

College Students' Attitudes Toward Music

Dimitrije Buzarovski, University of Kiril and Metodij, Macedonia
and Visiting Scholar, Arizona State University, Tempe (1992-93)

Jere T. Humphreys, Arizona State University, Tempe

Barrie Wells, Arizona State University, Tempe

The purposes of this study were to examine relationships between three listener characteristics (college major, sex, school music performance experience) and college students' (n = 300) attitudes toward nine types and styles of music. Significant differences ($p \leq .05$) were found in favor of music majors (n = 100) toward classical and contemporary classical music, and in favor of non-music majors (n = 200) toward rock music. Females expressed significantly more favorable attitudes than males toward country and spiritual music. Rap received significantly higher ratings from male music majors than from female music majors, and music major and non-music major males gave significantly higher ratings to rock than did their female counterparts. Subjects with high levels of school music ensemble experience exhibited significantly more positive attitudes toward jazz than those with less experience. In addition, females with high levels of school music performance experience expressed significantly less favorable attitudes toward rap than less experienced females, and female non-music majors expressed significantly more positive attitudes than male non-music majors toward classical, spiritual, and country music.

Introduction

In the late nineteenth and early twentieth centuries, the emerging fields of psychology and sociology added new dimensions to theoretical examinations of attitudes toward music. A psychological study of children's song preferences was published just before the turn of the century (Gates, 1898), and musical preference became a frequent topic of investigation in the 1930s (Price & Yarbrough, 1987). Broadcasting companies commissioned some of the early studies in an attempt to determine the musical preferences and behavior patterns of their listening audiences (Deihl, Schneider, & Petress, 1983). One of the best known of the early studies was Farnsworth's (1950) examination of musical taste. Since then, music education research on attitudes has burgeoned, with some 27% of studies reported in two leading journals in the 1980s employing attitude toward some aspect of music or music participation/listening as a dependent variable (Flowers & Jellison, 1990).

In recent years, researchers have drawn distinctions between attitude, opinion, and preference (Price, 1986). Attitude, the broadest concept of the three, cannot be measured directly; rather, "attitudes are inferred from opinions, behavioral intentions, and preferences" (Kuhn, Sims, & Shehan, 1981). The present study was designed under the assumption that opinions expressed by subjects represent their

attitudes toward music. Because attitude, opinion, and preference are closely related, research literature on all three concepts is reviewed below.

In his review of literature, Wapnick (1976) identified three types of variables in preference research: subject (listener), music, and situation. Similarly, LeBlanc (1980, 1982) holds that all musical preference variation can be accounted for by characteristics of the listener, the musical stimulus, and the listener's cultural environment. Despite the similarity of their models, the two authors define the listener and cultural environment categories somewhat differently. For example, Wapnick placed musical training in the situation (cultural environment) category, while LeBlanc labeled it a listener characteristic. Where the two differ, the present authors followed LeBlanc's model.

Attitude-preference studies on characteristics of listeners show that American college non-music majors and younger students prefer current popular composers (Geringer, 1982; Geringer & McManus, 1979; Jellison & Flowers, 1991; May, 1985; Pantle 1977/1978). Similarly, high school students in Macedonia claim to prefer rock over other types of music (Buzarovski, 1989).

Researchers in Europe (Schulzen, 1987) and North America (e.g., LeBlanc, Colman, McCrary, Sherrill, & Malin, 1988) have found differences in attitudes and preferences attributable to the age of the subjects. Most researchers report a decrease in favorable attitudes or preference for classical music as students age, with attendant increases in attitude or preference for popular music, at least for those with limited or no musical training (Greer, Dorow, & Hanser, 1973; Greer, Dorow, & Randall, 1974). However, some researchers report the opposite results (Baumann, 1960; Geringer & McManus, 1979), and one study showed no influence of age on musical preference (Keston & Pinto, 1955). Preference for classical music seems to increase among college-age subjects (LeBlanc, Colman, McCrary, Sherrill, & Malin, 1988).

Both Wapnick (1976) and LeBlanc (1980, 1982) believe that the listener's sex may influence musical preference, although Abeles's (1980) literature review suggests otherwise, and LeBlanc, Sims, Malin, and Sherrill (1992) found no significant differences.¹ Several attitudinal research studies support the Wapnick and LeBlanc position, however. In each of these studies, females expressed significantly more positive attitudes than males toward music (Baumann, 1960; Brittin, 1991; National Assessment of Educational Progress, 1974; Schuessler, 1948; Valentine, 1913; Wheeler, 1985). A study by LeBlanc, Sims, Malin, and

Sherrill (1992) suggests that females, especially those of college age, pay much more attention to lyrics than do males.²

Music attitudes and preferences have also been found to be related to prior instruction and experiences (Brittin, 1991; Darrow, Haack, & Kuribayashi, 1987; Price & Yarbrough, 1987; Rubin-Rabson, 1940), including high school music experiences (Birch, 1962; Erneston, 1961/1962; Frakes, 1984/1985; Humphreys, May, & Nelson, 1992; Little, 1979/1980; Long, 1971; Noble, 1977). However, there appears to be no significant difference between music majors' and non-music majors' attitudes toward popular music (Palmquist, 1990). Finally, a unique comparative study of Japanese and American students showed preference differences seemingly attributable to nationality (Darrow, Haack, & Kuribayashi, 1987), although another researcher reported preference differences between Japanese students living in Japan and those living in the United States (Nakazawa, 1988).

