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## **Relationship of Generalized Self-Efficacy, Career Decisiveness, and General Teacher Efficacy to Preparatory Music Teachers' Professional Self-Efficacy**

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*Researchers have established a relationship between perceived self-efficacy and teaching effectiveness. In this investigation, we proposed 3 strong influences on preparatory music teachers' professional self-efficacy: generalized perceptions of self-efficacy, extent of career decisiveness, and perceptions of overall teacher efficacy. A total of 231 undergraduate music education majors from 7 American universities took 4 self-efficacy measures: the Generalized Self-Efficacy Scale (GSE), the Career Decision Scale (CDS), the Teacher Efficacy Scale (TES), and the author-constructed Music Teacher Efficacy Scale (MTES). The study's purposes were to determine (a) mean outcomes on the 4 self-efficacy measures, (b) scale items achieving the highest and lowest means, (c) the extent to which the 4 scales intercorrelated, and (d) the extent to which scores on the GSE, CDS, and TES predicted scores on the MTES. Descriptive data and high and low mean items were reported. Analyses revealed a significant rise of MTES scores between years in school. Intercorrelations among the 4 scales were modest, ranging from .28 to .56 ( $p < .01$  for all). The GSE, CDS, and TES together strongly predicted the MTES, as did each of the three scales examined individually.*

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Preparatory music educators have long expressed uneasiness concerning their ability to function as an effective teacher in the schools. Peters and Miller (1982) hypothesized that

"the future teacher is uncertain about the demands of teaching and his or her adequacies to meet those demands" (p. 56). Interestingly, researchers from diverse fields have established a strong link between perceptions of self and behavior leading to successful outcomes (Good & Brophy, 1987). One of these self-percepts has been labeled *self-efficacy*. Bandura (1982, p. 37) has defined self-efficacy as that which is "concerned with judgments of how well one can execute courses of action required to deal with prospective situations." Perceptions of self-efficacy influence behavior, affecting the extent to which individuals expend effort and persist toward completing specific goals (Gorrell, 1990). Perceived self-efficacy helps to account for an array of behavioral and cognitive phenomena linked to effective teaching: coping, level of physiological stress, reaction to failure experiences, feelings of personal control, efforts directed toward achievement, growth of intrinsic interest, and pursuit of career (Bandura, 1977a, 1982; Berry & West, 1993; Fields, 1993; Kleinke, 1986).

Self-efficacy is crucial to *motivated* learning, learning for the acquirement of skills and knowledge rather than merely for the completion of tasks (Schunk, 1985). Students with favorable self-appraisals have been found to work harder at academic activities (Bouffard-Bouchard, 1990; Felson, 1984; Hackett, Betz, O'Halloran, & Romac, 1990) and at self-monitored behaviors (Kingery, 1990). High self-efficacy teachers are more willing to devote instructional time to small-group cooperative activities, are more positive in interactions with students, and are more persistent in overcoming initial failure situations (Gibson & Dembo, 1984). According to Sparks (1988), teachers labeled "improving" demonstrated higher perceived self-efficacy growth than "nonimproving" teachers. The "improving" teachers were more willing to experiment in their classrooms, whereas the "nonimproving" teachers tended to be defensive about their teaching style, attempted fewer changes, and had lower expectations for themselves and for their students. Preservice teachers with higher perceived self-efficacy were found to be more adept at applying strategies learned in methods classes (Gorrell & Capron,

1990).

Furthermore, teachers' sense of efficacy has been linked to more effective teaching of at-risk, exceptional, and low-achieving students (Midgley, Feldlaufer, & Eccles, 1989; Miller, 1991). Teachers with high self-efficacy were found to be more likely to view students' problems as residing outside of the pupil, whereas teachers with lower self-efficacy tended to view problems as residing largely within the pupil (Jordan, Kircoali-Iftar, & Diamond, 1993).

Although self-efficacy is usually concerned with individuals' judgments of their ability to deal with well-defined, contextually clear situations (as contrasted with *self-concept*, a broader, more global view; cf. Gorrell, 1990), it is usually viewed as originating from multiple sources (Bandura, 1977b). One source may be the individuals' feelings of their ability to persevere throughout a broad range of challenging situations, an ability Tipton and Worthington (1984) labeled *generalized self-efficacy*. Preparatory music teachers' views of their ability to teach music effectively may relate to this generalized sense of self-efficacy.

Another source potentially affecting preparatory music teachers' professional self-efficacy is the extent of their resolve to pursue music teaching as a career, that is, their level of career decisiveness. Strongly linked to career decisiveness (Luzzo, 1993a, 1993b; Osipow, Carney, & Barak, 1976; Osipow, Carney, Winer, Yanico, & Koschier, 1976; Ralph, Halpin, Halpin, & McEwen, 1987; Taylor & Betz, 1983), self-efficacy has received increasing attention as a useful paradigm for understanding career development (Bores-Rangel, Church, Szendre, & Reeves, 1990; Hackett et al., 1990).

A third potential source influencing preparatory music teachers' professional self-efficacy involves perceptions of their ability to be effective "generic" teachers; that is, their ability to function effectively in challenging situations encountered by all teachers regardless of specialization (e.g., relating to administrators and parents, dealing with behavioral problems, etc.). Teacher efficacy has been identified as a strong influence on effective teaching (Ashton & Webb,



1986). Researchers have found that personal efficacy (typified by Tipton & Worthington, 1984) and teacher efficacy are distinct constructs (Austin, 1993; Gibson & Dembo, 1984; Woolfolk & Hoy, 1990) and that both make substantial contributions to attitudes about pupil control and the extent to which teachers feel manipulated by the educational bureaucracy (Woolfolk & Hoy, 1990).

### *Problem*

We surmised that the three constructs just discussed strongly influence preparatory music teachers' sense of professional self-efficacy. The purpose of this study was to determine relationships among generalized self-efficacy, career decisiveness, general teacher efficacy, and music teacher efficacy in a sample of preparatory music teachers. Specifically, we sought to answer the following research questions.

1. In a sample of preparatory music teachers, what are mean outcomes on measures of generalized self-efficacy, career decisiveness, general teacher efficacy, and music teacher efficacy?
2. In a sample of preparatory music teachers, which items on these four measures achieved the highest and the lowest mean scores?
3. In a sample of preparatory music teachers, to what extent do scores on measures of generalized self-efficacy, career decisiveness, general teacher efficacy, and music teacher efficacy correlate?
4. In a sample of preparatory music teachers, to what extent do scores on measures of generalized self-efficacy, career decisiveness, and general teacher efficacy predict scores on a measure of music teacher efficacy?

## Method

*Instrumentation*

Self-efficacy is context dependent, amenable to measures dealing with specific behaviors (Wang & RiCharde, 1988). We therefore chose three different scales, and constructed one of our own, to measure the four facets of generalized self-efficacy, career decisiveness, general teacher efficacy, and music teacher efficacy. These scales are as follows:

*Generalized Self-Efficacy Scale (GSE)*. Tipton and Worthington (1984) based the development of the GSE on a factor identified in an earlier investigation as *faith in self* (Tipton, Harrison, & Mahoney, 1980). The general theme of GSE items (27 in all) involves a determination to stay with an endeavor in the face of physical or emotional adversity. Examples of items from the GSE include "I find it extremely unpleasant to be afraid"; "I am a very determined person"; and "I find it difficult to take risks." According to the authors of the GSE, subjects with high GSE scores expended more effort, persevered longer, and demonstrated a greater willingness to pursue changes in instructional strategies.

Although no internal reliability figures were reported, the GSE demonstrated a significant correlation (.37) with a "goal attainment scale" that measured the extent of success at achieving goals. In the present investigation, the GSE yielded an alpha (Cronbach's) of .84. The authors of the GSE centered their validity discussion on the GSE's ability to show that high scorers demonstrated more intensive effort and perseverance across unrelated tasks.

*Career Decision Scale (CDS)*. Authors (Osipow, Carney, Winer, et al., 1976) constructed the 18-item *CDS* originally to measure conditions relating to educational-vocational indecision in college students (Osipow, Carney, & Barak, 1976). Representative items include "I have decided on a career and feel comfortable with it"; "I can't make a career choice right now because I don't know what my abilities are"; and "I know I will have to work eventually, but none of the careers I know

about appeal to me." The authors of the *CDS* found that students most likely to be undecided about their career scored highest on the scale. Test-retest reliabilities of .90 and .82 (two different groups) were reported. The authors demonstrated construct validity via multivariate analyses.

*Teacher Efficacy Scale (TES)*. Gibson and Dembo (1984) based the 30-item TES on Bandura's (1977a) conceptualization of self-efficacy. Typical items include "When a student does a little better than usual, many times it will be because I exerted a little extra effort"; "The amount that a student can learn is primarily related to family background"; and "teachers are not a very powerful influence on student achievement when all factors are considered." The authors reported a total score alpha (Cronbach's) of .79 and provided support for construct validity via factor analysis and multitrait-multimethod procedures.

*Music Teacher Efficacy Scale (MTES)*. Because self-efficacy is context-dependent, and because music teachers behave in ways unique to the music teaching/learning process (Bergee, 1992), a self-efficacy measure specific to music teaching was required. We therefore constructed such a measure. Representative items on the 14-item MTES include "I think I'll be a good music teacher"; "My ensembles will probably do quite well in festivals and in competitions"; and "If I begin my teaching career in a poor or mediocre situation, I know that I can make it better." Internal consistency of the MTES (Cronbach's alpha) in this investigation was .85. We attempted to establish content validity of the MTES by basing items on situations described in texts on the teaching of music, especially secondary music, in the schools (e.g., Hoffer, 1991). Two university music education faculty members examined the items and found them to be relevant.

