either somewhat or strongly disagreed on the value of Standard 4 (composing/arranging) as an appropriate Standard for music curricula.

One concrete indication of the value a teacher places on a particular Standard or Standards is the time he or she spends teaching towards it (Kay, 1997). Abeles and Horowitz (1999) questioned elementary, middle school, and high school music teachers about the percentage of class time they devoted to teaching the content area of each standard. As expected, Standards 1 (singing) and 2 (playing instruments) comprised about 40-50% of class time, and Standard 5 (reading/notating) accounted for 11% of the time at the elementary level, 18% at the middle school level, and 9% at the high school level. Content 6 (listening/analyzing/describing) comprised about 9% at all levels. The remaining five standards, on average, took no more than the remaining 7% of teaching time in music classrooms. Of these five standards, Standard 3 (improvising) came in last.

Yet another factor that would cause a music educator to place high value on a particular Standard would be how meaningful he or she thinks that Standard's content is to a comprehensive music education. This is different from one's personal interest or estimation of value. For example, a choral director may feel that Standard 2 (playing instruments) is important to a comprehensive music education, but may not necessarily believe that it is his or her personal responsibility to include it in the choral curriculum (Byo, 1999).

In programs where performance comprises the majority of the music curriculum, the associated expectations and pressures may prevent the choral or instrumental director from spending instructional time on non-performance aspects of the Standards, even though he or she may personally value them as important to a balanced music education. Kirkland (1996) discovered that music educators' goals for student achieve-

ment in Standards 6 (listening/analyzing/describing), 8 (relation to other arts and disciplines), and 9 (history/culture) were negatively affected by performance expectations.

It appears that music educators in general feel better prepared to implement the content of some Standards and not of others. Two factors account for this primarily: the educator's musical background and experiences, and his or her professional and academic training. As early as 1995, Reimer predicted that competency in Standard 3 (improvising) would be difficult to achieve due to the Western educational paradigm of promoting the written musical tradition over the oral. Lehman (1995) concluded that teachers were already used to working with Standards 1 (singing), 2 (playing instruments), and 5 (reading/notating). Informal surveys conducted by Schmid (1996) resulted in similar conclusions.

At first glance, the Standards are aimed exclusively at grades Pre-K-12. However, if teachers have not been educated in a standards-based curriculum, it is unreasonable to expect them to implement it. Since the Standards were introduced, many respected individuals have admonished that the success of implementation rests upon the quality of training of preservice music educators (Froseth, 1996; Jordanoff, 1996; Kay, 1997; Lehman, 1995; Lindeman, 1996; Shuler, 1996). Hope (1995) made an important distinction: the Standards are a model for content, not delivery. Preservice teachers cannot merely study about musical components contained within the content standards; they must achieve competency in how to teach these skills effectively to their students in various ways.

Just as there is little documented information about the impact of the National Standards in classrooms, likewise it is not yet clear how they are affecting institutions of higher learning. Fonder and Eckrich (1999), among the first researchers to examine the impact of the Standards on the nation's collegiate music teacher education curricula, examined whether these institutions have adjusted or are in the process of adjusting their current curricula based on the National Standards. They found that many alterations are occurring in music education sequences, and some in music history and theory programs.

Similarly, music methods professors in McCaskill's (1998) study indicated that they included the Standards as a topic in methods classes.

The majority of currently employed music teachers were not educated according to a systematic, comprehensive curricular framework based on Standards, so it is important that they receive adequate, comprehensive in-service training (Jordanoff, 1996; Schmid; 1996; Shuler, 1996). Abeles and Horowitz (1999) suggested that as more in-service opportunities are implemented to focus on the more "non-traditional" content of the Standards, such as improvisation and composition, future research might reflect a change in teacher attitudes and an increase in classroom time dedicated to implementing them.

Method

This study was designed to determine awareness of and attitudes toward the National Standards for Music Education by Missouri high school instrumental and choral directors. The survey consisted of four sections: General Information, Implementing the National Standards, Educating Educators about the Standards, and Additional Comments. The general information section included items inquiring about school size, type of schedule followed, director's area of specialization and years of experience, familiarity with the National as well as State Standards, access to MENC publications on the Standards, and MENC membership status. In addition, participants were asked to what extent they use the Standards in daily lesson planning, whether they were employed as a music educator prior to 1994 (when the Standards were introduced), and if so, to what extent their teaching was changed by the Standards.

Section II, Implementing the National Standards, comprised the largest portion of the survey. Each Standard was listed in its entirety with the question, "How often do you implement this Standard in your classroom?" Participants responded to a 5-point Likert-type scale ranging from "always."

to "never." Next for each was a list of statements (see Figure 2) for which participants answered the question, "What factors influence this decision? Circle A for 'agree,' D for 'disagree.'" The following items were listed, with space to write in "other" factors at the conclusion. (Note: Some statements were intentionally phrased positively, and others negatively, to increase the chance that respondents would read carefully and think about their answers.)

- | | | |
|---|---|--|
| A | D | I believe this Standard is essential to a quality, comprehensive music education. |
| A | D | I believe it is my professional obligation to teach the content of this Standard. |
| A | D | I do not believe this Standard applies to my teaching area. |
| A | D | I believe that I have the necessary skills to implement this Standard. |
| A | D | My teacher preparation program did not adequately prepare me to teach this Standard. |
| A | D | I do not have adequate instructional time to teach this Standard. |
| A | D | I have the necessary equipment and facilities to teach this Standard. |
| A | D | The pressures of public performance prevent me from adequately implementing this Standard. |

FIGURE 2.
Statements presented to participants.

These items were constructed based on the findings of previous studies which identified what music educators focus on when choosing curricular content (Byo, 1999; Froseth, 1996).

Section III offered three questions: how the respondent initially became aware of the Standards, whether the respondent had participated in any training opportunities offered by

their school or district, and finally, any or all present obstacles preventing respondents from obtaining further training in the National Standards. An opportunity was given to list any additional obstacles. Section IV provided space for optional comments and additional written information from the respondents.

Of the 584 statewide high school instrumental and choral programs in Missouri, 500 ($N_{\text{instrumental}} = 269$, $N_{\text{choral}} = 231$) were randomly selected to receive the survey. Names of schools were obtained from a database of a major university. Mailing of the surveys was carefully planned so that they would arrive at the beginning of the second semester, when school resumed after the winter break. Respondents were given two weeks to return the survey, and approximately 2 weeks after that, follow-up e-mails were sent to those for whom e-mail addresses were available, with another 2-week deadline imposed.

Due to the nature of the subject being studied, there was some concern about the response rate. The whole National Standards movement has been fraught with controversy since its inception in the early 1980s. In informal discussions with colleagues and experienced classroom music educators, the general consensus was that there was not much awareness of, nor interest in, the Standards on the part of most music educators. The relatively low response rate of 145, or 29%, was disappointing, but not unexpected. It could be that the lack of interest in, or discomfort about, the Standards in general was in some part responsible. The breakdown of area of specialization for the 145 respondents was as follows (respondents could choose more than one answer): instrumental, 93 (64%); choral, 74 (51%); other, 17 (12%).

Results

One aim of this study was to ascertain whether the introduction of the National Standards in 1994 altered what music educators were teaching in their classrooms. A large majority, 81% of these respondents, stated that they were employed as

music educators prior to 1994, when the Standards were adopted. Of these, 76%, stated that they made no changes, or only a few changes in what they teach on a daily basis. Twenty-one percent have made "some changes," and only 3% have made "many changes." No respondent stated that he/she had completely changed their teaching as a result of the introduction of the National Standards.

At the time this study was conducted, 49 states and the District of Columbia had instituted their own set of state standards or guidelines strongly influenced by the National Standards (MENC Information Services, 1998). Because of this, I believed that information about how music educators viewed the two in comparison to one another might be of interest to standards policymakers. Respondents were asked to compare the National Standards with Missouri's state standards (Show-Me Standards) according to three criteria: their familiarity with, use in daily lesson planning, and the extent to which their district has aligned their music curriculum with the standards (see Table 1). Missouri secondary music educators were more familiar with the Show-Me Standards than with the

Table 1

Comparison of National and State (Show-Me) Standards

	National Standards				State Standards (Show-Me)			
	Very	Some what	Know they exist	No know-ledge	Very	Some what	Know they exist	No know-ledge
Familiarity with	23%	47%	24%	6%	39%	45%	10%	6%
	Always	Freq.	Occas.	Infreq/ Never	Always	Freq.	Occas.	Infreq/ Never
Consider when planning daily lessons	7%	25%	26%	42%	9%	29%	28%	33%
	Yes	In progress	No		Yes	In progress	No	
District has aligned curriculum with	40%	25%	35%		55%	30%	15%	

National. Thirty percent of respondents marked "no knowledge" or "know they exist" for the National Standards compared to just 16% for the Show-Me Standards. Respondents consider the Show-Me Standards when planning daily lessons more than they do the National, although results were more evenly distributed, with 38% "always" or "frequently" considering the Show-Me Standards compared to 32% for the National. According to this survey, more Missouri schools have aligned their curriculum with the Show-Me Standards than with the National Standards. Eighty-five percent of respondents indicated their school or district was currently in the process or had already done so for the Show-Me Standards, compared to 65% for the National Standards.