In studies that focus on musical stimuli, researchers have examined relationships between various aspects of music and attitudes or preferences. LeBlanc (1981) found that some variance in style preference of children was attributable to musical style (23%), style and tempo (26%), and style, tempo, and performance medium (28%). In another study, young subjects identified melody, mood, rhythm, and lyrics as the most important musical components (Boyle, Hosterman, & Ramsey, 1981).

Tempo is the aspect of music most studied by researchers to date. Several researchers have reported that subjects prefer fast tempi (Baker, 1980; Geringer, 1976; Geringer & Madsen, 1987; Huebner, 1976; LeBlanc, 1981; LeBlanc & Cote, 1983; LeBlanc & McCrary, 1983; LeBlanc, Colman, McCrary, Sherrill, & Malin, 1988; Sims, 1987; Wapnick, 1980), although one researcher found no significant difference in tempo preference (Flowers, 1988), and another found that subjects preferred unaltered to faster tempos in popular music (Geringer & Madsen, 1987). In his review of American, British, German, and Scandinavian research, Finnäs (1989) reported that tempo, rhythm, complexity, emotional content, and other musical characteristics seem to relate to preference.

Several environmental factors have been found to correlate with, and possibly influence, music attitudes and preferences. College music appreciation courses (Jumpeter, 1985; Price, 1988; Price & Swanson, 1990) and middle school keyboard experiences (Wig & Boyle, 1982) seem to have produced immediate changes. In addition, certain teaching-learning strategies and teacher characteristics have been

found to correlate with attitudes and preferences, including positive teacher reinforcement of subjects' responses to music (Dorow, 1977; Greer, Dorow, & Hanser, 1973; Greer, Dorow, Wachhaus, & White, 1973; Steele, 1967), selected teacher characteristics (Finnäs, 1989), subjects being asked to respond positively to music that they disliked initially (Zimmerman, 1978/1979), music information, repeated listening, and participatory experiences and discussion (Bartlett, 1973; Bradley, 1971, 1972; Finnäs, 1989; Getz, 1966; Hargreaves, 1984; Moskovitz, 1992; Mull, 1957; Shehan, 1985; Trammell, 1977/1978; Wapnick, 1976), the use of analytic and figurative language (O'Brien, 1992), and teaching strategies that direct attention to specific aspects of the music (Finnäs, 1989). Positive correlations have also been observed between attitude or preference and familiarity with the composer (or perhaps composer eminence) (Farnsworth, 1969; Rittelmeyer, 1971), expectation (Duerksen, 1972), familiarity with the music (Hargreaves, Messerschmidt, & Rubert, 1980; Peery & Peery, 1986; Radocy, 1982; Russell, 1986), and social influences by peers, the media, teachers, and others (Alpert, 1982; Boyle, Hosterman, & Ramsey, 1981; Buzarovski, 1989; Dorow, 1977; Finnäs, 1989; Furman & Duke, 1988; Inglefield, 1972; Killian & Kostka, 1992; Tanner, 1976; Webster & Hamilton, 1981/1982).

Conversely, some researchers have found no preference effects from teacher approvals of student choices (Sims, 1986) or teacher approval of specific pieces (Pantle, 1977/1978). Several studies and reviews show no significant relationships between attitudes or preferences and immediate instruction (Brown, 1978; Meeker, 1971; Prince, 1974; Shehan, 1984; Smith, 1982; Yarbrough & Price, 1987), prior musical training (Buzarovski, 1989; Fulbright, 1964; Humphreys, May, & Nelson, 1992; Stewart, 1961/1962), or musical knowledge (Brown, 1978; May, 1985; Pantle, 1977/1978; Yarbrough & Price, 1987).

Finally, researchers have found that listeners' preferences may be influenced by the performance medium (i.e., synthesized versus acoustic) (Wapnick & Rosenquist, 1991), amount of vibrato (LeBlanc & Sherrill, 1986), and race and sex of the performers (Appleton, 1970/1971; Jaynes, McCullers, MacNeil, & Vafaie, 1985; Killian, 1990; LeBlanc & Sherrill, 1986; May, 1985; McCrary, 1993; Meadows, 1970/1971; Morrison, 1993; Schuessler, 1980). LeBlanc (1980) called these "media variables," which he placed ". . . between [the] stimulus and cultural input variables" (p. 31).