The four self-efficacy scales were combined into a questionnaire containing a total of 89 items. Each item was coupled with a five-option, Likert-type response scale whose elements included Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5). Each of the four scales contained both positively and negatively worded items.

Scoring was reversed for the negatively worded items. To account for order effects, four different forms of the questionnaire were distributed equally among the subjects. A different scale initiated each of the forms; thereafter, the order of the scales was determined randomly. We did not manipulate item order within the scales.

### *Participants and Procedures*

A total of 231 undergraduate music education majors from seven large American universities (one Western, one Southwestern, and five Midwestern) working toward K-12 certification in music served as subjects for the study. Subjects indicated only their university, year in school, and concentration (instrumental, vocal, or both). No other information was requested. A total of 44 first-year, 50 second-year, 47 third-year, and 90 fourth- or fifth-year students responded. Subjects indicating "instrumental" as their concentration totaled 128, subjects indicating "vocal/general" totaled 97, and subjects indicating "both instrumental and vocal/general" totaled 6. These 6 individuals were categorized into both concentrations. The participants were informed in a cover letter that the statements contained in the scales addressed attitudes and feelings they might have about themselves and their chosen occupation. They were asked to "please be sure to give only *one* response to each question and to answer *every* item. Work quickly and give your first impression." On average, the questionnaire took 12 minutes to complete.

The resulting data yielded descriptive information. Additionally, we examined the four scales for internal consistency (Cronbach's alpha); differences among universities, year in school, and concentration; correlations among measures; and ability to predict preparatory music teachers' self-efficacy.

### Results

Preliminary analyses revealed no significant differences on any of the four scales between universities or concentration.

On three of the four scales (GSE, CDS, TES), no significant differences were found between years in college. On the fourth scale, MTES, a significant difference was noted,  $F(3, 227) = 4.33, p < .01$ . Tukey analyses (Table 1) revealed a statistically significant rise between every grade level with the exception of Junior-Senior.

Table 1

*Pairwise Comparisons (Tukey) of Music Teacher Efficacy Scale Mean Differences with Year in College Serving as Independent Variable*

	<i>M</i>	Soph.	Jr.	Sr.
Freshman	53.08	2.18*	3.28*	3.29*
Sophomore	55.26		1.10*	1.11*
Junior	56.36			.10
Senior	56.37			

\* $p < .01$ .

Descriptive data, reliability coefficients, and correlations among scales appear in Table 2. Means for the four scales were 101.9 for GSE (135 possible), 73.8 for CDS (90 possible), 103.7 for TES (150 possible), and 55.5 for MTES (70 possible). Alphas ranged from .66 for the TES to .93 for the CDS. Correlations between scales ranged from .28 to .56. Although all were statistically significant ( $ps < .01$ ), the relationships were not particularly strong.

Table 3 reports scale items achieving a mean score above 4.3 and those achieving a mean score below 3.0. (Subjects who indicated "Strongly Disagree" on negatively stated items received an item score of 5, "Disagree" a score of 4, etc.) The CDS contained half of the items found in the high-mean category, while the TES had none. Virtually the reverse was the case of the low-mean category—the TES had the most items while the CDS had none. A small number of GSE and MTES

scale items appeared in both categories. The item achieving the highest mean score (4.51) was from the MTES: "I think I'll be a good music teacher." The item achieving the lowest mean score (2.24) was from the TES: "If parents would do more with their children, I will be able to do more."

Table 2

*Descriptive Statistics, Reliabilities, and Correlations Among the Four Self-Efficacy Measures (N = 231)*

	<i>M</i>	<i>s</i>	alpha <sup>a</sup>	<i>CDS</i>	<i>TES</i>	<i>MTES</i>
GES	101.86	10.14	.84	.37*	.39*	.56*
CDS	73.82	12.30	.93		.28*	.48*
TES	103.73	7.36	.66			.47*
MTES	55.46	6.14	.85			

*Note.* GSE = Generalized Self-Efficacy Scale (135 possible); *CDS* = Career Decision Scale (90 possible); *TES* = Teacher Efficacy Scale (150 possible); *MTES* = Music Teacher Efficacy Scale (70 possible).

<sup>a</sup>Cronbach's.

\* $p < .01$ .

Table 3

*Subjects' Highest and Lowest Means on Self-Efficacy Scale Items*

#### Means Above 4.3

##### Generalized Self-Efficacy Scale

3. I am a very determined person. (4.38)  
 19. I feel that chances are very good that I can achieve my goals in life. (4.49)  
 20. In general, I agree that "if at first I don't succeed, I'll try again." (4.42)

Table 3 (continued)

Career Decision Scale

6. I'd like to be something besides a music teacher, but I'd be going against the wishes of someone who is important to me if I did so. Because of this, it's difficult for me to make a career decision right now. I hope I can please them and myself. - (4.44)
7. Until now, I haven't given much thought to choosing a career. I feel lost when I think about it because I haven't had many experiences in making decisions on my own and I don't have enough information to make a career decision right now. - (4.47)
9. I thought I knew what I wanted for a career, but recently I found out that it wouldn't be possible for me to pursue it. Now I've got to start looking for other possible careers. - (4.41)
13. I can't make a career choice right now because I don't know what my abilities are. - (4.39)
14. I don't know what my interests are. A few things "turn me on" but I'm not certain that they are related in any way to my career possibilities. - (4.38)

Teacher Efficacy Scale

None

Music teacher Efficacy Scale

1. I think I'll be a good music teacher.\* (4.51)
4. I'll probably be able to relate pretty well to music students. (4.43)

Means Below 3.0

Generalized Efficacy Scale

1. I find it extremely unpleasant to be afraid. - (2.34)
9. Sometimes things just don't seem worth the effort. - (2.95)
25. I become frustrated when I experience physical discomfort. - (2.84)

Career Decision Scale

None

Teacher Efficacy Scale

7. I will have enough training to deal with almost any learning problem. (2.84)
9. Many teachers are stymied in their attempts to help students by lack of support from the community. - (2.33)
10. Some students need to be placed in slower groups so they are not subjected to unrealistic expectations. - (2.90)
23. If parents would do more with their children, I will be able to do more. - (2.24)<sup>b</sup>
30. Even a teacher with good teaching abilities may not reach many students. - (2.59)

Music teacher Efficacy Scale

11. Things will probably go well for me right away when I begin teaching music. (2.81)

*Note.* The highest attainable score is 5, the lowest 1. Scoring was reversed for negatively stated items (indicated by -).

\*Item receiving highest mean score.

<sup>b</sup>Item receiving lowest mean score.

Table 4

*Stepwise Multiple Regression of Self-Efficacy Scales with Music Teacher Efficacy Scale Serving as Dependent Variable (N = 231)*

Multiple R	.67		
R <sup>2</sup>	.45		
F	60.46*		
Variable	$\beta$	t	Sig. T
GSE	.37	6.48	<.0001
CDS	.27	5.02	<.0001
TES	.24	4.49	<.0001

*Note.* GSE = Generalized Self-Efficacy Scale; CDS = Career Decision Scale; TES = Teacher Efficacy Scale.

\*  $p < .0001$ .

Results of the stepwise multiple regression analysis, with GSE, CDS, and TES scores serving as independent variables and MTES scores serving as the dependent variable, are reported in Table 4. The three variables in concert emerged as a strong predictor,  $F(3, 227) = 60.5$ ,  $p < .0001$ . Additionally, each of the three variables considered individually emerged as a strong predictor ( $ps < .0001$ ). The three independent variables accounted for 45.1% of the total variance ( $R^2 = .451$ ).

### Discussion

The theory of self-efficacy as advanced by Bandura (1977a) should be of interest to all educators, especially those involved in the teacher preparation process. We examined self-efficacy in a sample of preparatory music teachers by exploring relationships among generalized self-efficacy, career decisiveness, general teacher efficacy, and music teacher efficacy. Results indicated that the four were modestly inter-correlated, and that generalized self-efficacy, career decisiveness,



ness, and general teacher efficacy served as significant predictors of music teacher efficacy. Subjects indicated confidence in their choice of major and their ability to succeed as music teachers, but they seemed somewhat unsure of their ability to deal with more generalized teaching situations.

High-mean items (cf. Table 3) profile respondents as determined, goal-oriented, dedicated to music teaching as a career, and convinced that they will succeed and relate well to students. On the other hand, low-mean items profile respondents as somewhat fatalistic, concerned about a lack of experience dealing with problematic students, and worried about lack of support for education on the part of parents and communities.

These profiles have implications for music teacher training and for follow-up mentoring of music teachers in early career stages. Music teacher educators might use preparatory music teachers' sense of commitment and determination to address perceived weaknesses. For example, a strong goal orientation might be a springboard for developing resolutions to typical student behavioral and motivational problems. Exposure to an array of learning environments should be increased, and interactions with a wide variety of students should be encouraged and carefully structured. Teacher educators should help preparatory music teachers understand the importance of support among parents and community members, and effective methods of building these support systems should be discussed. Ideally, music teachers' first 3 years of teaching should be intensively mentored, as this might help establish a stronger sense of generalized teacher efficacy.