To determine which Standards are being addressed in the classroom, participants were asked, "How often do you implement each Standard in your classroom?" Respondents overwhelmingly chose "always" for Standards 2 (playing instruments), 5 (reading/notating), and 1 (singing), in that order, although 10% and 11% of respondents indicated that they "never" address Standards 1 and 2, respectively. No respondent marked "never" for Standard 5. Conversely, 18% of respondents marked "never" for Standard 3 (improvising) and 34% for Standard 4 (composing/arranging) (see Table 2).

Table 2

Implementation of Standards: Number and percent of responses to the question, "How often do you implement each Standard in your classroom?"

Standard respondents)	(total # of	Always	Frequently	Occasionally	Infrequently	Never
Singing	(113)	37 33%	38 34%	22 19%	5 4%	11 10%
Instruments	(117)	50 43%	29 25%	16 14%	9 8%	13 11%
Improvising	(119)	4 3%	10 8%	33 28%	50 42%	22 18%
Composing/arranging	(120)	1 --	4 3%	24 20%	50 42%	41 34%
Reading/notating	(121)	49 40%	54 45%	14 12%	4 3%	0 --
Listening/analyzing/describing	(120)	11 9%	45 38%	43 36%	19 16%	2 2%
Evaluating	(119)	14 12%	53 45%	40 34%	11 9%	1 --
Integrating with other arts/subjects	(121)	12 10%	34 28%	37 30%	27 22%	11 9%
History/culture	(119)	11 9%	39 33%	41 34%	27 23%	1 --

When asked if each Standard is essential to a quality, comprehensive music education, over 90% of all respondents agreed for every Standard except 3 (improvising), 4 (composing/arranging), and 8 (relation to other arts and disciplines). More than 75% of all respondents responded that they believe it is their professional obligation to teach the content of all Standards, except for 3 (improvising) and 4 (composing/arranging).

The majority of respondents reported that they believe most Standards have a rightful place in their teaching area. Standards 4 (composing/arranging), 3 (improvising), and 8 (relation to other arts and disciplines) were the exceptions, in that order. A combined 25% of all respondents also believe that either singing or playing instruments is not applicable content for their particular teaching area.

An overwhelming majority of these Missouri secondary music educators reported that they are confident in their skills to implement the content of all nine Standards. Over 90% of respondents indicated this for all Standards except 3 (improvising), 4 (composing/arranging), and 8 (relation to other arts and disciplines), while over 75% of respondents stated they possess the necessary skills to implement those Standards.

Many respondents believe that their teacher preparation program did not adequately prepare them to teach the content of Standards 3 (improvising), 8 (relation to other arts and disciplines), and 4, respectively (composing/arranging). Most respondents believe they are best trained to deliver the content of Standards 5 (reading/notating) and 6 (listening/analyzing/describing).

According to this survey, time is a factor affecting implementation of the Standards in classrooms. Around 25% of respondents reported that they do not have adequate instructional time to address Standards 1 (singing), 2 (playing instruments), and 5 (reading/notating). Over 75% of respondents reported that they do not have adequate instructional time to implement Standards 3 (improvising) and 4 (composing/arranging).

Most of the respondents reported that they have the nec-

cessary equipment and facilities to implement the content of the National Standards. The only Standard for which less than half the respondents agreed with this statement is Standard 4 (composing/arranging).

Around half of these secondary instrumental and choral directors believe that the pressures of public performance inhibit effective implementation in their classrooms of five of the Standards: 3 (improvising), 4 (composing/arranging), 6 (listening/analyzing/ describing), 8 (relation to other arts and disciplines), and 9 (history/culture). For the remaining Standards, about 25% of respondents indicated that performance pressures prevent them from adequate implementation.

In Section III of the survey, respondents were asked to indicate how they initially became aware of the National Standards for Music Education. Over half of the 125 respondents initially became aware of the Standards via MENC publications. Twelve percent learned of them through a professional meeting or conference. Undergraduate and graduate courses were the primary source of information for 14% of the respondents, and in-service training and colleagues accounted for another 14%.

About 75% of the 128 respondents are participating in some kind of further professional training by a combination of means. More than half attend local in-service sessions, while 79% travel to professional conferences. About 20% of respondents take advantage of tuition offered by their local school or district. Thirteen percent indicated that they do not participate in training offered by their school or district. One percent stated they receive training through other means.

Time was the factor indicated most frequently as an obstacle in preventing music educators from obtaining further training in the National Standards, marked by 80% of the 109 who responded to this item. Funds were stated as a factor in nearly half of the responses. Just over one third of the respondents indicated that further education in the Standards was not a priority for their administration, and just under 25% of the respondents indicated it was not a priority for them personally.

Discussion

It could be assumed that because of the high visibility of the National Standards movement over the last decade, not only in music education but in general education at all levels, most music educators would be aware of the National Standards for Music Education. It was surprising, then, that when Fonder and Eckrich (1999) surveyed college and university music education chairpersons, three of these administrators contacted the researchers to ascertain what these Standards were about, professing to have no prior knowledge of them. Respondents to the current survey were more familiar with Missouri's state standards than with the National Standards. One respondent indicated that this was his very first exposure to the concept of the National Standards. It should be noted that he also expressed interest in learning more about them.

Perhaps one of the most important findings in this study was that many secondary music teachers do not believe that they are responsible for implementing the content of all nine National Standards in their classrooms. The majority of respondents trained as instrumental directors indicated that they do not believe that Standard 1 (singing) is applicable to their teaching area, and the same was true for choral directors' opinions of Standard 2 (playing instruments). As in most other studies, Standards 3 (improvising) and 4 (composing/arranging) did not fare well in terms of implementation in the classroom (Abeles & Horowitz; 1999; Schmid, 1996). Numerous respondents who said they "never" or "infrequently" implement Standard 3 (improvising) provided written comments such as "we only do this in jazz band," or, "if we had a jazz band here we would address this Standard."

It is worth noting that this survey was addressed to and completed by secondary (specifically high school) music educators. Had the respondents been from the elementary level, it would not have been surprising to see different answers about perceived responsibility to implement each Standard. Elementary music curricula traditionally have emphasized both singing and playing instruments, and included activities to

develop composing, arranging, and improvising skills, although they might not be overtly identified as such. Listening to and evaluating music of many styles and genres have been included, as well as material that emphasizes the two interdisciplinary Standards, 8 (relation to other arts and disciplines) and 9 (history/culture). Elementary music educators responding to Byo's (1999) survey indicated a high degree of responsibility for teaching all nine Standards, "agreeing" to "strongly agreeing" that they believed they were responsible for teaching them.

The results of this study suggest that music educators believe they have the necessary skills to implement most of the National Standards, as was the case in Froseth's (1996) study involving music educators taking graduate courses. The notable exceptions were for Standards 3 (improvising) and 4 (composing/arranging). These findings support results from previous research (Byo, 1999; Lehman, 1995). This indicates a need for more in-service training focusing on the more "non-traditional" content of the Standards (Abeles and Horowitz, 1999).

It appears that the music educators who participated in this study believe they have the necessary equipment and facilities to implement most Standards. The notable exceptions are for Standards 3 (improvising), 8 (relation to other arts and disciplines), and 4 (composing/arranging). These responses concur with the results of Byo's (1999) study. Schmid (1996) has suggested that even though technology is not specifically outlined as a necessary tool for implementing Standards 3 and 4, many music educators believe they are at a disadvantage to implement the content of those Standards if they do not have technological resources.

Because this was a survey sent to high school ensemble directors, it seemed appropriate to include a question about their perceptions of performance practice as it affects the "academic" nature of their classroom. Almost 25% of the respondents stated that the pressures of public performance prevent them from adequately implementing Standards 1 (singing), 2 (playing instruments), 5 (reading/notating), and 7

(evaluating) in their classrooms. This is notable given that singing, playing, and reading/notating music generally are considered part of the performing experience. One respondent stated in the "additional comments" section that she had made it a point to focus on emphasizing one standard content for each of her concerts, including remarks directed at the audience to educate them about the Standards. Hopefully, school concert audiences include other teachers and administrators as well as parents. Perhaps other secondary music educators could benefit from a similar approach.

It appears that music teachers' perception of lack of time affects the extent to which they implement the Standards in their classrooms, as well as their willingness to gain further training in the Standards. At MENC's National Assembly in July 1999, state music education association leaders were asked in an informal survey to rank items in a list of topics according to their concern about these subjects (FYI, 1999). The Standards were mentioned—but did not make the list of the top nine concerns, or even the list of five "other topics of interest/concern." On the surface, many of the items that concerned state leaders at that time appear not directly related to the Standards and all they encompass, but upon closer reflection, there are definite connections. Issues related to time, teacher shortages, budget restrictions, technology, and teacher education all eventually impact the content of classroom instruction.

Many respondents provided insightful personal comments, two of which seemed particularly significant. One music educator reported that aligning the curriculum with the National Standards had elevated the value of the music curriculum in the eyes of parents and other educators, resulting in some notable equipment purchases for their program. Another paid the Standards a high compliment worth quoting: "I already implement them—it's a natural outgrowth of what I do. How can one *not* implement these and still be a competent music educator?"