One conclusion drawn in many of the reviewed studies is that future research should lead toward more complete explanations of the phenomena of musical attitude and preference. The purpose of this study was to investigate college

students' attitudes toward several types and styles of music, and to examine relationships between those attitudes and three listener characteristics (sex, college major, school ensemble experience).

Method

A self-report measure of attitudes was used in this study because the ease of administration permitted large samples. In addition, self-report and behavioral (and behavioral intentions) measures have generally been found to be moderately to highly correlated (Charboneau, 1980/1981; Geringer, 1977, 1982; Graffius, 1988/1989; Kuhn, Sims, & Shehan, 1981; Pantle, 1977/1978; Price & Yarbrough, 1987; Shehan, 1981; Wapnick, 1976; Yarbrough & Price, 1987).³

As in most previous studies (Kuhn, 1980), a rating scale was used as the stimulus measure in this study. One statement ("I enjoy listening to:") followed by a five-point scale was employed for each of nine types of music, defined by the following descriptors: "rock," "rap," "country," "folk music (authentic, ex., Indian, Chinese, Lithuanian, etc.)," "jazz," "classical," "contemporary classical," "spiritual (ex., church, gospel)," and "world music (ex., Latino-American, Italian 'canzona,' etc.)."⁴ The scale was anchored by "strongly agree" and "strongly disagree." Pilot testing demonstrated that the musical terms and response mode were unambiguous to the subjects. The validity of the instrument is supported by the straightforward nature of the items and response mode, Cutietta's (1992) dictum that verbally expressed attitudes tend to be valid representations of "individuals' beliefs" (p. 299), and the assumption that the descriptors adequately represented the respective musical styles in the minds of subjects.⁵

Two listener characteristics, sex and musical training, were examined. Musical training was operationalized as two variables: academic major (i.e., music majors, non-music majors) and school music performance experience.⁶ The performance experience variable was formed by totaling the responses to three survey items: number of years spent in school bands, choirs, and orchestras. The experience scale was divided into three levels: low (0-5 years), medium (6-15 years), and high (more than 15 years).

Following pilot testing, the survey instrument was administered to 300 students at Arizona State University, Tempe. The subjects were music majors enrolled in music education methods classes and ensembles ($n = 100$), and non-music majors enrolled in engineering, history, language, and music appreciation

classes ($n = 200$). Both groups consisted of both graduate and undergraduate students, with undergraduates predominating in each group.

Results

Reliability coefficients (coefficient alphas) were .57 for the nine-item music attitude subscale, .43 for the school music performance experience subscale, and .53 for the overall questionnaire. Reliability coefficients of this magnitude are typical for measures of demographic and attitudinal data.

Of the nine types of music, classical music received the highest overall mean rating, followed in descending order by rock, jazz, contemporary classical, world, country, spiritual, folk, and rap (Table 1). Not surprisingly, music majors expressed significantly more positive attitudes toward music overall than non-music majors, as can be seen from the means (Table 1) and the multivariate analysis of variance (MANOVA) results shown in Table 2 (Wilk's Lambda = .885, $F = 4.04$, $p \leq .05$). However, univariate analyses revealed that significant differences by major (music, non-music) occurred for only three of the nine types of music ($p \leq .05$). Music majors had significantly higher means for classical and contemporary classical, and non-music majors had significantly higher means for rock.

MANOVA results (Table 2) indicate significant overall attitude differences between the two sexes (Wilk's Lambda = .938, $F = 2.06$, $p \leq .05$), with females having the higher mean (Table 1). Univariate analyses revealed significant differences in favor of females (Table 1) for country and spiritual only (Table 2).

In addition to significant MANOVA main effects for major and sex, there was a significant interaction between the two variables (Wilk's Lambda = .930; $F = 2.35$; $p \leq .05$) (Table 2). This significant interaction is attributable to two significant univariate interactions: major \times sex for rock music ($F = 8.65$, $df = 1$, $p \leq .05$) and major \times sex for rap ($F = 9.39$, $df = 1$, $p \leq .05$). Contrast analysis of the cells showed that males liked rock significantly more than females in both the music ($F = 4.12$, $df = 1$, $p \leq .02$) and non-music ($F = 4.23$, $df = 1$, $p \leq .04$) groups. Similarly, male music majors favored rap significantly more than female music majors ($F = 7.41$, $df = 1$, $p \leq .007$). There was a nonsignificant difference between male and female non-music majors' attitudes toward rap.

There was no overall difference in attitude as a function of school music performance experience (Wilk's Lambda = .909, $F = 1.52$, $p \geq .05$). Despite the nonsignificant MANOVA, univariate analyses revealed a significant difference in

attitude toward jazz (Table 2). Post hoc tests (Scheffé) showed that the significant differences ($p \leq .05$) occurred between the high and medium, and high and low experience groups in favor of subjects with high levels of school music performance experience (Table 3). The means suggest a positive linear relationship between school music performance experience and attitude toward five of the other types of music (classical, contemporary classical, folk, spiritual, world), a negative linear relationship for two types (rap, rock), and a curvilinear relationship for the remaining type (country) (Table 1). However, none of the respective univariate tests was significant.