Self-efficacy is not a static personality trait; perceptions of self-efficacy are amenable to change over time and through intervention (Fields, 1993). Self-efficacy perceptions can serve as a mediator between attitude and achievement (Randhawa, Beamer, & Lundberg, 1993) and between past and future experience (Rubin, Martin, Bruning, & Powers, 1993). Results of this investigation suggest that the undergraduate experience itself may serve to develop higher self-efficacy perceptions (cf. Table 1). This outcome must be interpreted

with caution, however. Increases were modest despite statistical significance.

The decision to utilize four scales (GSE, CDS, TES, and MTES) appears to be justified by the modest and positive correlations among the measures. These correlations reinforce Bandura's hypothesis of self-efficacy as a context-specific phenomenon. Individuals may display high self-efficacy in one context while demonstrating low or moderate self-efficacy in others. This principle has important implications regarding the complex relationships among applied instruction, conducting experiences, music theory and ear-training courses, performance ensemble training, and music education methods and materials courses, as well as observation, aiding, student teaching, and internship experiences.

All three measures—generalized self-efficacy, career decisiveness, and general teacher efficacy—emerged as significant predictors of music teacher efficacy. The differential outcomes, especially the relatively low TES mean, therefore are of concern. Studies by Bandura and Adams (1977), Bandura, Adams, and Beyer (1977), and several other researchers indicated that self-efficacy in specific contexts can be strengthened through various remediation procedures, while Schunk (1985) has demonstrated that educational practices are important contextual influences on students' self-efficacy. The implications of these studies have ramifications on moderating what may be preparatory music teachers' paradoxical view of themselves as *music teachers* rather than *teachers*.

The design, structure, and sequence of the undergraduate curriculum might positively influence the development of heightened self-efficacy in general teaching skills among preparatory music educators. Research suggests that enhanced self-efficacy can be cultivated through several avenues, including a focus on knowledge derived from performance accomplishments, vicarious experiences, verbal persuasion, and/or emotional arousal (Bandura, 1977b). While all four of these sources of information readily lend themselves to appli-

cation in music teaching contexts, performance accomplishments and vicarious experiences are especially amenable for use in a pedagogical situation, owing to an emphasis on modeling. Because modeling and imitation are common and effective instructional techniques regularly implemented in the music classroom (Kohut, 1985), the complementary benefit of this strategy as a vehicle to strengthen preparatory music educators' sense of teacher efficacy should be considered.

In this investigation, measures of generalized self-efficacy, career decisiveness, and general teacher efficacy accounted for 45% of the total variance in a measure of music teacher efficacy. Although this is substantial amount of variance accounted for in a study of self-perceptions, future investigations should continue to look for other influences on music teacher efficacy. Researchers interested in further exploration of the self-efficacy of undergraduate music education majors might initiate a longitudinal study that follows preparatory students through their program of study to discern changes in self-efficacy and to suggest approaches that will effect positive changes in students' self-efficacy. A related study might assess graduates engaged in teaching various populations and curricula to determine how perceptions of self-efficacy are altered in the "real world" of music teaching. Finally, the present study should be replicated drawing from different populations (e.g., students from smaller or private higher education institutions) to establish evidence for generalizability.

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## **Determinants and Implications of a Music Teacher Shortage Among Missouri Music Educators**

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*The purpose of this study was to determine why Missouri music educators believe that there is a shortage of music teachers in their state. Participants were 281 instrumental, choral, and general music teachers attending the 2000 Missouri State Music Convention. Missouri music teachers expressed concerns about salary, respect, excessive workload, weaknesses in teacher preparation programs, and insufficient administrative support. Love and enjoyment of music were the most appealing components about teaching, and the "kids themselves" are what invigorate these music educators' daily tasks. The teachers offered several suggestions for encouraging others to enter the teaching profession, including creating a positive classroom environment, serving as a role model or mentor teacher, being active in professional organizations, and focusing on the rewards of teaching by seeing the enjoyment and enthusiasm in children's faces as music touches their lives.*

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Is the state of Missouri preparing and retaining enough teachers to meet its students' needs? The demand for teachers is great in many states across the nation and is expected to climb. The U.S. Department of Education predicts that the United States will need an additional two million teachers during the next decade (Basinger, 2000a). In the St. Louis metropolitan area alone, about 25,000 to 30,000 teachers will be needed over the next 5 to 7 years (Bower, 2000). The demand for Missouri teachers is highest in the St. Louis area, and it continues to climb because of the current hot labor market for college graduates, schools' increasing enrollments, teachers leaving the field within their first 5 years, and a

growing percentage of teachers at or near retirement age (Hacker, 2000).

The shortage of teachers is more noticeable in selected subject areas including math, science, special education, and music (Missouri Department of Elementary and Secondary Education, 2001). A Missouri Teacher Recruitment and Retention Committee reports a shortage of high-quality job candidates in all music-specialty areas, especially in elementary general music and string education (Gifford, 2000). Hinckley (2000) reports that from 1984 to 1994, the number of music education degrees awarded nationally declined by 1,500 per year, which suggests a possible deficit of teachers for current needs, not to mention future needs. If music positions are not filled by a certified teacher or an appropriate substitute, the danger exists for music instruction to be dropped from the curriculum.

Quality teachers and public support are essential if public-school music programs are to survive. While school curricula and teacher qualifications are largely determined by the state, the local schools boards and building principals hire teachers. Many music teachers travel between buildings and, therefore, report to more than one principal. Classroom teachers are also held accountable for their teaching through their students' test scores, a situation Missouri music teachers may also face with the upcoming fifth-grade fine-arts assessment. These factors place tremendous pressure on public-school teachers to perform well.

Teaching in the public schools can be a stressful profession, especially in the music field. Individuals whose jobs keep them in constant contact with other people are prime candidates for job stress. Stressful employment can lead to burnout, and burnout is predominantly found in two types of occupations: (a) public employees such as police officers, air traffic controllers, public health workers, and other appointed officials; and (b) helping professionals such as counselors, teachers, social workers, school administrators, and psychologists (Cedoline, 1982).

In 1940, teachers listed talking out of turn, chewing gum,



making noise, running in the halls, cutting in line, dress-code violations, and littering as the most difficult school issues (Payne & Yukimura, 1995). When asked that same question in 1980, teachers listed drug abuse, alcohol abuse, pregnancy, suicide, rape, robbery, and assault (Payne & Yukimura, 1995). Kyriacou (1989) reported that the stress of teaching often results from nonmotivated students, discipline problems, poor working conditions, time pressures, low status and appreciation, and/or conflicts with colleagues or administrators.

Public-school music teachers have significantly higher burnout levels than do public-school general classroom teachers, according to research by Hamann, Daugherty, and Mills (1987). In a previous study Hamann and Daugherty (1984) asked music educators to list the main frustrations of their job. The teachers reported: (a) lack of recognition by administration, and unclear goals from principals, music administrators, and fellow music teachers; (b) lack of recognition by other teachers, unclear goals from general administration, and lack of coordination between levels in the curriculum; (c) lack of recognition by peers, parents, and students; lack of goals in planning; and lack of cooperation among music teachers in the district and building; and (d) too much work and not enough salary or time to do it and not enough equipment, room, or budget (p. 131).

In a study by Nimmo (1989), band directors listed eight major causes for leaving the teaching profession: (a) low salary potential, (b) unappreciative administration, (c) too many school-related evening commitments, (d) too many athletic performances, (e) a lack of time to spend with family, (f) a feeling that nobody cared, (g) a desire to do something different, and (h) a general feeling of being burned out (p. 34). Nimmo's findings correspond with Cedoline's (1982) seven major causes of job burnout: (a) lack of control over one's destiny; (b) lack of occupational feedback and communication; (c) work overload or underload (difficult or irregular hours); (d) contact overload (dealing with difficult or unpleasant people on a regular basis); (e) role conflict/ambiguity (being unsure of responsibilities or having job tasks change fre-

quently); and (f) individual factors (family, personality, and/or environmental factors); (g) training deficiencies (not having the necessary job skills or not being allowed to use one's skills).

Educating today's students is a complicated and stressful task. Teachers are among the most frequently criticized and underpaid workers in the human service fields (Greenberg, 1984). A 1969 Gallup poll conducted for *Phi Delta Kappan* revealed that 75% of the general public felt that teaching was a desirable career for their children. By 1980 the percentage had dropped to 48 percent (Dworkin, 1987). A study by Hirshberg (1999) found that almost half of Americans polled rate teachers as more important to the community than merchants, lawyers, public officials, or clergymen. Sixty-one percent also said that teachers are underpaid.

Educators are sensing less and less respect from other professions. "Teachers are not afforded basic respect. We not only need to train teachers but [to] treat them as true professionals" (Botstein as stated in Hirshberg, 1999, p. 42). The decline in the public's confidence in public schools and in their desire to see their children become teachers brings additional stress to existing teachers, who are likely to receive less respect from parents and encounter more confrontations with them.

How can music teachers deal with the demands of their profession? Teachers give so much energy that they probably often do not take time to energize themselves. Observing other teachers, being an active performer, taking classes, and attending professional conventions can bring renewed excitement back into the classroom. Learning to say "no" to requests that take away from personal growth time can also help reduce tension (Rogers, 1986).

The future of music teaching in Missouri rests in part with those in the field today. The importance of this survey stems from the general value of using people's experiences to shape future policies and procedures. Understanding how current teaching conditions and problems contribute to burnout might lead to administrative changes as well as other modifications

in the teaching profession. These changes might reverse the negative trend and begin to attract students once again to careers in music education.