Conclusion

Missouri has historically proven itself a "bellweather state" in political contests, accurately forecasting how the entire country would ultimately vote. In every presidential election of the twentieth century except for one, it has chosen the winner (U.S. Bureau of the Census, 1975; *World Almanac*, 2000). Missouri has been called "a microcosm of the complexity that characterizes United States history" (Wells & Crain, 1997). With this in mind, it would be interesting to see if the results of this Missouri survey are indicative of what is happening with the National Standards in music classrooms across the country.

This study is one of a small but growing body of research on the National Standards. It would be beneficial as well as informative to replicate this study at a future point, perhaps at the 10-year mark, to determine whether the National Standards have gained or lost support. A closer examination of each category within the standards (creative, interdisciplinary, performance, aesthetic) might yield important information for Standards policymakers as well. In addition, there is insight to be gained from looking at the demographics of those individual music educators and schools/districts who are implementing the Standards, such as years of experience of the music educator, area of specialization, school size, and many other factors. Information such as this in addition to empirical evidence "from the trenches" may result in retooling the Standards. At the very least, including a component of music technology seems beneficial.

Successful standards implementation is dependent at implementation at every level. It is one thing to design and recommend a set of standards, and quite another to put them into effective practice in music classrooms across America. What occurs at the elementary level will affect the secondary level (and vice versa). Standards training of preservice teachers is necessary at the college level to affect change in school programs at every stage, and beginning Standards implementation at the pre-K level will benefit everyone. If the National Stan-

dards movement is to survive, and for music education programs to succeed to the fullest extent, total and effectual implementation at every level of classroom instruction is imperative.

References

- Abeles, H., & Horowitz, R. (1999, February). *The School music curriculum: The national standards reflected in practice*. Paper presented at the MENC Eastern Division Convention, New York.
- Byo, S. J. (1999). Classroom teachers' and music specialists' perceived ability to implement the national standards for music education. *Journal of Research in Music Education*, 47, 111-123.
- Fonder, M., & Eckrich, D. W. (1999). A Survey on the impact of the voluntary national standards on American college and university music teacher education curricula. *Bulletin of the Council for Research in Music Education*, 140, 28-40.
- Froseth, J. O. (1996). *The Standards: Surveys of undergraduate and graduate values*. In *Aiming for excellence: The impact of the standards movement on music education* (pp. 45-60). Reston, VA: Music Educators National Conference.
- FYI: Survey results. (1999, December). *Teaching Music* 7(3), 52.
- Hope, S. (1995). Teacher preparation and the voluntary K-12 music standards. *The Quarterly Journal of Music Teaching and Learning*, 6(2), 14-21.
- Jordanoff, C. (1996). Integration of the standards: One institution's response. In *Aiming for excellence: The impact of the standards movement on music education* (pp. 61-68). Reston, VA: Music Educators National Conference.
- Kay, A. (1997). Transforming music education on the way to the standards. *General Music Today*, 11(1), 15-20.
- Kirkland, N. J. (1996). South Carolina schools and Goals 2000: National standards in music. (Doctoral Dissertation, University of South Carolina, 1996). *Dissertation Abstracts International*, 57-03, A1069.
- Lehman, P. R. (1995). The National standards for music education: Meeting the challenges. *The Quarterly Journal of Music Teaching and Learning*, 6(2), 5-13.
- Lindeman, C. A. (1996). Implementing the standards: Taking action. In *Aiming for excellence: The impact of the standards movement on music education* (pp. 75-78). Reston, VA: Music Educators National Conference.
- McCaskill, L. L. (1998). The National standards for music education: A Survey of general music methods professors' knowledge, attitudes, and professional practices. (Doctoral Dissertation, University of Colorado at Boulder, 1998). *Dissertation Abstracts International*, 59-03, A0765.

- MENC Information Services. (1998). [Status of standards adoption as of October 1998]. Unpublished raw data.
- MENC Research Task Force. (1998). *A research agenda for music education* [Online]. Available: <http://www.menc.org/information/research/agenda.html>.
- Music Educators National Conference. (1994). *The school music program: A new vision*. Reston, VA: MENC.
- Music Educators National Conference for the Consortium of National Arts Education Associations. (1996). *Teacher education for the arts disciplines* [Online]. Available: <http://www.menc.org/publication/books/hchred.htm>
- Reimer, B. (1995). Beyond performing: The promise of the new national standards in music education. *The Quarterly Journal of Music Teaching and Learning*, 6(2), 23-32.
- Riveire, J. H. (1997). California string teachers' curricular content and attitudes regarding improvisation and the national standards. (Doctoral Dissertation, University of Southern California, 1997). *Dissertation Abstracts International*, 59-05, A1504.
- Schmid, W. (1996). Standards in America's music classrooms (1994-1996). In *Aiming for excellence: The impact of the standards movement on music education* (pp. 25-31). Reston, VA: Music Educators National Conference.
- Shuler, S. C. (1996). The Effects of the national standards on assessment (and vice versa). In *Aiming for excellence: The impact of the standards movement on music education* (pp. 81-108). Reston, VA: Music Educators National Conference.
- U.S. Bureau of the Census. (1975). *Historical statistics of the United States, colonial times to 1970, Bicentennial edition, Part 2*. Washington, D.C.: Author.
- Wells, A. S., & Crain, R. L. (1997). *Stepping over the color line*. New Haven, CT: Yale University.
- The World Almanac and book of facts 2000*. (2000). New York: Press Publishing Company.

Note. This article was based on the author's Master's Thesis completed at the University of Missouri - Columbia.

The Effect of a Music Appreciation Course on the Ability of Students to Recognize Music Notation Examples

Mark C. Ellis
The Ohio State University

The intent of the present study was to examine of the ability of students in a music appreciation course to associate notated examples of music excerpts with the musical sounds represented by the notation. Before and after a course in music appreciation, 73 students were asked to match excerpts of recorded music with corresponding examples of music notation. The results indicated that almost all students, even those with little previous musical experience, performed above the level of chance on the pretest and posttest. An analysis of variance revealed an interaction between test item type and time of test: Scores increased significantly from pretest to posttest for items involving music and notation that students had encountered during the course, but not for the remaining items. Previous musical experience was highly associated with matching scores on both the pretest and the posttest, but not with pretest-posttest gain scores.

Music courses aimed at the nonmusic major continue to hold a place in the general education curricula of most colleges and universities. In a national survey, nearly nine out of ten colleges and universities in the United States reported offering a course in music appreciation or an equivalent (College Music Society, 1989). Although the concept of music appreciation has broadened to the point that both course content and approach now vary considerably across institutions and instructors, the primary goal of helping novices to listen to music perceptively music has remained constant (Smith, 1980).

Given the prevalence of music appreciation courses, it is

not surprising that a number of researchers have been interested in what students learn in music appreciation courses and how they learn it. Bauer (1994), Duitman (1993), Gatto (1984), and Jumpeter (1985) tested the effectiveness of various methods for delivering instruction. Halpern (1992), Herberger (1983), Weiss (1984), Williamson-Urbis (1995), and Woodruff and Heeler (1990, 1991, & 1993) measured the efficacy of various instructional strategies. Doyle (1988), Ellis (1995a, 1995b, 1996), Ellis and McCoy (1990), Gatto (1984), and Zalanowsky (1986 & 1990) looked for interactions between instructional strategies and cognitive differences. Asmus and Harrison (1990) sought to understand the factors underlying motivation for learning. Price (1988) and Price and Swanson (1990) measured musical attitudes and opinions before and after a course in music appreciation.

An issue that has not been formally investigated concerns the usefulness of traditional music notation in music appreciation courses. Because the ability to read and perform music from notation is essential for musicians in the Western tradition, it is common for college music majors to follow notated representations when they are engaged in listening activities. Notation to accompany listening is also common to instructional materials for courses in music appreciation, but in this case the students are not music majors, but general students, including some with little or no skill in reading music. Appropriately, the examples of notation found in music appreciation textbooks tend to be highly simplified versions of what appears in the original score. Typically these reductions are one-line scores representing the primary melodic content of the music under scrutiny.

Although notation can be found in most current textbooks for music appreciation, the extent to which it is used varies widely across textbooks. For example, Todd (1990) places traditional notation on almost half of the pages in his music appreciation textbook, whereas Ferris (1991) incorporates almost none in hers. It seems plausible that to some degree, this variance indicates a range of opinion among authors as to the value of notation as an instructional aid for music appre-

ciation.

The intent of the present study was to examine of the ability of students in a music appreciation course to associate notated examples of music excerpts with the musical sounds represented by the notation. A fundamental premise was that for notation to serve as an enhancement to listening, the listener must possess at least some ability to associate the notation with musical sound it represents. The dependent variable, therefore, was derived from a task that asked students enrolled in a music appreciation course to match excerpts of recorded music with corresponding examples of music notation. The first research question was: To what extent will students be able to correctly match the recorded excerpts with music notation when tested before and after a course in music appreciation?

The second research question related to whether or not course experiences would affect the ability of students to match musical sounds with notation: At the end of the course, will students perform better on items constructed from music and notation they encountered as part of the course than on items constructed from music and notation that were not part of the course? To address this question, the music and corresponding notation for 12 test items were taken from the course textbook-CD set, *The Art of Music* (Simms, 1993); the music and corresponding notation for 12 additional items were taken from other currently available textbook-CD sets.