Table 1
Means and Standard Deviations by Major, Sex, and
School Music Performance Experience (N=300)

	Major		Sex		Experience			Total
	MU	NM	M	F	H	M	L	
N -	100	200	143	157	95	45	160	300
Classical	4.69 (.58)	3.70 (1.17)	3.80 (1.14)	4.24 (1.05)	4.58 (.66)	4.04 (1.07)	3.70 (1.21)	4.03 (1.11)
Rock	3.52 (1.15)	4.22 (1.08)	4.15 (1.12)	3.83 (1.16)	3.68 (1.21)	3.93 (1.07)	4.18 (1.10)	3.98 (1.15)
Jazz	3.79 (1.21)	3.27 (1.19)	3.33 (1.17)	3.54 (1.26)	3.88 (1.12)	3.44 (1.20)	3.18 (1.21)	3.44 (1.22)
Contemp.	4.07 (.91)	3.06 (1.14)	3.20 (1.14)	3.57 (1.17)	3.87 (1.07)	3.44 (1.12)	3.10 (1.15)	3.40 (1.17)
World	3.16 (1.16)	2.63 (1.29)	2.57 (1.25)	3.03 (1.26)	3.08 (1.17)	2.87 (1.20)	2.63 (1.33)	2.81 (1.27)
Country	2.63 (1.33)	2.83 (1.37)	2.55 (1.28)	2.96 (1.41)	2.66 (1.30)	3.00 (1.37)	2.76 (1.39)	2.76 (1.36)
Spiritual	3.15 (1.23)	2.45 (1.33)	2.36 (1.20)	2.98 (1.40)	3.05 (1.29)	2.76 (1.19)	2.44 (1.36)	2.68 (1.34)
Folk	2.87 (1.13)	2.42 (1.25)	2.48 (1.22)	2.65 (1.23)	2.80 (1.20)	2.53 (1.16)	2.44 (1.24)	2.57 (1.22)
Rap	1.60 (.90)	2.25 (1.27)	2.16 (1.25)	1.89 (1.12)	1.64 (.90)	2.04 (1.26)	2.23 (1.28)	2.02 (1.19)
Total	3.28 (.45)	2.98 (.61)	2.96 (.58)	3.19 (.55)	3.25 (.44)	3.12 (.51)	2.96 (.64)	3.08 (.58)

Table 2
Multivariate ANOVA Results for Music Attitude by Major, Sex,
and School Music Performance Experience (N=300)

Source	Wilk's Lambda	SS	df	MS	F	p
Major	.885				4.04	.0001
Classical		16.44	1	16.44	16.68	.0001
Rock		16.94	1	16.94	14.13	.0002
Contemporary		18.87	1	18.87	16.65	.0001
Sex	.938				2.06	.0336
Country		12.96	1	12.96	7.26	.0075
Spiritual		8.83	1	8.83	5.62	.0184
School Music Experience	.909				1.52	.0772
Jazz		17.40	2	8.70	6.28	.0021
Major x Sex	.930				2.35	.0145

Note: All main MANOVA effects, significant univariate effects, and significant interactions ($p < .05$) only; all other univariate effects and interactions were not significant.

Table 3
Means and Post hoc Results (Scheffé) for Jazz Preference
by Level of School Music Performance Experience

	High	Medium	Low
	3.88	<u>3.44</u>	<u>3.18</u>

Note: Underline indicates nonsignificance ($p > .05$).

Of the 36 possible interactions (four each for the nine dependent variables), only three were significant, possibly the result of Type I error. Two of these, major x sex for rock and rap, contributed to the significant MANOVA interaction for major x sex, as described above. (The third, sex x school music performance experience for rap music ($F = 4.48$, $df = 2$, $p \leq .05$), occurred despite the corresponding nonsignificant MANOVA interaction. Contrast analysis showed that females with high levels of school music performance experience expressed significantly less liking for rap music than females with medium and low levels of experience ($F = 7.29$, $df = 1$, $p \leq .007$). However, males with high levels of school music performance experience did not exhibit significantly different liking for rap music than males with medium or low levels of experience. Neither males nor females were significantly different when the experience variable was divided into low versus medium/high levels.

Finally, because nonsignificant interactions sometimes mask significant differences between cells, selected additional contrasts were computed, only three of which were significant. These revealed that female non-music majors expressed significantly greater liking than male non-music majors for classical ($F = 4.25$, $df = 1$, $p \leq .04$), spiritual ($F = 9.17$, $df = 1$, $p \leq .003$), and country music ($F = 5.91$, $df = 1$, $p \leq .02$).