The purpose of this study was to determine why Missouri music educators believe that there is a shortage of music teachers in their state. Participants were 281 instrumental, choral, and general music teachers attending the 2000 Missouri State Music Convention. General questions included: (a) Will Missouri music education be able to continue with the number of teachers entering and retiring from the profession?, (b) What recruitment and retention initiatives are practicing Missouri music educators implementing?, and (c) What are the primary factors that cause Missouri music educators to leave or remain in the profession?

#### Procedure

Subjects were given a questionnaire while they were waiting in the registration line the evening before the convention opened. The executive board of the Missouri Music Educators Association approved this survey on September 10, 1999. Surveys were also placed at the registration table for the following two days, and all surveys were returned to a marked box that was placed at the same registration table. The survey contained both free-response questions and checklists. The questionnaires were then analyzed and categorized according to the responses given, and all responses remained anonymous. Approximately 1,700 teachers were registered for the 2000 convention, and 305 surveys were dropped into the box. Of these 305 surveys, four were blank and 20 were incomplete, leaving a total of 281 surveys for analysis.

#### Results

Analysis of the surveys by the author revealed that Missouri music teachers' responses were similar to those of teachers surveyed in previous research studies.

Although Missouri music teachers' statements reflected

that music is an important and valuable component of public education, the increasing number of job tasks required of them makes their jobs more difficult each year. The responses to each survey question are given below.

1. **Number of years you have been teaching music.**
2. **Number of years at your present school.**

One hundred and eleven teachers had 0-10 years of teaching experience, 82 teachers had 11-20 years, 74 teachers had 21-30 years, and 14 teachers had 31-41 years. If teachers continue to leave the field within the first 5 years, these 111 teachers will be reduced by one-half. That combined with the 88 teachers with over 20 years of experience (possibly putting them at or near retirement age) indicates that a large number of music educators will likely be leaving the profession within the next 5 to 10 years. Baker and Smith (1997) reported that the retirement of teachers would be the most significant factor affecting teacher demand for the next 20 years. The number of years at their present schools ranged from 0-33.

3. **Is your school public or private?**
4. **How many different teaching positions have you held during your career?**
5. **Check your school district's classification.**
6. **What areas and grade levels are you currently teaching?**

Two hundred fifty-nine teachers taught in the public school system while only 20 held positions in private schools (2 subjects gave no response to this question). Different teaching positions held ranged from none to one. Teachers from the smaller school districts in the state were well represented at the convention. Teachers from 2A districts were best represented, with the 1A districts ranking second. The largest districts (6A) placed third in teacher attendance, and the 5A districts placed fourth. The 3A and 4A districts tied for fifth with seven teachers attending from each. Teaching levels

are ranked in Table 1.

Table 1

*What grade levels are you currently teaching? (Check all that apply)*

Grade Level	Number of Responses
Junior/Middle School	168
Senior High	153
Elementary	141
Private studio	37
College/University	0
Preschool	11
Administration	4

Subjects were instructed to check all teaching areas that applied to their positions. Teaching areas for these teachers are shown in Table 2.

Table 2

*What areas are you currently teaching? (Check all that apply)*

Teaching Area	Number of Responses
General Music	143
Choral	136
Band	99
Jazz	43
Music theory	25
Keyboard	23
Music history	20
Guitar	16
Orchestra	13
Teacher education	8
Music appreciation	2

### 7. Degrees held/year received.

The majority of respondents (122) had received the bachelor of music education degree. The bachelor of science (70), bachelor of arts (30), and bachelor of fine arts (2) were the next three most common. However, the master of arts (37) was the principal graduate degree earned, with the master of music education ranking a close second (32). The master of music (23) and master of science (20) degrees were the others listed. Because of the increase in master's degrees granted since 1980, today's teachers have more years of education than teachers of previous decades. Table 3 illustrates the number of educators who received their degrees by decade.

Table 3

*Degrees held/year received*

Decade	Bachelor's Degree	Master's Degree
1960s	24	5
1970s	68	14
1980s	49	37
1990s	52	48

The 1990s narrowly outnumbered the 1980s in the number of bachelor's degrees given, but clearly surpassed the 1980s in the number of graduate degrees awarded. This could be explained by new state teaching certification requirements, initiated during the 1980s, mandating an advanced degree in order to obtain a *lifetime* teaching certificate. Many of the large numbers of teachers who received their degrees during the 1970s will retire soon or have already retired.

### 8. Why did you become a teacher?

When asked why they decided on a career in music education, the predominant answer was sheer love and enjoy-

ment of music (116). Sharing with and enjoying kids was the second most common response, and the influence of a teacher—whether junior or senior high school or private—was third. Having talent and performing ranked fourth. Other responses included seeing bad teachers, not being a performer, receiving scholarships, and having encouraging family members.

#### **9. Would you choose this career again?**

Would music educators choose teaching as their career again? An overwhelming majority (225) said “yes,” but 36 said no. Of these 36, 11 had 0-10 years of teaching experience, 11 had 11-20 years of teaching experience, and 14 had 21-32 years of teaching experience. Eight teachers wrote “not sure” and two responded with “maybe” to this same question. Ten subjects gave no answer to this question.

#### **10. How would you encourage others to enter the teaching profession?**

How would practicing music educators encourage others to enter the music teaching profession? Many different answers were given for this question, such as focusing on the rewards of teaching by seeing the enjoyment and enthusiasm in children’s faces as music touches their lives. Creating a positive classroom environment and serving as a role model for students were also suggested. Sharing ideas, being active in professional organizations, and observing teachers were additional thoughts expressed in the survey. Future teachers must have the desire and passion to teach. Serving as a cooperating teacher to student teachers or being a mentor to high-school students, student teachers, and beginning teachers may also provide an opportunity to encourage someone to enter the teaching profession. Some subjects responded that their students were not old enough to make this decision yet. Twenty-three teachers wrote that they would not encourage anyone to enter the teaching profession.

**11. What factors do you believe keep your students from entering the teaching profession?**

The number one factor listed for keeping public-school students from becoming teachers was salary. One hundred ninety-three Missouri teachers identified this as being a hindrance to future educators. Long hours and little respect were also named as factors by subjects, as were too many certification requirements for the degree, heavy workloads, and insufficient support. Other factors listed were discipline, paperwork, assessment, violence, stress, poor student behavior, students with disabilities, and poor piano skills.

**12. Which of the following items most appeals to you about the teaching profession?**

The most appealing component about teaching for these respondents was their love of music (263 responses), and second was enjoyment of students (these answers correspond exactly with the number one and number two answers to the question about why they became teachers). Vacation time ranked third (some subjects wrote that they used this time to refresh and energize themselves through summer classes and workshops). Other replies were performance opportunities, benefits, and salary, in decreasing order of popularity.

**13. What other tasks, in addition to your classroom instruction, are included in your present position?**

Committee work was by far the most frequent additional task that music teachers were asked to perform. Teachers were asked to serve on all types of committees, with Missouri Assessment Program (MAP), Missouri State Improvement Plan (MSIP), professional development, and curriculum committees being the most popular. The second most common extra duty was hall supervision, followed by athletic bands/ensembles, lunch duty, bus duty, study hall, and administrative work.



**14. Have you ever considered leaving teaching for another career?**

When asked if they had ever considered leaving the teaching profession for another career, the responses were close in number. One hundred fifty-six teachers checked "no," but 119 checked "yes." Six subjects gave no answer to this question.

**15. What would cause you to leave the teaching profession?**

What circumstances would cause these Missouri teachers to leave teaching? Salary was again the top choice-the opportunity to make more money. Burnout and stress were the second factors listed, and their health-as well as the health of their families-was listed third. Decreasing support and retirement were the next two factors given. Additional answers included scheduling (switching to a block or year-round system), extra duties and hours, and politics.

**16. What would make teaching more rewarding to you?**

Eighty-nine teachers stated that an increase in salary would make teaching more rewarding to them. Increased support (administrative and budget) ranked second with 28 responses, and increased respect, appreciation, and recognition were ranked third with 25 responses. Further replies included more preparation time, scheduling (allowing more than one elective), less paperwork, students who were motivated and interested in learning, more-disciplined students, additional staff, and having music be equal to athletics in the administration's eyes.

**17. What energizes your teaching?**

What energizes these music teachers? Two hundred forty-five teachers said that the "kids themselves" are what invigorate their daily tasks. Two hundred forty-two subjects wrote

that conferences and conventions stimulated their teaching. The music that is performed was noted by 229 teachers. Table 4 illustrates the answers given to this question.

Table 4

*What Energizes Your Teaching? (Check all that apply)*

Responses	Number of Responses
1. Kids themselves	245
2. Conferences/conventions	242
3. Music performed	229
4. Other teachers	164
5. Workshops	144
6. Parents	65
7. Graduate coursework	52
8. Books	44
9. In-service workshops	44
10. Journals	32

Mentoring, summer work, performing, seeing kids succeed, and hearing from former students were also mentioned.

### Discussion

"Music education in Missouri is strong today because of the dedicated music educators who face the day-to-day demands of the classroom" (Hook, 2000, p. 1). Missouri is facing a music-teacher shortage (Missouri Department of Elementary and Secondary Education, 2001), and we must meet the numerous problems and challenges outlined by these practicing music educators. There must be changes in the employment of public-school teachers, changes in the manner in which public-school teachers are managed by school administrators, and changes in the recruitment and training of pre-service teachers by Colleges of Education (Dworkin, 1987). In the area of employment, Missouri music educators would like to see less paperwork, fewer committees, and financial incentives such as tuition reimbursement and student-loan

repayment. Better management might include more mentor teachers, release time for additional training, and fewer extra-curricular activities to sponsor. Training practices to investigate include the number of hours for certification (which could easily fill 5 years of college), necessary piano skills, more field experiences, and working with students with disabilities.