The third research question asked: To what extent will previous musical experience and general academic achievement be associated with the ability of students to match musical sounds with notation? To provide an estimate of previous experience in music, students reported the numbers of years during grades 7-12 they had participated in school-sponsored instrumental or vocal ensembles, as well as the numbers of years during grades 4-12 they had participated in piano lessons. The composite score from the American College Testing Assessment (ACT) provided an estimate of general academic achievement for each student.

Instrumentation

A single test consisting of 24 items served as pretest and posttest. The items were presented in random order (Table 1).

Table 1

Items in the Notation Test

Item	Selection	Simms	Start
Practice 1	Mozart: <i>Eine Kleine Nachtmusik</i> (IV)		0:00
Practice 2	Mozart: <i>Marriage of Figaro</i> , "Fandango"	✓	2:59
1	Mozart: <i>Symphony No. 40</i> (I)		0:00
2	Schumann: "Grillen"	✓	0:00
3	Stravinsky: <i>Petrushka</i> , "Russian Folk Dance"		0:00
4	J.C.Bach: <i>Symphony in D</i>	✓	1:11
5	Milhaud: <i>Creation of the World</i> , Opening	✓	0:00
6	Debussy: <i>Prelude for the Afternoon of a Faun</i>		0:00
7	Bartok: <i>Music for Strings, Percussion and Celesta</i>		0:03
8	Stravinsky: <i>Petrushka</i> , "Russian Folk Dance"		1:46
9	Beethoven: <i>Symphony No. 5</i> (IV)	✓	0:00
10	Smetana: <i>Moldau</i> , "River Theme"	✓	1:00
11	Mozart: <i>Eine Kleine Nachtmusik</i> (II)		0:54
12	Bach: <i>Brandenburg Concerto No. 2</i> (I)	✓	0:20
13	Bartok: <i>Concerto for Orchestra</i> (II)		0:16
14	Haydn: <i>Symphony No. 102</i>	✓	2:32
15	Webern: <i>String Quartet</i> , Op. 28 (I)	✓	0:00
16	Schumann: <i>Piano Concerto in A minor</i> (I)		0:00
17	Haydn: <i>String Quartet in Bb</i>	✓	0:00
18	Haydn: <i>Symphony No. 100</i> (II)		0:00
19	Tchaikovsky: <i>The Nutcracker</i> , "Trepak"		0:00
20	Chopin: <i>Nocturne in Db major</i>	✓	0:04
21	Gershwin: <i>Prelude No. 2</i>	✓	0:00
22	Mozart: <i>Eine Kleine Nachtmusik</i> (IV)		0:00
23	Mozart: <i>Symphony No. 40</i> (III)		0:00
24	Smetana: <i>Moldau</i> , "Peasant Dance"	✓	3:54

Note. A checkmark in the "Simms" column indicates that the excerpt appears in the textbook-CD set and was presented in class. The "Start" column indicates the starting point of the excerpt relative to the CD track; all excerpts were 10 seconds in duration.

In each item, students listened to a 10-second excerpt of recorded music played twice, and then attempted to identify which of four examples of music notation matched the music. Fifteen seconds of silent response time separated items. The examples of notation used as response choices were taken from five different music appreciation textbooks, including the

A 

B *Allegro molto* 

C 

D *fp espressivo* 

FIGURE 1.
Examples of test items.

textbook used in the course. For the most part, the notated examples represented melodic material. In general, the distractors were at least superficially similar to the correct choices (see Figure 1).

An analysis of test items indicated a mean difficulty index (percentage answered correctly) of .56 and a range of difficulty from .33 to .78. Two measures of internal consistency provided estimates of test reliability: The split-half r (corrected) was .90 for the pretest and .92 for the posttest, whereas Cronbach's α was .86 for the pretest and .95 for the posttest.

Subjects

The subjects were 73 nonmusic majors (female = 40; male = 33) enrolled in two sections of a university course in music appreciation during the 1999-2000 academic year. To increase motivation, the students were offered extra course points for various levels of performance on the experimental task.

The treatment consisted of a course in music appreciation taught over a 10-week quarter. The musical works covered in the textbook and companion materials were typical of a traditional survey of Western music. The primary instructional goal of the course was to develop listening skills. To this end, students participated in activities aimed at enabling them to (a) describe examples in terms of musical elements (texture, dynamics, tempo, etc.), (b) discriminate among musical style periods, and (c) identify excerpts drawn from an assigned listening list. There was no attempt to teach music notation during the course, nor were students directed to the notated examples in the textbook in any extraordinary manner.

Results

Mean scores from the pretest and posttest, grouped according to the source of the test item material (Simms or Other), are shown in Table 2. Because each test item had four response choices, the chance of selecting a correct response by

guessing was 25% (6 items). On the pretest, 89% of all students scored above the chance rate; on the posttest, 97% scored above chance. On the pretest, 16% of all students recorded 20 or more correct answers; on the posttest, 33% of all students performed at this level.

Table 2

Mean Pretest-Posttest Scores by Source of Test Item Material ($n = 73$)

	Source	<i>M</i>	%	<i>SD</i>	<i>SE</i>
Pretest:					
	Other	6.78	56%	3.19	.373
	Simms	6.63	55%	2.69	.315
	Total	13.41	56%	5.64	.661
Posttest:					
	Other	7.19	60%	3.26	.382
	Simms	8.08	67%	2.64	.309
	Total	15.27	64%	5.55	.649

Note. "Other" indicates the set of 12 items in which music and notation were not taken from textbook and CD set used in the course. "Simms" indicates the set of 12 items in which music and notation were taken from textbook and CD set used in the course. "Total" indicates the complete 24-item test. *SD* = standard deviation, *SE* = standard error.

Scores were also examined through a repeated-measures analysis of variance (ANOVA) (Table 3). The time of testing (pretest or posttest) served as the repeated measure; item source (Simms or Other) served as the grouping factor. The results indicated a significant interaction between time of testing and item source, $F(1, 144) = 11.73, p = .0008$. As the plot of means in Figure-2 shows, scores increased significantly from pretest to posttest for the items taken from the Simms set ($Mn = 6.63 - 8.08; F(1, 72) = 53.26, p < .0001$) but not for the items taken from other sets ($Mn = 6.78 - 7.19; F(1, 72) = 3.20, NS$).

Three multiple regression models were constructed to ex-

Table 3

ANOVA Table for Time

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>
Source	1	9.99	9.99	.63
Subject	144	2275.45	15.80	
Time	1	63.34	63.34	37.55*
Time*Source	1	19.78	19.78	11.72**
Time*Subject	144	242.87	1.68	

Note. *df* = degrees of freedom, *SS* = sum of squares, *MS* = mean square, *F* = *F*-value. *Time* = time of testing (pretest-posttest); *Source* = source of materials (Simms-other).
p* < .0001; *p* < .001.

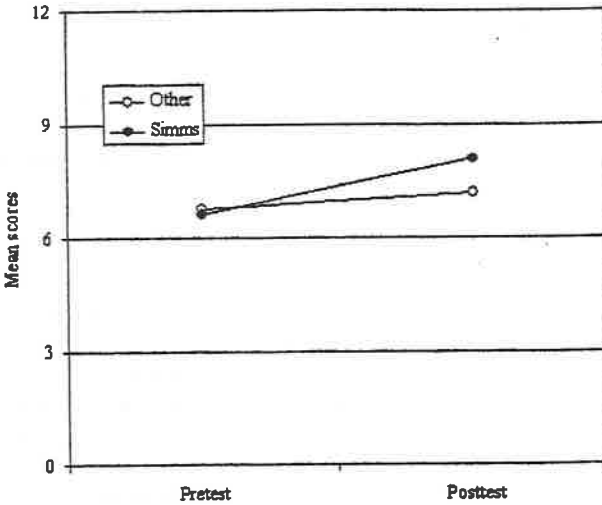


FIGURE 2.
Means for notation pretest and posttest by item source (chance rate = 3.0).

amine the influence of years of musical experience and ACT composite scores on matching scores. The regression of both variables explained 60.1% of the variance in scores on the pretest, $r = .775$; $F(2, 70) = 52.75$, $p < .0001$. Of the two variables, only years of musical experience accounted for a significant percentage of unique variance (i.e., variance not explained by the other variable) (46.1%, $t = 8.99$, $p < .0001$). For posttest scores, the regression of both variables explained 57.8% of the variance, $r = .760$; $F(2, 70) = 47.99$, $p < .0001$. Again, only years of musical experience explained a significant percentage of unique variance (43.9%, $t = 8.54$, $p < .0001$). The regression of both variables on gain scores (change from pretest to posttest) failed to account for a significant amount of variance, $r = .060$; $F(2, 70) = 0.13$, *NS*. A scatter plot of gain scores by years of musical experience revealed that gains were distributed fairly normally across degrees of experience.

Discussion

This study examined the ability of students in a music appreciation course to associate notated examples of music excerpts with the musical sounds represented by the notation. The underlying premise was that for notation to serve as an enhancement to listening, the listener must possess at least some ability to associate the notation with the musical sounds it represents. Accordingly, the research task asked students to match examples of notation drawn from music appreciation textbooks with excerpts of recorded music.