Discussion

The positive attitudes of subjects in this study toward classical music, followed in decreasing order by rock, jazz, contemporary classical, world, country, spiritual, folk, and rap, differ sharply from LeBlanc's (1981) findings with young children, who preferred rock/pop, followed by country, band, new jazz, old jazz, and art music. One-third of subjects in the present study were music majors, but non-music majors rated classical music second highest. Therefore, these results appear to contradict the notion that attitude-preference toward classical (art) music decreases with age, and confirm findings that attitudes toward classical music increase among college students (LeBlanc, Colman, McCrary, Sherrill, & Malin, 1988). However, samples of college students may represent a smaller population, and perhaps one with more elite tastes, than samples of elementary students. Moreover, in recent years classical music has been featured by popular media such as the television and motion picture industries. Longitudinal studies could provide more insights into these questions. That music majors like classical and contemporary classical music more than non-majors is probably a function of training, exposure, and knowledge. Non-majors rated rock music highest, which replicates earlier research (Geringer, 1982; Geringer & McManus, 1979), but the

significant difference between music majors' and non-majors' attitudes toward rock appears to differ from findings of previous research (Palmquist, 1990).

The finding that females express more favorable attitudes than males toward music is similar to that of Brittin (1991), who used a somewhat different musical classification scheme. The overall sex differences were significant for only two types of music, but music major and non-major males liked rock better than did females divided respectively by major, and rap was favored by music major males more than by music major females. The more positive attitudes on the part of males and females toward certain types of music may relate more to the lyrics than to the music itself, especially among college students (LeBlanc, Sims, Malin, and Sherrill, 1992). The possible effects of lyrics on attitude-preference warrants further investigation (Bowers, 1989).

The finding of no overall significant difference in attitude as a function of school music performance experience may not contradict Brittin's (1991) results, because she employed a different musical experience variable. However, the positive relationship between school music performance and attitude toward jazz may relate to Brittin's (1991) finding of a positive relationship between performing musical experience and preference for (not attitude toward) jazz. Many school bands and choirs perform jazz, but many do not perform some of the other types of music investigated in this and Brittin's study. This relationship should be investigated further. Also, the finding that females with high levels of school music performance experience expressed significantly less favorable attitudes toward rap than females with less experience, together with the overall (though nonsignificant) negative relationships between such experience and attitudes toward rock and rap, bear further investigation.

Conclusions

The results of this study confirm portions of LeBlanc's model. Specifically, listener sex does seem to play a part in attitudinal differences toward music, but probably only for certain types of music. The findings that school music performance experience relates positively to attitudes toward jazz, and that music majors and non-music majors differ in their attitudes toward some types of music, also confirm LeBlanc's speculation that listener characteristics influence attitudes toward music. The findings also confirm previous research on the minimal effects of school music participation on attitudes toward most types of music.

Musical and descriptive stimuli have been used in various studies, and both types have been found to correlate with behavioral measures. However, the two types of stimuli appear not to have been correlated with each other in the same study. Future studies should compare the two types of stimuli, in addition to behavioral measures. In fact, a "composite of indices" should probably be employed as dependent variables (Kuhn, Sims, & Shehan, 1981). Future studies should also compare attitudes and preferences for non-Western music, and more comparative studies should be conducted on listeners of different nationalities and cultural backgrounds (Fung, 1993).

Decisions about non-major course offerings by college and university music departments could be informed by these research findings. The fact that female non-music majors expressed significantly greater liking than male non-music majors for classical, spiritual, and country music suggests that such non-major courses may attract more female than male students. If that is the case, it would not be the first time in history that college "appreciation" courses have attracted more females than males (Koza, 1993). This study also suggests that researchers should study the effects of lyrics on attitudes, opinions, and preferences, and that non-major courses should perhaps emphasize this aspect of the music.

Future studies should also investigate attitudes and preferences for different types of music by academic major. Results could be compared to those by Fathi and Heath (1974), who reported that English and philosophy majors favored "high culture" music, and that business and engineering majors favored "mass culture" music. This type of research could have additional implications for collegiate course offerings and "marketing strategies" for the same.

Notes

¹ Although "sex" and "gender" are often used interchangeably in the music education research literature, the two terms are not synonymous. "Sex" refers to "biologically determined" characteristics, such as whether a person is a man or a woman, while "gender" refers to "our culturally defined, or 'constructed' . . . notions of maleness and femaleness" (Cook, 1989, p. 93). Indeed the use of "gender" to describe "a person's sex" is deemed colloquial by *Webster's New World Dictionary* (Neufeldt, 1990, p. 247).

² See Bowers (1989) for a brief discussion of musicological research on differences in men's and women's lyrics, especially in blues, country and western, gospel, and selected types of popular music.

³ See Kuhn (1980) for a discussion of approaches employed by researchers to study attitudes toward music, including physiological (e.g., blood pressure levels), verbal (i.e., self-report, typically with Likert-type scales), behavioral (e.g., concert attendance, sheet music sales, ownership of recordings), content analysis (e.g., of concert programs and radio programming), and miscellaneous measures (e.g., facial expressions). Behavioral measures became popular in the late 1960s (Price & Yarbrough, 1987). Correlations between self-report and behavioral measures are higher for adults than for young children (Alpert, 1982; Flowers, 1981; Geringer, 1982). Both Kuhn (1980) and Cutietta (1992) consider self-report measures adequate for this type of research.