Subjects cited excessive workload as a cause for wanting to leave the profession and for discouraging their students from entering the teaching profession. Thousands of teachers are drained and exhausted at the end of the day, and many are driven from the classroom because they are overworked (Stinnett, 1970). One teacher surveyed wrote that he/she is tired of hearing "other nonmusic teachers squabbling about how easy my job is" (#230). Another stated, "I'm tired. Sometimes I feel under appreciated. I get tired of doing janitorial duties — lifting, hauling, and packing. It is just frustrating" (#249). Heavy class loads, extra duties, too much paperwork, little respect, and scheduling conflicts were all major issues that antagonize Missouri teachers. Administrators should note these problems and attempt to solve them; teachers would then be able to concentrate on their main objective: teaching.

In order to help teachers with their workloads, administrators might explore a teen-teaching program for their schools. This program allows high-school students who are interested in becoming teachers to assist practicing teachers for one to two periods per day. Typical activities for a teen teacher are record keeping, individual student instruction, sectional work, test grading, and teaching mini-lessons with the approval and supervision of the practicing teacher (Kimball, 2000). This program can also serve as encouragement to enter teaching as a career.

New music teachers are especially visible to students, parents, and the community because of their numerous public performances. Providing trained mentors for new teachers is one way to support and retain quality music teachers in Missouri. New teachers receive the same type of training and support that medical students receive as new doctors (Basinger, 2000c). Missouri already requires each first-year

teacher to have a mentor teacher. Iowa has initiated such a project (Bekkerus, 2000), as has the University of California at Santa Cruz.

Funding for music programs is another area where school administrations can be of assistance. Seventy percent of public-school music budgets come from outside fundraisers, compared with less than 50 percent in 1977 (Boehlert, 1997). Books, equipment, and other supplies are essential if students are to learn and if teachers are to be held accountable. Sheryl Davenport, president of the St. Louis Public Schools Teacher's Union, Local 420, maintains that "accountability is a two-way street. Give me the kind of support I need to get my job done" (Pierce, 1999, p. A12).

The main complaint today is, as it was in the past, salary. The promise of better pay is always just that, a promise. Sandra Feldman, President of the American Federation of Teachers (AFT), states that, "We lose almost 50% of teachers in the first five years. Money is a key reason" (as stated in Kantrowitz & Wingert, 2000, p. 40). Teachers are educated, skilled professionals, but rarely earn a salary equivalent to other professionals for the work performed and preparation required (Greenberg, 1984, p. 27). They also are not compensated for overtime work (number of hours grading papers at home, extra duties, additional training) as other professions are. No matter how hard people in other professions work, except perhaps for nurses, teaching is harder" (as stated in Bower, 2000, p. A5). Paying teachers more might help retain them in the profession.

Recruiting talented music students into the teaching profession is a duty practicing teachers and universities should share. Teen teachers can help not only with administrative duties, but also with recruiting efforts. Tri-M, a national music honor society that recognizes middle-/high-school music students' musical achievements, might also serve as an incentive. Providing opportunities for public-school students to conduct, lead rehearsals, teach private lessons, or learn a new instrument can give the inspiration they need to follow music as a career. Paul Watson, junior-high-/middle-school vice-

president of the Utah Music Educators Association says, "We too often lose sight of one of our primary obligations: the discovery and nurture of our eventual successors" (2000, p. 8).

Teacher-training programs have undergone numerous reforms as a response to heavy criticism for producing poorly trained teachers. Such reforms have included more courses in arts and sciences, longer internships, established and revised tests, and an insistence that new teacher-education professors have elementary or secondary teaching experience (Hipple, 1999). Teacher-preparation programs also administer tests for admission into and out of the degree program. The American Federation of Teachers has criticized the idea of a national standardized test for prospective teachers, saying that these state tests are inadequate. Does a test measure all the characteristics necessary to be a successful teacher, including communication skills, common sense, teaching techniques, and knowledge of subject matter? (see Associated Press, 2000). Test supporters may claim that it upholds specific teacher-education standards by process of elimination. Nonsupporters of testing may maintain that the strongest teachers may not always obtain the highest exam score. Do we dare impose more testing during a time of teacher shortages?

Hinckley (2000) offers the following suggestions for the future of teacher-education programs:

- Make student teaching more relevant to the current and future teaching environments
- Actively recruit talented minority teachers to music education
- Purposefully prepare teachers for diverse student needs
- Model the inclusion of technology throughout teacher-preparation programs
- Maximize traditional teacher-preparation course offerings to prepare future teachers to understand the less familiar styles in world and popular music genres (p. 1).

Hinckley's suggestions correspond to a report prepared by the Education Department's National Center for Education

Statistics, which stated that only one in five teachers surveyed felt prepared to work in a modern classroom. Only about 20 percent said they were confident in using technology or in working with students with disabilities, with limited English proficiency, or with diverse backgrounds (Lewis, Parsad, Carey, Bartfai, Farris, & Smerdon, 1999).

Teacher-preparation programs in music education should also strive to generate more scholarships, more classroom observations, more practical preservice experiences, and support throughout student teaching (Bennett, 2000). The current survey corroborates the need for the latter, to include not only the administration's support, but also support through the mentoring program. Without some type of assistance during the first few years of teaching, new educators find themselves lost in their busy daily routines. "Teaching is the only job where people who are just beginning are expected to do the same thing as people who have been doing this for 25 years," said Bob Chase, president of the National Education Association (as stated in Kantrowitz & Wingert, 2000, p. 40). Teachers are often rewarded for their professional efforts and advanced degrees with higher salaries and graduate course work opportunities, which were two benefits mentioned by the respondents of the current survey.

Other ways of meeting teacher shortages are beginning to develop. One method of providing teacher training is through alternative certification; that is, bringing people without education degrees into the classroom. About 250 United States institutions offer alternative teacher certification (Basinger, 2000a). This survey's respondents noted intense certification requirements as a factor that prohibits teachers from entering the field (but at the same time that universities are enforcing stricter teacher certification requirements, they are opening doors for alternative certification).

The St. Louis public school system dealt with the problem of teacher shortages by rehiring retired teachers to fill vacancies for the 1999-2000 school year (Pierce, 1999). The New York City public school system has another idea for dealing with the problem: offer on-line teacher training (Carr, 2000).

Educators everywhere should consider what this says about the respect for their profession, a concern Missouri teachers expressed in the current study.

Will on-line training provide the same experiences as observing a teacher in an actual classroom? How will interactive and communication skills be developed on-line? Rehiring retired teachers is an indicator that there are a deficient number of new teachers entering the profession. Both on-line training and hiring retired teachers raise the question, "Do these teachers have the appropriate training to face students in today's schools?" The results of this survey indicate that teachers believe in the work they are doing, but they want changes — more support from administration, more support financially, more respect for their subject matter, more time to teach, less paperwork, fewer extra duties, and better pay.

The fact that over one-third of the respondents have considered leaving teaching is evidence that a change is needed. Teachers who leave the profession within the first 5 years discover that they can teach but they cannot support themselves or their families, says AFT president Sandra Feldman (Kantowitz & Wingert, 2000). Graduate work will raise salaries, but even so, salaries will still trail those of different professions. Teachers age 44 to 50 with a master's degree earned about \$43,313 in 1998, compared to the \$75,800 average salary of employees with master's degrees in other areas (Basinger, 2000b). Missouri music educators ranked graduate course work seventh of eleven factors that energized their teaching, which suggests that changes need to be made in graduate course offerings and/or delivery.

Teachers, including music teachers, are the heart of schools and one of the most important ingredients in a student's success. They lead children to do their best, and through practice and persistence, children can achieve great things (Riley, 1999). Music educators often become frustrated because they feel that they do not make a difference, yet they "are the ones to whom many students reach out to for help instead of the school guidance counselor or psychologist," states former Music Educators National Conference (MENC)

president Will Schmid. "They provide a center of life in this school — a place of nourishment for the soul, a safe haven from the streets, a gathering place for friends, and a space where emotions don't have to be hidden away" (1995, p. 4). They are making a difference in much the same way that their teachers made an impact on them. This impact was probably the catalyst in helping them choose a career in music education (Bergee, Coffman, Demorest, Humphreys, & Thornton, 2001).

There are many obstacles to overcome before the teacher shortage is solved. Will low salaries and early retirements contribute to the shortage? Will teacher shortages result in lower standards for certification? A poor teacher can quickly teach kids to hate music, and poorly trained teachers are probably more likely to become frustrated and leave the classroom. "We must be more concerned with who is the music teacher in the smallest town than who is the conductor of the National Symphony, for a poor conductor will fail, but a poor teacher can kill the love of music from 30 classes of students for 30 years," warned prominent music educator Zoltan Kodaly (Gallo, 1998). Successful educators do not allow obstacles to stop them; rather, they see them as opportunities for growth. Successful educators have shown that they are committed to reaching their goals and invest whatever is necessary in order to achieve those goals.