The pretest and posttest mean scores from the matching task, as well as a large percentage of individual scores, were above the rate of chance. These results suggest that almost all students were able to glean information from the notation that was useful to them in the task. However, it should be noted that only a small proportion of students were able to perform at a level that would be expected of a competent musician in the Western tradition. On the pretest, for example, only one student in six could match notation with music at a rate of

80% or higher.

Students clearly gained something from contact with the Simms materials during the course that helped them in the posttest: Scores from these items increased significantly from pretest to posttest whereas scores for items with material not taken from the Simms set, and consequently not encountered during the course, did not. Although small in absolute terms (1.45 items), the increase among Simms-related items is noteworthy because the matching task was not a part of any-learning activity in the course.

A limitation of this study is that the data do not reveal what specific factors produced the increase among the Simms items. Because the effect was limited to these items, it is unlikely that the increase was driven by a general improvement in notation reading among students. A more plausible explanation is that course experiences led students to form associations between the look of notated examples and the corresponding music. Determining the extent to which such associations cause students to listen in a more informed way is beyond the scope of this study.

Given the discipline-specific nature of the research task, it was not surprising that previous musical experience, but not ACT composite scores, could explain much of the variance in matching scores. Of more interest was the finding that pretest-to-posttest gains were distributed fairly equally across degrees of previous experience. This pattern appears to support the notion that the increase among Simms items was unrelated to notation reading ability.

In summary, the results from this study suggest that even students with little previous musical experience can make some sense of the notation that appears in music appreciation textbooks. Further, general students, regardless of previous musical experience, can become more proficient at matching music with notation as the result of contact with the materials during a course. However, the extent to which this ability is related to comprehension or appreciation of the music is yet to be determined.

Important questions for future research efforts include: How does following notation while listening to music affect the listening experience? Would individuals who read music rate their affective states differently when following notation while listening as opposed to just listening? Could these individuals describe how following notation while listening allows them to listen differently? Would they rate their affective states differently when following notation while listening than would notation-illiterate individuals? Does following notation while listening affect the ability to recall or identify specific musical works? Questions such as these need to be addressed before we can be certain about the usefulness of music notation in music appreciation courses for college students.

References

- Asmus, E. P., & Harrison, C. S. (1990). Characteristics of motivation for music and musical aptitude of undergraduate nonmusic majors. *Journal of Research in Music Education*, 38, 258-268.
- Bauer, W. I. (1994). *The relationships among elements of learning style, mode of instruction, and achievement of college music appreciation students*. Unpublished doctoral dissertation, Kent State University College Music Society.
- College Music Society. (1989). *Music in the undergraduate curriculum-a reassessment*. Boulder, CO: The College Music Society.
- Doyle, W. E. (1988). *Relationships between prior musical experience and success in a college music appreciation course*. Unpublished doctoral dissertation, University of Southern California.
- Duitman, H. E. (1993). *Using hypermedia to enrich the learning experience of college students in a music appreciation course*. Unpublished doctoral dissertation, The Ohio State University.
- Ellis, M. C. (1995a). Field dependence-independence and college nonmusic majors' description and identification of music excerpts. *Journal of Research in Music Education*, 43, 298-312.
- Ellis, M. C. (1995b). Field dependence-independence and texture discrimination in college nonmusic majors. *Psychology of Music*, 23(2), 184-189.
- Ellis, M. C. (1996). Field dependence-independence and the discrimination of musical parts. *Perceptual and Motor Skills*, 82, 947-953.
- Ellis, M. C., & McCoy, C. W. (1990). Field dependence/independence in college nonmusic majors and their ability to discern form in music. *Journal of Research in Music Education*, 38, 302-310.
- Ferris, J. (1991). *Music: The art of listening* (3rd edition). Dubuque, IA: Wm. C. Brown.
- Gatto, R. P. (1984). *An assessment of two instructional methods for music appreciation*. Unpublished doctoral dissertation, University of Pittsburgh.

- Halpern, J. (1992). Effects of historical and analytical teaching approaches on music appreciation. *Journal of Research in Music Education*, 40, 39-46.
- Herberger, R. (1983). Presenting a method of analyzing mental and emotional processes in secondary students while they are listening to music. *Council for Research in Music Education Bulletin*, 75, 40-47.
- Jumpeter, J. (1985). Personalized system of instruction versus the lecture-demonstration method in a specific area of a college music appreciation course. *Journal of Research in Music Education*, 33, 113-122.
- Price, H. E. (1988). The effect of a music appreciation course on students' verbally expressed preferences for composers. *Journal of Research in Music Education*, 36, 35-46.
- Price, H. E., & Swanson, P. (1990). Changes in musical attitudes, opinions, and knowledge of music appreciation students. *Journal of Research in Music Education*, 38, 39-48.
- Simms, B. R. (1993). *The art of music*. New York: Harper Collins.
- Smith, C. M. (1980). The effects on listening perception skills of two approaches to teaching music appreciation to non-music majors at the college level. Unpublished doctoral dissertation, Indiana University.
- Todd, R. L. (1990). *The musical art: An introduction to Western music*. Belmont, CA: Wadsworth.
- Weiss, R. L. (1984). *Developmental instruction in music appreciation: An application of curriculum interventions based on Perry's scheme of intellectual and ethical development*. Unpublished doctoral dissertation, Southern Illinois University at Carbondale.
- Williamson-Urbis, S. Z. (1995). *The effect of two methods of music instruction on the degree of liking and musical knowledge on nonmusic majors enrolled in music appreciation classes*. Unpublished doctoral dissertation, The University of Arizona.
- Woodruff, E., & Heeler, P. (June, 1990). *A study of the use of interactive videodisc technology to present aural tests to college music appreciation students*. In E. Ellis, (ed.), National Educational Computing Conference Proceedings, Nashville, TN.
- Woodruff, E., & Heeler, P. (May, 1991). *A computer-based tutorial system to develop listening skills using CD-ROM*. Paper presented at the Joint Conference of the Educational Computing Organization of Ontario and the International Conference on Technology and Education, Toronto, Ontario.
- Woodruff, E., & Heeler, P. (March, 1993). *Music appreciation and technology: An evaluation of a creativity-based approach using a MIDI environment*. Paper presented at the International Conference on Technology and Education.
- Zalanowsky, A. H. (1986). The effects of listening instructions and cognitive style on music appreciation. *Journal of Research in Music Education*, 34, 43-53.
- Zalanowsky, A. H. (1990). Music appreciation and hemispheric orientation: visual versus verbal involvement. *Journal of Research in Music Education*, 38, 197-205.

The Effect of Tempo and Tonality on the Color Associations of Elementary Students when Listening to Music

Emily Megan Freeman
University of Missouri-Kansas City

The purpose of this study was to determine if the style characteristics of tempo and tonality affected the color associations of elementary age children when listening to music. Elementary students (N = 460), ranging in age from 6 to 12 years, participated in listening activities administered on three consecutive music periods. Students were instructed to choose one color per listening example that they believed best matched the music. Four piano compositions from the Romantic period, two in a major key and two in a minor key, were played at three tempos each: largo, andante, and presto. Tempos were altered to identify changes that might occur in student color choices, and these changes did occur in three of the four examples. Results support literature suggesting that tempo and tonality have an affect on human perception of musical stimuli including color association. Connections to the teaching of music listening to children are explored.

Can music elicit an emotional response from its listeners? Can it produce vivid imagery and become a form of communication between humans or does it hold intrinsic value and meaning only for the individual, locked to the sound and structure into which the composer has placed it? Music researchers have grappled with understanding our emotional responses to music for decades, yet these responses seem to elude definition. A renewed interest in musical aesthetics and perception in the 1980's and 1990's is still developing, in part, because music educators and researchers realize now that the "one-sided emphasis on structural aspects somehow does not

capture the essence of musical activity" (Gabrielsson & Juslin, 1996, p. 70). Emotional responses to music are difficult to measure, and therefore, have not received the amount of attention in research that other aspects of music receive. Stratton and Zalanowski (1989) believed that emotional responses to music would be enhanced by the introduction of visual art, and found that music and visual stimuli presented together had a greater influence on mood than either stimulus presented alone. These findings led this researcher to focus on the connections that can be made between music listening and artistic expression, particularly in the study of color association with music.

This study dealt with the problem of identifying colors that elementary age students associate with specific music listening examples. Much of the previous research associated with aesthetic response to music centered on subjects of college age and beyond. It was important for the researcher in this study to focus on the responses of children ages 6-12 in order to gain some perspective on the emotional responses and color associations made with music by school-age children. Through this study, the researcher hoped to offer color association with music as a viable addition to the teaching of music listening in the general music classroom, and to encourage music educators to utilize color association to elicit emotional responses from children. This study offers information on the following research questions: (a) Do students form specific color associations with music projecting differing moods? (b) Does the tempo of a music listening example affect the color associations that a student makes with the music? (c) Does the tonality of a music listening example affect the color associations that a student makes with the music?

Research questions formed during the current study and a former study (Freeman, 2000) by this researcher on color association with music lead to the main purpose of this research: to determine if the style characteristics of tempo (when altered) and tonality, affected the color associations of elementary-age children when listening to music. If color associations with music are to be utilized as a subjective means of

teaching music listening, than the specific characteristics of the music that more easily elicit these types of color associations should be well defined for the music educator.