⁴ Many researchers have limited their investigations to classical music, although some have examined attitudes and preferences for other types of music (e.g., Brittin, 1991; Kuhn, Sims, & Shehan, 1981; LeBlanc, 1981).

⁵ In self-report studies of music attitude and preference, two types of stimuli have been used to represent different musical styles: recordings of musical excerpts, and written descriptors of the styles, usually in the form of names of the styles followed by examples. At least one music education researcher (Cutietta, 1992) believes that only musical stimuli should be employed, but Brittin (1991) noted that little research has been conducted on the effects of "stylistic categorization" on listener preference, and that "most preference research imposes a stylistic taxonomical structure on the subject that may or may not function as intended." (p. 144) Kuhn (1980) made a similar point a few years earlier. Price and Swanson (1990) distinguish between attitude and opinion, with "attitude being a predisposition in the absence of music, whereas opinion is measured in the presence of the music being assessed." Indeed, validity might be questioned for either type of stimulus. Different subjects undoubtedly construe descriptors (names) of styles to mean different things. On the other hand, a few recorded excerpts can hardly represent an entire style (Brittin, 1991; Hargreaves, 1984; Kuhn, 1980), especially in the rapidly changing world of popular music. In any event, the research literature on attitudes and preferences for music, music activities, and instruments generally shows moderate to high correlations between behavioral measures (or behavioral intentions) and attitudes, opinions, and preferences expressed verbally through free response or following descriptor-type stimuli (Charboneau, 1980/1981; Geringer, 1977, 1982; Pantle, 1977/1978; Price & Yarbrough, 1987; Shehan, 1981). Flowers (1981) found low to moderate correlations for young children, but higher correlations for college students.

⁶ Listener sex was included because both Wapnick (1976) and LeBlanc (1980, 1982) believe it may affect musical preference. If they are correct, it could influence attitudes also, at least indirectly. As noted earlier, the two authors differ over how to classify musical training. Nevertheless, the work of both authors suggests that musical training should be included in a model designed to account for musical preferences. Consequently, this study included an examination of attitude differences between music majors and non-music majors, and the relationship between attitude and school music performance experience. As noted earlier, comparative attitude-preference research has been conducted on college music majors and non-majors, and Brittin (1991) has suggested the desirability of a more thorough investigation of performance background variables.

References

- Abeles, H. F. (1980). Responses to music. In D. A. Hodges (Ed.), Handbook of music psychology (pp. 105-140). Lawrence, KS: National Association for Music Therapy.
- Alpert, J. (1982). The effect of disc jockey, peer, and music teacher approval of music on music selection and preference. Journal of Research in Music Education, 30, 173-186.
- Appleton, C. (1971). The comparative preferential response of black and white college students to black and white folk and popular musical styles (Doctoral dissertation, New York University, 1970). Dissertation Abstracts International, 32, 27223A.
- Baker, D. S. (1980). The effect of appropriate and inappropriate in-class song performance models on performance preference of third- and fourth-grade students. Journal of Research in Music Education, 28, 1-17.
- Bartlett, D. L. (1973). Effect of repeated listenings on structural discrimination and affective response. Journal of Research in Music Education, 21, 302-317.
- Baumann, V. H. (1960). Teen-age music preferences. Journal of Research in Music Education, 8, 75-84.
- Birch, T. E. (1962). Musical taste as indicated by records owned by college students with varying high school music preferences. Missouri Journal of Research in Music Education, 1, 53-54.
- Bowers, J. M. (1989). Feminist scholarship and the field of musicology: I. College Music Symposium, 29, 81-92.
- Boyle, J. D., Hosterman, G. L., & Ramsey, D. S. (1981). Factors influencing pop music preferences of young people. Journal of Research in Music Education, 29, 47-56.
- Bradley, I. L. (1971). Repetition as a factor in the development of music preferences. Journal of Research in Music Education, 19, 295-298.

Bradley, I. L. (1972). Effect on student music preference of a listening program in contemporary art music. Journal of Research in Music Education, 20, 244-353.

Brittin, R. V. (1991). The effect of overtly categorizing music on preference for popular music styles. Journal of Research in Music Education, 39, 143-151.

Brown, A. (1978). Effects of televised instruction on student music selection, music skills, and attitudes. Journal of Research in Music Education, 26, 445-455.

Buzarovski, D. (1989). Dvizenjata vo muzickata kultura kaj srednoskolskata mladina, odnosno generaciite rodeni vo periodot 1970-1973 vo SRMakedonija - incidencija i prevalencija na muzickite zanri - Final report, NUB "Kliment Ohridski," Skopje, Macedonia.

Charboneau, M. L. (1981). The effect of bell playing instruction and music listening on kindergarten students' preferences and attitudes (Doctoral dissertation, Syracuse University, 1980). Dissertation Abstracts International, 42, 591A.