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## **A Comparison of Aesthetic Response to Audio with Video and Audio Alone**

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*The purpose of this study was to examine the relationship and strength of aesthetic response to a music soundtrack when heard alone as compared to the response to the same music soundtrack heard while viewing the corresponding video images. The video alone condition was not included and the film soundtrack was carefully selected to comprise music written specifically to accompany the film. The intent was to isolate the aural and aural/visual conditions to determine if there is a greater aesthetic response to the aural component when the visual is paired with it. In addition, the aesthetic response of music majors and nonmusic majors was compared. Results indicate no significant difference between major, or stimulus in mean aesthetic response.*

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### **Introduction**

Aesthetic responsiveness is not limited to a single art form. On the contrary, it is human aesthetic response that draws people to art in its varied forms. Artistic endeavor requires an aesthetic responsiveness from both the artist/performer and the audience. Without aesthetic responsiveness, any art form falls short of its potential. In addition, it has been suggested that there may be a heightened reaction when experiencing multiple stimuli simultaneously. (Gardner, 1993) Therefore combining two or more kinds of artistic endeavor into a single presentation may not only enhance the presentation but may also call forth a stronger aesthetic response. The purpose of this study is to examine the relationship and strength of aes-

thetic response to a music soundtrack when heard alone as compared to the response to the same music soundtrack heard while viewing the corresponding video images.

### Review of Literature

The discussion of aesthetics with regard to music and music education came to the forefront in 1970 with the publication of *A Philosophy of Music Education* by Bennett Reimer. This ground-breaking work prompted musicians, especially those involved in music education, to consider what it is that makes music valuable and unique. In the opening paragraph Reimer states that "the nature and value of music education are determined by the nature and value of the art of music" (1970, p. 1). Since the field of aesthetics deals with the nature and value of the arts, Reimer determined that aesthetic education in music was both possible and appropriate (1970, pp. 1-2). His advocacy of the concept of aesthetic education proved important yet somewhat controversial. In the second edition, Reimer discusses the problems he has encountered with the terms aesthetic education and aesthetic noting that "while many are quite comfortable with the terminology, others find it confusing or even threatening" (Reimer, 1989, p. xii).

As a philosopher who has had a profound impact on the area of aesthetics, Langer espouses a broad view of the term aesthetic and is interested in meaning or symbolic nature rather than beauty. In *Philosophy in a New Key* she states:

All thinking begins with *seeing*, not necessarily through the eye, but with some basic formulations of sense perception, in the peculiar idiom of sight, hearing, or touch, normally of all the senses together. For all thinking is conceptual, and conception begins with the comprehension of *Gestalt*. (1993, p. 266)

It can be said then that the comprehension of *Gestalt* forms the basis for responsiveness. Therefore it follows that viewing a work of art as a whole with a variety of parts is a necessary

first step. This could refer to a work of art representing a singular artistic endeavor such as visual art, theatre, dance, or music, or it could refer to a collaborative work where two or more of these areas are represented. In either case, there are component structures that comprise the work.

It has often been demonstrated that collaborative works such as theatrical productions and ballet have component parts that can stand alone, usually the musical component. Classic examples include *Appalachian Spring* by Copland and *West Side Story* by Bernstein. In modern popular culture it is nearly standard practice to distribute movie soundtracks on tape and CD prior to the release of the film itself. In spite of the fact that a large percentage of recent soundtracks are merely compilations of music by popular artists, there are still some soundtracks that demonstrate skillful writing that is closely related to the action of the film and which can and do stand alone.

Haack (1970) found that the visual arts can be used to effectively enhance the development of musical concepts. In a week-long, junior high school music clinic, he paired visual art examples with musical examples from the same period for one music appreciation group while using only listening, and discussion with another group. The group experiencing the visual examples with the listening were significantly better at identifying broad musical concepts on a posttest.

Knieter (1970) states that "programs of music education conceived as aesthetic education stress the sensitive, intelligent, and creative development of musicality through the fundamental avenues of expression: creativity, performance, and response" (p. 19). In addition, he discussed the growing interest in "interdisciplinary arts" programs, also known as "allied arts" or "related arts" programs. "This approach to aesthetic valuing permits students and teachers to deal with all styles and encourages the cultivation of independent artistic judgment" (p. 17).

Interdisciplinary arts programs grew out of two pieces of legislation — the International Education Act of 1966 (Pub. L. No. 89-698) and the Education Professions Development Act

of 1967 (Pub. L. No. 90-35). As an outgrowth of these two laws, the Interdisciplinary Model Programs in the Arts for Children and Teachers (IMPACT) was established in 1970 to increase awareness of the arts and help people incorporate the arts into their daily lives (Mark, 1986). Among others, Karel (1966a) applied the concept to the university level arts appreciation class developing his own text (1966b) and Croft (1971) applied the concept in the high school band setting. Ruccius did a study in 1994 to determine the current status of interdisciplinary arts programs in the state of New Jersey and found 11 courses offered in secondary schools throughout the state. She went on to discuss successes and concerns, making it clear in her recommendations that the interdisciplinary arts courses should be viewed as important supplements to, but not as replacements for, a rich and varied fine arts curriculum. Here again, the combining of art forms is believed to strengthen them individually and provide for a stronger and/or deeper reaction to the final product.

It is widely known that Howard Gardner (1993) views music as one of seven intelligences. He notes, "the core operations of music do not bear intimate connections to the core operations in other areas; and therefore, music deserves to be considered as an autonomous intellectual realm" (p. 126). With this as a base, he suggests that "as an aesthetic form, music lends itself especially well to playful exploration with other modes of intelligence and symbolization" (p. 126). Considering that another of his intelligences is "visual/spatial" and acknowledging that modern society is highly visual in nature, a case could be made both for merging and separating musical and visual stimuli. If music is an intelligence as Gardner suggests, then it must be explored and developed separate from the other intelligences. However, this would not preclude examining its relationship to and ability to interact with other intelligences including the visual/spatial intelligence.

A variety of studies have examined music paired with another stimuli. Sheldon (1994) used the Continuous Response Digital Interface (CRDI) to measure the effect of paired visual

and aural stimuli on detection of tempo modulation and found that nonmusicians benefit from receiving bimodal sensory information, particularly aural and visual cues. Johnson (1991) used the CRDI to measure band performance ratings across time. His findings showed higher mean scores when the subjects received combined aural/visual stimuli than when they received aural stimuli alone.

In an exploratory study of the visual and aural aspects of listening to music by Madsen, Legette, and Duke (1993) participants watched/listened to three music videos. Results indicated that music majors and nonmusic majors responded similarly when exposed to the same stimuli and conditions and that each excerpt was rated differently depending upon condition.

Byrnes (1996) examined stress response to audio, video, and audio-video conditions. She found no significant difference between the beginning and ending stress responses with the audio or video conditions alone but a significant difference between the beginning and ending stress responses with the audio-video condition. Using the same conditions to measure emotional response to music, Adams (1994) compared responses from musicians and nonmusicians to visual, aural, and visual combined with aural stimuli using the CRDI as had been done in previous aesthetic response studies. The stimulus was a video of a concert of classical music filmed in a cathedral. Results indicated a significant difference between musicians and nonmusicians for the visual only task with musicians demonstrating an ability to focus longer on the task, but no other differences were found for musicians and nonmusicians.

Frego (1999) studied emotional response to music and dance from musicians and nonmusicians with the same conditions (aural, visual, and combined aural/visual stimuli) using the CRDI. Results indicated no significant differences between musicians and nonmusicians, however there was a significant difference in subject response to each of the three stimuli.

The purpose of this study was to examine the relationship

and strength of aesthetic response to a music soundtrack when heard alone (audio only) as compared to the response to the same music soundtrack heard while viewing the corresponding video images (audio with video). The video alone condition was not included for this study and the film soundtrack was carefully selected to comprise music written specifically to accompany the film. The intent was to isolate the aural and aural/visual conditions to determine if there is a greater aesthetic response to the aural component when the visual is paired with it. In addition, the aesthetic response of music majors and nonmusic majors was compared.

### Method

Participants ( $N = 61$ ) for this study were undergraduate and graduate students enrolled at a comprehensive university. Thirty-one of the participants were music majors and 30 of the participants were nonmusic majors. There was no attempt to involve an equal number of male and female nor graduate and undergraduate students in this study.

Half of the participants viewed, listened, and responded to the video segment with its corresponding audio and the other half of the participants listened and responded to the audio soundtrack alone. The stimulus was the flight scene from the film *E. T. The Extra Terrestrial*. The participants who viewed the segment with corresponding audio saw the specified segment dubbed from a videodisk onto the beginning of a VHS videotape. The audio portion of the videotape was transferred to mini-disc for the audio alone participants to hear. This allowed for easy location and accurate time coordination with the CRDI software and reduced the possibility of wear on the videotape, which could result in poor stimulus reproduction.

The stimulus was chosen because of the popularity the film has enjoyed and, more importantly, because of the rather extended portion with almost no dialogue. Popularity is important in this case primarily because it indicates that most potential participants will be familiar with the stimulus, but also because it indicates acceptance of the work by consumers of



this genre which can be an indication of quality. Similar criteria were used in choosing a segment of Puccini's *La Bohème* as stimulus for the first study done using the CRDI (Madsen, Brittin, & Capperella-Sheldon, 1993). In addition, composer John Williams is well known for his film music and has been recognized for his work. This coupled with the success, both financial and critical, of film-maker Stephen Spielberg attests to the quality of the stimulus. It was deemed important to find a film segment that was primarily music and video so that there could be some comparison to previous studies, especially Adams (1994) and Frego (1999).

Data were collected in two ways — via questionnaire and via the Continuous Response Digital Interface (CRDI). The purpose of the questionnaire was to determine familiarity with the music as well as reaction to and attitude toward the stimuli. The CRDI is a potentiometer (in dial format) whose readings are recorded by a computer as a string of numbers that can then be graphed and statistically analyzed. The CRDI was specifically designed to record ongoing responses to music without necessitating a verbal response during the listening process.