Related Literature

The study of color association with music originates from the study of individuals who experience synesthesia and chromesthesia. Chromesthesia is a physiological condition known as "color hearing," in which all tones elicit a color as well as an auditory sensation (Haack & Radocy, 1981). Synesthesia, on the other hand, involves an individual's response to one stimulus in more than one sensory mode simultaneously (Radocy & Boyle, 1979). In both situations, an auditory experience is enhanced by a visual experience. Music educators, who offer listening experiences to their students, can benefit from unique, subjective ways to present music listening that will enhance more than just the auditory sense. Associating color with music in a classroom setting "forces" a synesthetic response to music (Haack, 1980). However, color associations have been related to an individual's emotional response to music. Cutietta and Haggerty (1986) sought to provide evidence to the origin of the association of color with music by monitoring the development of these associations across time. They concluded that color associations to music are the "result of some sort of sensory processing of music that appears to be widespread and consistent across a wide age spectrum" (Cutietta & Haggerty, 1986, p. 89).

Music listening experiences in the classroom must offer nontraditional means for children to express emotional responses to the music that they hear. Kratus (1993) suggests that young children may be limited in their vocabulary, and therefore, verbal or written approaches to defining their emotional responses may be problematic. He also believes that music educators underestimate the importance of cultivating and encouraging children's subjective and emotional responses to music. Hair (1981) states that children perceive differences and changes in music long before they are able to

label those changes according to traditional music terminology. The role of the music educator should be to facilitate a positive and inviting environment where music listening can flourish. Students learn how to communicate the music in their souls through listening and the discussion of the music that follows. Haack (1990) believes that the goal of music listening should be an "increasing awareness and aptness in the more subjective experiential realm." Music listening experiences can help students "grow in awareness and understanding of their personal feelings" (Haack, 1990, p. 29). Color association listening activities can serve as a means for music educators to engage young students in nonverbal, subjective, music thinking.

Much research has been done on the affective values, expressiveness, and meaning of music. This research gives us an insight as to why this subjective type of music listening should be taught in the general music classroom setting. It is a necessary component to the individual understanding and comprehending of any music listening. Kate Hevner provided a springboard for this type of research with her series of six experiments on expressiveness in music from 1934-1937. She assumed that there is expressiveness in music, which is "so generally and consistently associated with it that it will lend itself to experimental variation and control" (Hevner, 1936, p. 246). Hevner (1937) studied the affective value of many musical style characteristics by utilizing an adjective word-circle that described listeners' moodstates. Hevner's results show that of the six mood effects studied, tempo and modality produced the most significant and consistent results; they produced the clearest affect on a listener's emotional or aesthetic response to music. Odbert, Karwoski, and Eckerson (1942) attempted to link the experiences of the synesthetic and the average person by analyzing the relation between the mood of music and the colors suggested by that music. They found that subjects forced to relate colors to music give responses very similar to those of subjects who readily see, think, or feel music with vivid visual imagery. They suggest that there must be an "existence of some basically similar psychological

mechanism in all people, regardless of the vividness of their imagery" (Odbert, Karwoski, & Eckerson, 1942, p. 153). They also found that the colors named with a musical selection were based on Hevner's word-circle (Hevner, 1936), which was related to the color wheel in its spectral order. This seems to validate the thought that a synesthetic response to music with color is related to an individual's emotional response to music.

The music listening examples in this study were chosen from the works of Romantic composer Felix Mendelssohn, since Romantic period music seems to evoke, more clearly than the music of other musical time periods, pictorial images through the use of programmatic compositional techniques. The program style of his music lends itself to elusive emotional responses, and might ultimately lead to some type of synesthetic experience for its listeners. Previous research that explored the color associations elementary students made with music listening examples of the Romantic and the Baroque periods (Freeman, 2000), indicated that a relationship existed between the tempo and tonality of a music example and the colors students associated to that music example. Therefore, it was the researcher's intent to isolate tempo and tonality as the musical style characteristics to be studied in this experiment.

Crowder (1984) believes that the contrast between major and minor modes can be related very clearly to emotional connotation in music. He states that the major/minor distinction "carries a stable, conventional, emotional content (happy/sad) in our musical culture" (Crowder, 1984, p. 3) and that the "association of the major mode with happy and minor with sad is the most solid link we have between music structure and the language of human emotions" (Crowder, 1984, p. 4). Hevner (1937) found tempo to be the single most important factor in determining responses to music and Rigg (1940) confirmed these findings, stating "tempo might have more influence over the emotional suggestiveness of music than any other single factor" (LeBlanc, 1981, p. 145). Holbrook and Anand (1990) found that tempo was regarded as a key musical device for expressing emotion in music, having a direct emo-

tional effect on the rhythms of a composition. In view of the apparent importance of tempo and tonality, a logical conclusion might be made that in altering the state of their existence within music, one might also have an effect on the emotional or affective response of the music listener.

Method

Elementary students ($N = 460$), ranging in age from 6 to 12 years, participated in listening activities administered on three consecutive music periods. The researcher utilized the 22 intact groups available through previously established classes, with each group ranging in size from 18 to 26 students. The listening activities were not administered to students who were absent on their particular days of testing. The numbers of students documented represent actual students present during their music class test periods. Students received six crayons upon entering the music room (one each of red, orange, yellow, green, blue, and violet) and were instructed to choose the one color per listening example that they believed best matched the music. Four piano compositions from the Romantic period, two in a major key and two in a minor key, were played at three tempos each: *largo*, *andante*, and *presto*. Tempos were altered to identify changes that might occur in student color choices.

The selections were originally performed on a Kawai piano keyboard with tempo altering capabilities. They were first recorded at an identical *andante* tempo controlled by metronome, regardless of the composer marked tempo, and were then adjusted to both a *presto* tempo (twice as fast) and a *largo* tempo (half as fast) controlled by metronome. There were a total of twelve cassette-taped recordings that the students heard in varying orders, each of the four pieces being played at three differing tempos. Each class, therefore, experienced three 10-minute long listening tests unique to them. This ensured that each group or class of students acted as their own control group and that the experiment was controlled for order effect.

Results were evaluated by comparing the distribution of color responses in the three different tempos for each piece, and by comparing the distribution of color responses in major and minor tonalities for a slow, moderate, and fast tempo. Student instructions were read from a script, and the researcher wore neutral colors: black, white, or khaki, during the tests, to promote consistency and non-biased color choices. Excluding tempo and tonality, all aspects of the music listening examples (including instrumentation and duration of the examples, modulation of keys in examples, and composer and historical time period of the examples) were kept constant. Possible confounding variables affecting this study included the age of the students, previous exposure to the music, time of day students attend music class, dynamics of the listening examples, students affected by chromesthetic or synesthetic experiences, and colors present in bulletin boards within the music room.

Results

The data from each of the three listening tests per class were tallied at the conclusion of each testing day, and were divided by musical piece and tempo. Totals were calculated for each color for each piece at the completion of the testing, and the results were graphed individually by piece. The color choice totals were also collected into a chart containing all of the experiment's data (see Table 1). A chi-square $r \times k$ contingency table was formed for each set of data comparisons in this research. A total of 7 contingency tables were formed, and 6 of those 7 proved to contain significant results.

Three 2×6 contingency tables were formed to look at the distribution of color responses in major and minor tonalities for a slow, moderate, and fast tempo. These tables compared the two listening examples in a major key to the two listening examples in a minor key. The Table of Critical Values of chi-square was inspected for the value of 5 df and $\alpha = .05$. The researcher found a significant difference between color choices for major and minor tonalities at each of the three re-

Table 1

Distribution of Color Responses in Three Tempos for Four Pieces

Piece	Tempo	Colors						Total
		R	O	Y	G	B	P	
"Agitation"	Slow	69 16%	51 12%	36 8%	50 11%	133 31%	96 22%	435
	Moderate	113 26%	43 10%	20 5%	66 15%	76 17%	120 27%	438
	Fast	106 25%	62 14%	28 6%	75 17%	84 20%	80 18%	435
"Regrets"	Slow	58 13%	65 15%	71 16%	78 18%	82 19%	81 19%	435
	Moderate	64 14%	73 17%	83 19%	65 15%	97 22%	56 13%	438
	Fast	79 18%	73 17%	83 18%	65 13%	97 18%	56 16%	435
"Tarantella"	Slow	63 14%	78 18%	54 12%	116 27%	69 16%	57 13%	437
	Moderate	56 13%	102 23%	119 27%	74 17%	52 12%	35 8%	438
	Fast	52 12%	76 17%	163 37%	65 15%	38 9%	43 10%	437
"Sweet Remembrance"	Slow	55 12%	43 10%	48 11%	57 13%	155 35%	79 18%	437
	Moderate	43 10%	45 10%	69 16%	92 21%	108 25%	81 18%	438
	Fast	85 19%	50 12%	63 14%	85 19%	85 19%	69 16%	437

corded tempos.

Four 3 x 6 contingency tables were formed to look at the distribution of color responses in three tempos for each of the four piano pieces: "Agitation," "Regrets," "Tarantella," and

"Sweet Remembrance." The Table of Critical Values of chi-square was inspected for the value of 10 *df* and $\alpha = .05$. Results of the tempo comparison were found to be significant for the pieces "Tarantella," "Sweet Remembrance," and "Agitation," indicating that at least one of the tempos affected the color choices of the students. "Tarantella" provided the strongest data of any example in the research, resulting in highly consistent color choices within each of the three tempos. Results did not prove to be significant for the piece "Regrets"; student color choices were ambiguous and inconsistent.