Cook, S. C. (1989). Women, women's studies, music and musicology: Issues of pedagogy and scholarship. College Music Symposium: Journal of the College Music Society, 29, 93-98.

Cutieta, R. A. (1992). The measurement of attitudes and preferences in music education. In R. Colwell (Ed.), Handbook of research on music teaching and learning (pp. 295-309). New York: Schirmer Books.

Dorow, L. G. (1977). The effect of teacher approval/disapproval ratios on student music selection and concert attentiveness. Journal of Research in Music Education, 25, 32-40.

Darrow, A. A., Haack, P., & Kuribayashi, F. (1987). Descriptors and preferences for Eastern and Western musics by Japanese and American nonmusic majors. Journal of Research in Music Education, 35, 237-248.

Deihl, E. R., Schneider, M. J., & Petress, K. (1983). Dimensions of music preference: A factor analytic study. Popular Music & Society, 9, 41-51.

Duerksen, G. L. (1972). Some effects of expectation on evaluation of recorded musical performances. Journal of Research in Music Education, 20, 268-272.

Erneston, N. (1962). A study to determine the effect of musical experience and mental ability on the formulation of musical taste (Doctoral dissertation, Florida State University, 1961). Dissertation Abstracts International, 22, 2817.

Farnsworth, P. R. (1950). Musical taste: Its measurement and cultural nature. Stanford, CA: Stanford University Press. Stanford University Publications, University Series, Education-Psychology, Vol. 2, No. 1.

Farnsworth, P. R. (1969). The social psychology of music (2nd ed.). Ames, IA: Iowa State University Press.

Fathi, A., & Heath, C. L. (1974). Group influence, mass media, and musical taste among Canadian students. Journalism Quarterly, 51, 705-709.

Finnäs, L. (1989). How can musical preferences be modified? Bulletin of the Council for Research in Music Education, 102, 1-58.

Flowers, P. J. (1981). Relationship between two measures of music preference. Contributions to Music Education, 8, 47-54.

Flowers, P. J. (1988). The effects of teaching and learning experiences, tempo, and mode on undergraduates' and children's symphonic music preferences. Journal of Research in Music Education, 36, 19-34.

Flowers, P. J., & Jellison, J. A. (1990, November). The measurement of music behavior in music therapy and education. Paper presented at the annual meeting of the National Association of Music Therapists, Washington, DC.

Frakes, L. (1985). Differences in music achievement, academic achievement, and attitude among participants, dropouts, and nonparticipants in secondary school music (Doctoral dissertation, University of Iowa, 1984). Dissertation Abstracts International, 46, 370A.

Fulbright, E. G. (1964). An investigation of relationships between cultural background and attitudes toward classical orchestral music among college undergraduates (Doctoral dissertation, Indiana University, 1964). Dissertation Abstracts International, 25, 3017.

Fung, C. V. (1993). A review of studies on non-Western music preference. UPDATE: Applications of Research in Music Education, 12, 26-32.

Furman, C. E., & Duke, R. A. (1988). Effect of majority consensus on preferences for recorded orchestral and popular music. Journal of Research in Music Education, 36, 220-231.

Gates, F. B. (1898). Musical interests of children. Journal of Pedagogy, 2, 153-170.

Geringer, J. M. (1976). Tuning preferences in recorded orchestral music. Journal of Research in Music Education, 24, 169-176.

Geringer, J. M. (1977). An assessment of children's musical instrument preferences. Journal of Music Therapy, 14, 172-179.

Geringer, J. M. (1982). Verbal and operant music listening preferences in relationship to age and musical training. Psychology of Music (Special issue): 47-50.

Geringer, J. M., & Madsen, C. K. (1987). Pitch and tempo preferences in recorded popular music. In C. K. Madsen & C. A. Prickett (Eds.), Applications of research in music behavior (pp. 204-212). Tuscaloosa, AL: University of Alabama Press.

Geringer, J. M., & McManus, D. (1979). A survey of musical taste in relationship to age and musical training. College Music Symposium, 19, 69-76.

Getz, R. P. (1966). The effects of repetition on listening response. Journal of Research in Music Education, 14, 178-192.

Graffius, K. O. (1989). Music preference: A comparison of verbal opinions and behavioral intentions of selected high school students (Doctoral dissertation, Louisiana State University, 1988). Dissertations Abstracts International, 49, 3652A.

Greer, R. D., Dorow, L. G., & Hanser, S. (1973). Music discrimination training and the music selection behavior of nursery and primary level children. Bulletin of the Council for Research in Music Education, 35, 30-43.

Greer, R. D., Dorow, L. G., & Randall, A. (1974). Music listening preferences of elementary school children. Journal of Research in Music Education, 22, 284-291.

Greer, R. D., Dorow, L. G., Wachhaus, G., & White, E. (1973). Adult approval and students' music selection behavior. Journal of Research in Music Education, 21, 345-354.