Participants were asked to manipulate the CRDI dial corresponding to their aesthetic response to the stimuli either audio with video or audio alone. Movement of the dial corresponded to each participant's personal definition or understanding of the term "aesthetic." The researcher read the following instructions to all participants after they were seated at a CRDI station and had read the consent document:

#### **Instructions (for Audio with Video)**

You are going to see and hear a segment from a popular film. As you listen, please move the dial in front of you corresponding to your aesthetic response to the music. Feel free to move the dial as much or as little as you like, utilizing as much or as little of the 256 degree range as you feel is appropriate. Following the segment, there will be a brief time period for you to answer several questions on the questionnaire at your station. Do not put your name on the questionnaire. The

entire process should take not more than 20 minutes. Are there any questions?

Please try manipulating your dial and then return the pointer to the far left. (pause) Now, please put on your headphones and we will begin.

#### **Instructions (for Audio Alone)**

You are going to hear a segment from the soundtrack of a popular film. As you listen, please move the dial in front of you corresponding to your aesthetic response to the music. Feel free to move the dial as much or as little as you like, utilizing as much or as little of the 256 degree range as you feel is appropriate. Following the segment, there will be a brief time period for you to answer several questions on the questionnaire at your station. Do not put your name on the questionnaire. The entire process should take not more than 20 minutes. Are there any questions?

Please try manipulating your dial and then return the pointer to the far left. (pause) Now, please put on your headphones and we will begin.

Previous studies indicated that the standard "face" of the CRDI dial with both positive and negative segments would be inappropriate for this study because the negative side of the dial was employed sparingly, if at all. Therefore, an overlay designed to give the visual appearance of a rounded Osgood scale with the word "less" at the far-left anchor and the word "more" at the far-right anchor was used.

A small studio with four CRDI stations, two on either side of a computer station, served as a laboratory for this project. Each station was visually separated from the next by partitions and included a CRDI dial, a set of headphones, a pencil, and a questionnaire that provided instructions and space for written responses. Each participant was able to see a television monitor, but all audio output was fed through headphones to help isolate participants. The computer was programmed to collect two samples per second during each example.

Upon entering the room, participants were seated and read the instructions. When all indicated that they were comfortable with the procedure, the stimulus and the CRDI software were activated. There was no interaction with or among the

participants during the running of the stimulus. At the end of the stimulus, participants completed the questionnaire at their station.

### Results

The purpose of this study was to examine aesthetic response to audio with video and to audio alone. In addition, there was an attempt to determine if there was a difference in response between musicians (students majoring in music) and nonmusicians (students not majoring in music).

Based on the subjects' mean dial positions expressed on a continuum from 0 to 255, an analysis of variance (ANOVA) revealed no significant difference between major or stimulus in mean aesthetic response ( $F = .19$ ,  $df = 3,57$ ,  $p = .90$ ). Group means and related data are presented in Table 1. Although not statistically significant, the group mean for nonmusicians responding to audio alone is 8 - 11 points lower than the other group means and has a considerably lower minimum value indicating that, as a group, these participants used a wider range of the dial.

Table 1

*Group Means for Participants by Condition*

Condition	Group	<i>N</i>	<i>M</i>	<i>SD</i>	Minimum	Maximum
Audio	Music	15	144.52	43.62	71.42	211.14
	Nonmusic	15	134.90	51.79	30.24	200.84
Video	Music	16	142.82	29.25	75.51	187.95
	Nonmusic	15	146.00	46.93	81.78	222.85

A Pearson correlation was calculated to compare test/retest of 20% of the participants, yielding a high degree of reliability ( $r = .95$ ,  $p < .05$ ).

Only two of the participants could not identify the film from which the stimuli were taken. Both of these participants

were music majors, but each of them experienced a different condition. Two other participants indicated that they did not have what they considered an aesthetic experience and three others indicated that their movement of the dial did not roughly correspond to their experience. Therefore almost all of the participants had what they considered an aesthetic experience and felt that their movement of the dial roughly corresponded to their experience.

Graphic analysis of the data included an examination of individual graphs as well as composite mean timelines (Figures 1 and 2). There was a noticeable trend toward agreement among individual graphs, but each graph was unique. The composite mean timelines contain peaks and valleys that roughly correspond to form, texture, or dynamic changes in the music.

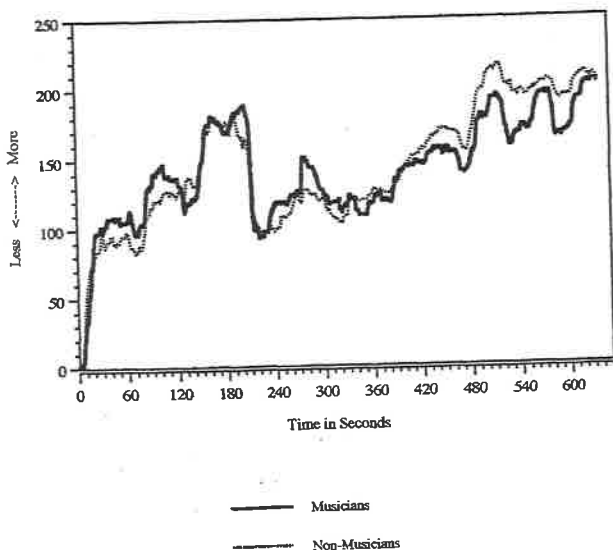


FIGURE 1.  
Audio with video.

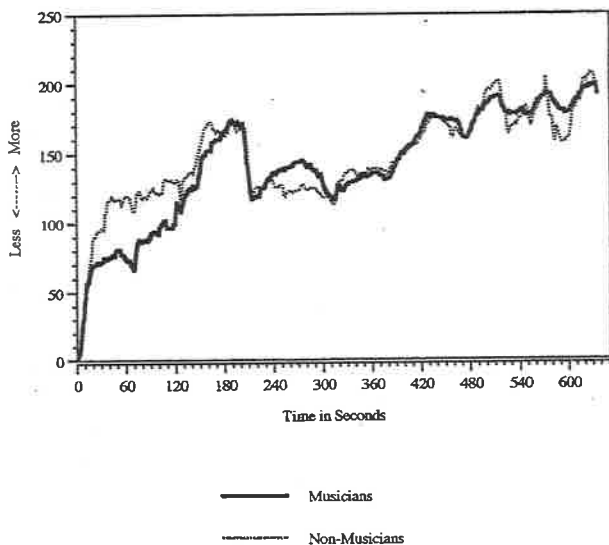


FIGURE 2.  
Audio alone.

### Discussion

The purpose of this study was to examine aesthetic response to audio with video and to audio alone. In addition, there was an attempt to determine if there was a difference in response between musicians (students majoring in music) and nonmusicians (students not majoring in music). Results indicate no significant difference between major or stimulus in mean aesthetic response. These results are consistent with the findings of Madsen, Legette, and Duke (1993), Adams (1994), and Frego (1999). Therefore, it would seem that adding a visual component to a listening task does not significantly increase the magnitude of the experience.

One might consider it more likely that a musician would be able to focus on and respond to the listening task as a result of experience and musical knowledge. However, this does not appear to be the case. Musicians do appear to have a tendency to attend to and recall specific aspects of the experience more than nonmusicians. For example, several of the musicians who experienced the audio only condition commented as they left the room that they had heard something that they had not heard before. While they recognized the music, they may not have noticed which instruments had the melody or how a countermelody interacted with the melody prior to this experience. One of the students who was a French Horn major noted that she was going to go to the store and buy the CD because she never realized how great the horn part was. By contrast, the nonmusic majors made very few comments. Several indicated that they really liked the movie and had not seen it in a while. A few asked about the project and its purpose. One even asked for a copy of the abstract upon completion.

The choice of stimulus did not seem to have a negative effect on the study. Five of the participants (2 music, 3 nonmusic) indicated that they did not like the movie, but all five indicated that they had what they would consider an aesthetic experience while they listened to the excerpt. These music majors may have had a more positive response to the stimulus because they were experiencing the audio only condition and possibly hearing the music in a new way. In addition, it is possible that the nonmusic majors who experienced the audio with video condition may have had a more positive response to the stimulus because of the video aspect — the chase scene followed by the flight scene culminating in E.T.'s departure. It could be viewed as a story within a story and since it is the climax of the movie's plot line there is a reasonable amount of action on which to focus. None of the participants appeared to have a negative reaction to their experience as noted by facial expression and written and verbal comments.

While these findings may suggest that aesthetic responsiveness is not limited to "art music," it is important to note that the primary timbre was orchestral and the harmonic vo-

cabulary was rather traditional. The genre is more popular by nature, but the soundtrack is not. This was not a film that depended on popular hit singles to help it attain its box office receipts. However, because of the broad popularity of the film and the readily recognizable theme, the soundtrack could serve as a crossover piece to help young students begin attending to orchestral timbres and even music fundamentals such as melody, harmony, and form.

In general, the educational value of this line of research is found in the fact that, once again, musicians and nonmusicians are similar in their aesthetic responsiveness to music. Knowing this, the music educator can plan lessons and/or concerts focused on literature rather than on the background of the students or the audience. This does not preclude the need for lessons covering musical elements, form, history, and so on, for students nor the usefulness of program notes for audiences, but rather indicates that we all begin at a similar point — our basic aesthetic responsiveness. Often, determining where to begin is the most difficult part of the teaching task. Knowing the background of students or audiences can and should help determine the overall processes of educating and programming. It is inappropriate to attempt to ignore the familiar and plunge into the unfamiliar when transfer makes the process easier. Therefore, it would seem that any music that moves people to an aesthetic response can and should be a part of an educational process.