Discussion

The results from the tabulation of color choices from the slow recording show high percentages of one-color choices in three of the music listening examples, and ambiguous findings for the fourth. The overwhelming color response to these pieces at a slow tempo was blue, in the case of "Agitation," and "Sweet Remembrance," and green, in the case of "Tarantella." It was clear that students were varied in their interpretation of the color and mood associated with the listening example "Regrets," given that there was no consistent color choice among their answers. The moderate tempo recordings of the four examples again provided strong one- or two-color associations for three of the four pieces. The individuality of each piece began to show through more clearly as the tempo was increased; the colors chosen for each piece were not as similar to each other as for the slow recordings. Students chose purple or red 53% of the time when listening to "Agitation" at a moderate tempo, yellow or orange 50% of the time when listening to "Tarantella" at a moderate tempo, and blue or green 46% of the time when listening to "Sweet Remembrance" at a moderate tempo. Results from the moderate tempo recording of the example "Regrets" were again the most ambiguous; students chose blue or yellow only 42% of the time.

The fast tempo recordings of the four examples provided clear results of one- or two-color associations for only two

examples. "Tarantella" at the presto tempo was marked by the greatest percentage of one-color associations for the entire experiment. Yellow was chosen 37% of the time. Students chose purple or red 43% of the time when listening to "Agitation" at a fast tempo, 10% less than the total for the same two colors chosen for this example in the moderate recording. Student color choices for the examples "Regrets" and "Sweet Remembrance" were highly varied at the fast tempo, with no clear one- or two-color associations made.

It can be seen from the results that, in almost every situation tested, tempo does significantly affect the color associations that elementary students make when they listen to the same pieces at slow, moderate, and fast tempi. The results from the examples "Tarantella" and "Agitation" provided the most striking results. The responses for the piece "Sweet Remembrance" became more ambiguous as the tempo increased. The original composed tempo for this piece is slow, and the results could signify that as a piece moves farther from its composer marked tempo, it is harder to comprehend the original intentions of the composer. "Regrets" carried highly ambiguous color responses in all three tempos. It did not seem as though students could determine the composer's intentions for this piece, or that it simply did not evoke any particular color or mood associations.

The results of the chi-square distributions that compared the major and minor tonalities of the four pieces provide significant results as well. The chi-square value for the slow tempo comparison is very slight, but never the less significant. The value of the chi-square for the moderate and fast tempos, however, rose dramatically, showing that it may be difficult for students to differentiate between major and minor tonalities at a slow tempo. The moderate and fast tempos may tend to bring out the major and the minor tonalities and their unique chord structures on a higher degree to the listening ear.

Conclusions

The purpose of this research was to determine if the style characteristics of tempo and tonality affected the color associations of elementary-age children when listening to music. The primary objective of this study was to provide music educators with descriptive information regarding student responses to musical stimuli in the form of color association choices. It is the hope of this researcher that the data provided will contribute to elementary students' musical learning and development. Fredrickson (1997) believes "individual pieces of music elicit their own unique response from individual listeners" (p. 632). These individual, subjective, and creative responses should be nurtured and encouraged. Utilizing color association activities within the teaching of music listening is one effective way in which this might be accomplished.

Students should have the opportunity to discuss their color associations with their classes, allowing memories, moods, and unique opinions to be freely voiced. Encouragement of this type of musical thinking within the classroom fosters creativity that is often absent within the general music curriculum, and discussion of these subjective musical ideas can lead to greater freedom during student improvisation and composition. This researcher's work may help to focus music educators' attempts to locate key listening selections of mood associations (through the correlation of color) for their classes, in support of this type of subjective listening activity.

Research has shown that the style characteristics of tempo and tonality provide the most consistent results among color and mood associations of students. It was found in the pilot study to this research that "regardless of what musical time period the music example originated, the same colors were chosen when the style characteristics of the music examples remained the same (Freeman, 2000, p. 14). The pairing of these style characteristics seemed to heighten the uniformity of students' color associations. Students, when listening to music examples that had a fast tempo and were in a major key most often chose yellow, when listening to music examples

that had a fast tempo and were in a minor key most often chose red, and when listening to music examples that had a slow tempo and were in a minor key most often chose blue. Though the exact emotions of the students tested cannot be known for certain, these findings support existing research suggesting, "children do associate colors and music together with moods, and that a synesthetic response to music with color is related to an individual's emotional response to the music" (Freeman, 2000, p. 14).

The color choices in the current study were not as clear-cut and directed as the choices made in the pilot study. One rationale might be that the original composition was changed when the tempos were altered to identify the changes that might occur in student color choices as tempos increased or decreased. These changes did occur in three of the four examples, and the findings were significant. For the listening example "Agitation," for example, color choices shifted from 31% blue at a slow tempo, to 27% purple at a moderate tempo, to 25% red at the fast tempo. These findings match the relationship of tempo and tonality that existed in the pilot study. "Agitation" was in a minor key, and as the tempo increased, the color choices for it shifted from blue to purple to red – direct movement along the color wheel.

The ambiguity of the color choices for the listening example "Regrets," show that it is possible that some compositions do not overtly express an emotion or mood to the music listener. It may also be true that these same compositions express differing moods or emotions to different music listeners, and simply do not have unifying characteristics of emotional response. This does not mean that these examples are not effective in the assessment of color or mood associations to music. It is believed that these examples might be discussion pieces that allow students the opportunity to talk about their unique color or mood associations.

The idea that color association could be one method of communicating a student's emotional response to music is a strong indicator in support of this type of subjective music listening activity. Music listening activities such as color

association are incredible tools for younger, nonverbal students, as well as special needs students who can use color to demonstrate or explain their emotional and affective responses to music. Color association can also be used as building blocks for students to utilize and develop music vocabulary and critical thinking skills. Subjective activities can prepare students for more rigid and objective assessments within music by encouraging students to verbalize what they are hearing and experiencing.

The music therapist, music educator, music publisher, and music parent can benefit from further research into emotional responses to music and their links to mood association, color association, perception, and enjoyment of music. Further research could focus on the study of only one piece of music played in a major or minor key, high and low registers, and again at fast and slow tempos. This could help to better identify the effect of style characteristics on the perception of melodic content. Color association data could be organized by age and/or by gender in order to compare differences in color associations across time and between the sexes. Color associations could also be matched with mood associations, or students could be encouraged to interpret their moods as they listen, giving insight to the actual emotional responses of the subjects at the time of listening.

References

- Crowder, R. G. (1984). Perception of the major/minor distinction: I. *Historical and theoretical foundation. Psychomusicology, 4*(1-2), 3-12.
- Cutieta, R. A., & Haggerty, K. J. (1986). A comparative study of color association with music at various age levels. *Journal of Research in Music Education, 35*, 78-91.
- Fredrickson, W. E. (1997). Elementary, middle, and high school perceptions of tension in music. *Journal of Research in Music Education, 35*, 78-91.
- Freeman, E. M. (2000). *Color associations of elementary students with music from the Romantic and Baroque musical periods*. Unpublished manuscript, University of Missouri-Kansas City.
- Gabrielsson, A., & Juslin, P. N. (1996). Emotional expression in music performance: Between the performer's intention and the listener's experience. *Psychology of Music, 24*, 68-91.
- Haack, P. A. (1980). In D. Hodges (Ed.), *Handbook of music psychology*.

- Lawrence, KS: National Association for Music Therapy.
- Haack, P. A. (1990). Beyond objectivity: The feeling factor in listening. *Music Educators Journal*, 77(4), 28-32.
- Haack, P. A., & Radocy, R. E. (1981). A case study of a chromesthetic. *Journal of Research in Music Education*, 29, 85-90.
- Hair, H. I. (1981). Verbal identification of music concepts. *Journal of Research in Music Education*, 29, 11-21.
- Hevner, K. (1936). Experimental studies of the elements of expression in music. *American Journal of Psychology*, 48, 246-268.
- Hevner, K. (1937). The affective value of pitch and tempo in music. *American Journal of Psychology*, 49, 621-630.
- Holbrook, M. B., & Anand, P. (1990). Effects of tempo and situational arousal on the listener's perceptual and affective responses to music. *Psychology of Music*, 18, 150-162.
- Kratus, J. (1993). A developmental study of children's interpretation of emotion in music. *Psychology of Music*, 21, 3-19.
- LeBlanc, A. (1981). Effects of style, tempo, and performing medium on children's music preference. *Journal of Research in Music Education*, 29, 143-156.
- Odbert, H. S., Karwoski, T. F., & Eckerson, A. B. (1942). Studies in synesthetic thinking: I. Musical and verbal associations of color and mood. *Journal of General Psychology*, 26, 153-173.
- Radocy, R. E., & Boyle, J. E. (1979). *Psychological foundations of musical behavior*. Springfield, IL: Charles C. Thomas.
- Rigg, M. G. (1940). Speed as a determiner of musical mood. *Journal of Experimental Psychology*, 24, 566-571.
- Stratton, V. N., & Zalanowski, A. H. (1989). The effects of music and paintings on mood. *The Journal of Music Therapy*, 26, 30-41.

Note. This article was based on the author's Master's Thesis completed at the University of Missouri - Kansas City.

The Effect of Phrase Expansion Recognition On Melodic Dictation Accuracy

Paul Allen Clements Jr., PhD
University of Missouri-Kansas City
May 2003

Committee Chairperson: Randall G. Pembrook

Dissertation Abstract

The purpose of this study was to examine the interaction between listener comprehension of expanded melodic phrase structure and melodic dictation accuracy. Subjects ($N = 27$) were divided into three groups and asked to listen to and transcribe the expanded portion of 12 expanded phrases which had been derived from basic phrases using 6 different expansion techniques. The expansion types were exact repetition (ER), tonal sequence (TS), real sequence (RS), rhythmic alteration (RA), tonal alteration (TA), and unrelated material (UM). The three groups had received different instructional levels regarding the concept of phrase expansion prior to the transcription sessions. Group A ($n = 8$) received no instruction, Group B ($n = 9$) received minimal instruction, and Group C ($n = 10$) received substantial instruction. In addition to the transcriptions, Group C was asked to identify the expansion type for each expanded phrase. Mean transcription scores of the three groups were calculated.

The combined scores of the three groups (out of a possible 32 points) were as follows: ER = 30.60, TS = 27.75, RA = 25.70, RS = 24.77, TA = 22.94, UM = 18.50. A repeated measures analysis of variance (ANOVA) was performed to determine whether or not there was a statistical difference in transcription scores due to instructional level or expansion type. The main effect of instructional level and the expansion type \times instructional level interaction did not reflect statistical significance. However, a statistically significant ($p < .05$) difference in mean transcription scores was found for the expansion type main effect. Within-subjects contrasts (Difference Method) were performed to determine which pairs of transcription score means were significantly different. These analyses showed that each pair of means was significantly different from the previous in the series with a trend towards decreases in means as expansion type difficulty increased (ER - TS, $F = 11.98$; TS - RA, $F = 12.65$; RA - RS, $F = 8.88$; RS - TA, $F = 17.29$; TA - UM, $F = 39.56$). There was a slight difference in transcription accuracy between the three groups (Group A [no instruction] = 24.26, Group B [minimal instruction] = 24.95, Group C [substantial instruction] = 25.75) but the difference was not statistically significant. The majority of expansion types were correctly identified by Group C subjects during the transcription sessions (98 out of 120). A t -test revealed a statistically significant ($p < .0005$) difference in mean transcription scores ($t = 4.59$) for Group C subjects when expansion type was correctly identified and when it was not (27.21 versus 19.27).

The Effect of Vocal Hygiene and Behavior Modification Instruction on the Self-Reported Vocal Health Habits of Public School Music Teachers

Rhonda S. Hackworth, PhD
University of Missouri-Kansas City
May 2003
Committee Chairperson: Dr. Charles Robinson

Dissertation Abstract

This study examined the effect of vocal hygiene and behavior modification/teaching techniques instruction on self-reported behaviors of music teachers. Subjects ($N = 76$) were elementary, middle/junior high, and high school music teachers who self-reported the following daily vocal health behaviors for 8 weeks: (a) volume of water consumption; (b) minutes of vocal warm up; (c) talking over singing, recorded music, or instruments while delivering instruction; (d) number of vocal breaks taken; (e) use of nonverbal commands to communicate with students; and (f) number of vocal problems. In addition to daily reports, demographic information was collected at the beginning and end of the study. Subjects were assigned to either experimental group one ($n = 19$), experimental group two ($n = 11$), or control ($n = 46$) groups. Both experimental groups received vocal hygiene instruction from a professional speech pathologist. Experimental group two received additional information in behavior modification/teaching techniques from a university music education professor.

No significant differences were found in any categories for the control group or experimental Group 1. For experimental Group 2, results of data reported in the weeks closest to the treatment time showed a significant increase in number of vocal breaks taken and a significant decrease in vocal problems. When data over all 8 weeks were analyzed, no significant differences were found for any of the groups in any category.

The significant differences found in experimental group two seem to indicate the importance of behavior modification's inclusion in programs of vocal hygiene. Individual variance among subjects implies the ability to manage vocal hygiene routines may be easy for some and difficult for others. Additional study of the effects of multiple, varied treatment sessions may help understand the impact of the treatments over extended periods of time.

Examining the Role of Popular Music in Education: A Quasi-Experimental Study Investigating Retention in Rural Southwest Missouri Middle Schools

Daniel Ligon, MSc
Southwest Missouri State University,
December 2003
Committee Chairperson: Norma McClellan

Thesis Abstract

Research in music education continued to refine and edify music educators making them more effective in the classroom. By critically examining popular music in curriculum and reviewing case studies and highlighting current trends in music education; the music educator may be more effective in their methodology of music to students.

The purpose of this study was to examine how students ranging in ages 11 to 14 in Southwest Missouri rural schools retain the basic music concept of simple and complex rhythms by listening to popular music selection versus those who listen to a classical selection. The groups were separated into a control group, (11 & 13), and the experimental group, (12 & 14), to compare differences. Data were obtained through a series of surveys with quantitative results. The results compared gender, age, and mean response.

Results showed a relationship between prior knowledge and the music listened to by the groups. Specifically, the comparisons suggested that the males in this study did retain the concept of rhythm more positively than did the female participants. Through an examination of the genre of popular music, teachers expand and enhance their ability to influence future musicians in Western society.

The Effects of Background Music on Viewers' Perceptions of Political Campaign Television Advertisements

Cathi Wilson, PhD
University of Missouri - Columbia
August 2003
Committee Chairperson: Wendy Sims

Dissertation Abstract

This investigation assessed viewers' affective responses to negative political campaign television advertisements containing no music, congruent music, and incongruent music. Musical characteristics of the congruent music corresponded to the negative tone of the selected ads, while for the incongruent condition the paired music possessed qualities traditionally associated with positive emotion. Participants' descriptions of the music contained in the ads were also of interest.

Three intact classes of undergraduate students enrolled in an introductory sociology class ($N = 286$) watched three different 30-second negative campaign ads, one with no music, one with congruent music, and one with incongruent music. Dependent variables were scores of participants' feelings about the ads, indicated by writing a number from 0-100 based on a "feeling thermometer" scale, and participants' open-ended comments about the music that they could recall from the ads.

Friedman nonparametric analysis of variance tests were used to analyze the affective response data. For two of the three groups, significant differences were found, with the incongruent music condition (positive music/negative ad content) rated the most positive. No significant effects were found for participants' gender, age, major, political party, strength of party affiliation, or years of musical experience. The 286 participants generated a total of 1,052 open-ended comments about the music. Results of a content analysis of these responses are included.

NEWS BRIEFS**Announcement from the MayDay Group**

Dear colleagues,

The editors of *Action, Criticism and Theory for Music Education* (ACT) issue an invitation for papers dealing with critical, analytical, practical, theoretical and policy development topics that are connected to applying, challenging or building on the issues and topics germane to the following areas of interest: (a) critical musicianship, (b) sociocultural contexts of music and music education, (c) music teacher agency, d) institutional effects on music education, (e) critiquing and strengthening the research and theoretical base, (f) music teacher education policy, and (g) curriculum theory. The focus of this journal is devoted to these seven distinct but interacting domains rather than to other topics. Scholarship from diverse disciplinary perspectives is invited (e.g., education, music, philosophy, sociology, history, psychology, curriculum studies, etc.), and interdisciplinary research is especially encouraged. The MayDay Group is an international and non-national organization; therefore submissions should, as much as possible, be framed in terms relevant and understandable to music educators everywhere. Further information about the MayDay Group, including an explication of the topics of interest above, can be found at <www.maydaygroup.org>.

Cordially,

Darryl Coan

**Journal of Historical
Research in Music Education**
Volume 25: 1, October, 2003

FEATURE ARTICLES

- | | |
|--|---------------------|
| Inclusion of Women Composers
in College Music History Textbooks | Vicki D. Baker |
| Radiating a Hope: Mary Cardwell
Dawson as Educator and Activist | Karen M. Bryan |
| Nationalism in school texts in Taiwan | Angela Hao-Chun Lee |
| Looking Back in Time: On Being a
Music Education Historian | Terese M. Volk |

Contact: Jere T. Humphreys, Editor, *JHRME*, School of
Music, Arizona State University, Tempe, AZ 85287-0405,
jhrme@asu.edu, <http://music.asu.edu/jhrme>

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 should be addressed to Carol McDowell, Editor, Missouri Journal of Research in Music Education, Music Department, Mail Stop 7800, Southeast Missouri State University, Cape Girardeau, MO, 63701. Four copies of the manuscript must be submitted and must conform with the most recent style requirements set forth in the PUBLICATIONS MANUAL for the American Psychological Association (APA, 5th 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.

Manuscripts are reviewed by the editorial board in a blind review process. To assure anonymity during the review process, the author's name and affiliation should appear on a separate cover page only. Authors are also requested to remove all identifying personal data from submitted articles. The collective recommendations of the reviewers determine whether a manuscript will be accepted for publication. Manuscripts submitted for review must not have been published nor be under consideration for publication elsewhere.

The editorial committee subscribes to the **Research Publication/Presentation Code of Ethics** of the Music Education Research Council of the Music Educators National Conference and the National Research Committee of the American Music Therapy Association.