Since one seldom finds long segments of film with little or no dialogue, it would require an ability to acquire segments of films with dialogue and action separate from the soundtrack to continue the line of this study. Further research in this area could focus on aesthetic response to music videos, following the line that Madsen, Legette, and Duke (1993) and Adams (1994) began. This work could be expanded to study a broader variety of genres. In either case, with music and video so tightly interwoven in our culture, it seems prudent to continue this line of research.

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## **Vocal Educators and Vocal Attrition**

**Kimberly A. W. Askren, MME**  
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**December 2001**

**Committee Chairperson: William E. Fredrickson**

### **Thesis Abstract**

The purpose of this study was to examine vocal teachers' perceptions of their vocal health, perceived causes of vocal attrition, and whether professional performance was affected. Sixty-three secondary vocal music teachers in Kansas City, Missouri were surveyed. Results were examined to gain understanding of vocal educators' perceived experiences with vocal attrition, and to evaluate for any statistical difference between responses for male teachers and female teachers.

Twenty-one percent of respondents stated they experienced vocal attrition once per month or more and forty-four percent had received treatment from a medical professional for vocal attrition. Eighty-seven percent stated they were strongly interested in utilizing vocal health education and eighty percent felt more education regarding maintaining vocal health while teaching was needed. There was no significant difference between the responses of male educators versus female educators other than presence of vocal attrition from speaking over background noise.

## **The Effect of Movement on Performance of Rhythmic and Melodic Patterns by Kindergarten Students**

**Colissa Freeman, MME**  
**Southeast Missouri State University**  
**May, 2002**  
**Committee Chairperson: Carol McDowell**

### **Thesis Abstract**

The purpose of this study was to determine if movement helped kindergarten students accurately perform and identify learned rhythmic and melodic patterns in music class repertoire. A pretest was given to determine student's understanding of the instructions. One hundred thirty-eight kindergarten students were divided into 2 groups, control group ( $n = 62$ ) and experimental group ( $n = 76$ ). The control group was taught 5 children's songs by rote, while the experimental group learned them through the use of rhythmic and melodic movement techniques. After 4 weeks of instruction, students were assessed on their ability to chant and play rhythm patterns and to sing and identify melodic patterns.

A chi-square test showed that the experimental group performed better in all areas of the assessment over the control group, indicating that there was a significant difference between the two groups.

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

**Emily Megan Freeman, MME**  
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**November 2001**  
**Committee Chairperson: William E. Fredrickson**

### **Thesis Abstract**

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.

## **The Effects of Information and Discussion Presentation Techniques on High School Students' Initial Preference for Recorded Choral Excerpts**

**Christopher M. Harris, MME**  
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**May 2002**  
**Committee Chairperson: Charles R. Robinson**

### **Thesis Abstract**

The purpose of this study was to examine possible effects of presentation condition on preference for selected music examples. High school students ( $N = 355$ ) participated in a pretest/treatment/posttest experimental model with control groups assigning preference ratings to four recorded choral excerpts. Treatment groups consisted of discussion (questions designed to elicit higher-order thinking), information (historical information about the piece and composer), and information plus discussion (a combination of the previous treatments).

Results indicated an increase in student preference for all four excerpts in all four groups. Further analyses showed that the treatment groups' posttest preference ratings showed greater increases than control group ratings for Renaissance, Baroque, and Romantic excerpts. Previous exposure of the control group to avant-garde music may have led to the control group's increased preference ratings for the avant-garde excerpt. Subjects from the information plus discussion group generated a substantially higher frequency of comments than all other groups.

## **The Effect of Length of Listening Example on Preference Ratings of Sixth-Grade General Music Students**

**Aaron Dean Kirchhoff, MME**

**University of Missouri-Kansas City,**

**May 2002**

**Committee Chairperson: William E. Fredrickson**

### **Thesis Abstract**

The purpose of this study was to determine if the length of a listening example used in the music classroom affects a student's attitude or preference towards that example. Sixth grade general music students ( $N = 222$ ) were divided into 3 groups which listened to excerpts from Bizet's *Symphony in C Major*, movement IV, Tchaikovsky *Symphony No. 4 in F minor*, movement IV, and Mendelssohn's *Symphony No. 4 in A Major*, movement IV. All groups heard the examples in the same order but the lengths of each selection varied. Students indicated preference ratings on a student response form at 3 different intervals during the listening procedure.

Results indicated no significant difference in student preference ratings between students listening to each length of example. Results also showed no significant difference in student preference ratings from beginning to the end of the listening example.

## **A Study in Developing Students' Criteria to Analyze and Evaluate Music**

**Kevin Howard Maret, MME  
University of Missouri-Kansas City  
May 2002  
Committee Chairperson: Randall G. Pembrook**

### **Thesis Abstract**

The purpose of this study was to predict the feasibility of instruction on music vocabulary and listening, and evaluate effectiveness of two, 30-minute lessons on developing students' abilities to analyze and describe music using terms and descriptors as outlined by the Music Educators National Conference.

Subjects of this study, fourth, eighth, and eleventh/twelfth-grade students, were from a suburban Kansas City School District. Students described music and rated their preference on the pretest. One month later they repeated the procedure for the posttest.

Responses were divided into academic, academic correct, and social categories. Students improved their total number of academic responses, the ratio of academic to social responses, and the number and percentage of correct academic responses. Preference was highest for world music with no statistically significant difference in pretest to posttest preference ratings. The results indicate that it is possible to increase performance regarding standards 6 and 7.

## **Individual Sight-Singing Success: Effects of Testing Condition, Large Ensemble Sight-Singing Rating, School Size, and Selected Background Factors**

**D. Brett Nolker, PhD**

**University of Missouri - Columbia**

**December 2001**

**Committee Chairperson: Wendy Sims**

### **Dissertation Abstract**

This study was designed to investigate the relationship of assessment setting to sight-singing success of the individual student in relation to (a) past ensemble sight-singing ratings, (b) school size, and (c) a group of selected background factors. An assessment strategy was used measuring pitch accuracy and rhythm accuracy, through audiotaped individual performance, both (a) in an isolated setting, and (b) in a group setting patterned after the adjudicated music festival experience.

Subjects for the study were members of eight Illinois high school choirs ( $N = 220$ ) who had participated in the sight-singing portion of IHSA large ensemble festival at least twice. The ensembles were chosen by consistency of festival sight-singing ratings (4 had received "I" ratings, 4 had not), and by school enrollment.

The results revealed significant differences between the act of sight-singing in isolation and sight-singing within the ensemble, with significantly higher mean scores for the within-ensemble setting. No statistically significant differences were found for previous festival sight-singing ratings or school size, and no interactions were found between test setting and previous rating or school size.

Musical background factors found to influence sight-singing ability were: (a) instrumental experience, both in ensembles and individually; (b) considering one's self able to play the piano; and (c) private instrumental lessons, both for piano, and other instruments. Results indicated a small negative effect for years of choral experience across testing conditions. Additionally, the within-ensemble individual testing procedure, was determined to be a reliable method for assessing the individual students while the sight-sing within the ensemble.

## **The Effect of Choral Performers' Body Movement on Performance Ratings Assigned by High School Choral Students and College Music Majors**

**Helena Maria de Vasconcellos, PhD**

**University of Missouri-Kansas City**

**May 2002**

**Committee Chairperson: Charles R. Robinson**

### **Dissertation Abstract**

The purpose of this study was to investigate the effect of body movement on high school choral students' and college music majors' evaluations of performances of a multicultural choral piece. Extant research suggested that the inclusion of movement in the classroom was effective in the process of music teaching and learning. Moreover, results from several investigations indicated that body movement and other types of visual stimuli might play an important role in communication and perception of musical phenomena to audiences. Further, there is support for the inclusion of body movement in choral performances to preserve cultural authenticity of certain folk and ethnic pieces.

Study participants were music students from the Kansas City metropolitan area (Missouri and Kansas). Subjects ( $N = 184$ ) were categorized into two groups (high school or college) according to their academic level. Each group was randomly divided into three subgroups, according to evaluation condition: aural only (Condition 1), aural/visual without movement (Condition 2), and aural/visual with movement (Condition 3). Participants rated recorded performances on rhythmic accuracy, pitch accuracy, voice quality, balance, and overall performance using a scale of 1 to 9 (9 = best). Results showed statistically significant differences in overall performance rating means as a function of group membership and evaluation condition and among rhythmic accuracy rating means as a function of evaluation condition ( $p = .01$ ). A strong positive correlation was found between each of the evaluation criteria when compared with overall performance ratings. A significant interaction group membership by evaluation condition interaction was also found ( $p < .05$ ).

Results suggest that body movement as visual stimulus might interfere either positively or negatively in the perception and evaluation of a piece of music. More research is warranted in order to clarify issues generated by possible confounding variables, such as lack of movement synchronization and singers' comfort level when performing more than one task simultaneously.



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## 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 William E. Fredrickson, Editor, Missouri Journal of Research in Music Education, University of Missouri-Kansas City, Conservatory of Music, 4949 Cherry Street, Kansas City, MO 64110-2229. 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, 5<sup>th</sup> edition). For historical or philosophical papers, Chicago (Turabian) style is also acceptable. An abstract of 150-200 words should accompany the manuscript. All figures and tables should be submitted camera ready.

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