Hargreaves, D. J. (1984). The effect of repetition on liking for music. Journal of Research in Music Education, 32, 35-47.

Hargreaves, D., Messerschmidt, P., & Rubert, C. (1980). Musical preferences and evaluation. Psychology of Music, 8, 13-18.

Huebner, M. A. (1976). The effect of three listening methods and two tempi on the musical attitude of sixth-grade students (Doctoral dissertation, University of Maryland, 1976). Dissertations Abstracts International, 37, 3257A.

Humphreys, J. T., May, W. V., & Nelson, D. J. (1992). Research on Music Ensembles. In R. Colwell (Ed.), Handbook of research on music teaching and learning (pp. 651-68). New York: Schirmer Books.

Inglefield, H. G. (1972). Conformity behavior reflected in the musical preference of adolescents. Contributions to Music Education, 1, 56-65.

Jaynes, W. E., McCullers, J. C., MacNeil, M. K., & Vafaie, E. (1985). How many schools of traditional jazz? A study of musicians and listeners. Journal of Personality and Social Psychology, 48, 1002-1008.

Jellison, J. A., & Flowers, P. J. (1991). Talking about music: Interviews with disabled and nondisabled children. Journal of Research in Music Education, 39, 322-333.

Jumpeter, J. (1985). Personalized system of instruction versus the lecture-demonstration method in a specific area of a college music appreciation course. Journal of Research in Music Education, 33, 113-122.

Keston, M. J., & Pinto, I. M. (1955). Possible factors influencing musical preference. Journal of Genetic Psychology, 86, 101-113.

Killian, J. N. (1990). Effect of model characteristics on musical preference of junior high students. Journal of Research in Music Education, 38, 115-123.

Killian, J. N., & Kostka, M. J. (1992). Children's song title choices: The effect of peer approval on preference. Applications of Research in Music Education, 10, 3-6.

Koza, J. E. (1993). The "missing males" and other gender issues in music education: Evidence from the Music Supervisors' Journal, 1914-1924. Journal of Research in Music Education, 41, 212-232.

Kuhn, T. L. (1980). Instrumentation for the measurement of music attitudes. Contributions to Music Education, 8, 2-38.

Kuhn, T. L., Sims, W. L., & Shehan, P. K. (1981). Relationship between listening time and like-dislike rating on three music selections. Journal of Music Therapy, 18, 181-192.

LeBlanc, A. (1980). Outline of a proposed model of sources of variation in musical taste. Bulletin of the Council for Research in Music Education, 61, 29-34.

LeBlanc, A. (1981). Effects of style, tempo, and performing medium on children's music preference. Journal of Research in Music Education, 29, 28-45.

LeBlanc, A. (1982). An interactive theory of music preference. Journal of Music Therapy, 19, 28-45.

LeBlanc, A., & Cote, R. (1983). Effects of tempo and performing medium on children's music preference. Journal of Research in Music Education, 31, 57-66.

LeBlanc, A., Colman, J., McCrary, J., Sherrill, C., & Malin, S. (1988). Tempo preferences of different age music listeners. Journal of Research in Music Education, 36, 156-168.

LeBlanc, A. & McCrary, J. (1983). Effect of tempo on children's music preference. Journal of Research in Music Education, 31, 283-294.

LeBlanc, A., & Sherrill, C. (1986). Effect of vocal vibrato and performer's sex on children's music preference. Journal of Research in Music Education, 34, 222-237.

LeBlanc, A., Sims, W. L., Malin, S. A., & Sherrill, C. (1992). Relationships between humor perceived in music and preferences of different-age listeners. Journal of Research in Music Education, 40, 269-282.

Little, J. P. (1980). Differences in attitudes toward music between twelfth grade music and non-music students (Doctoral dissertation, University of Kentucky, 1979). Dissertation Abstracts International, 40, 3618-3619A.

Long, N. H. (1971). Establishment of standards for the *Indiana-Oregon Music Discrimination Test* based on a cross-section of elementary and secondary students with an analysis of elements of environment, intelligence, and musical experience and training in relation to music discrimination. Bulletin of the Council for Research in Music Education, 25, 26-35.

May, W. V. (1985). Musical style preferences and aural discrimination skills of primary grade school children. Journal of Research in Music Education, 32, 7-22.

McCrary, J. (1993). Effects of listeners' and performers' race on music preferences. Journal of Research in Music Education, 41, 200-211.

Meadows, E. (1971). The relationship of music preference to certain cultural determiners (Doctoral dissertation, Michigan State University, 1970). Dissertation Abstracts International, 31, 6100A.

Meeker, D. L. (1971). Measuring attitude and value changes in selected humanities and human relations programs. Journal of Research in Music Education, 19, 467-473.

Morrison, S. J. (1993). Toward a black aesthetic: The effect of race on preference and perception of selected popular music. Missouri Journal of Research in Music Education, 30, 26-37.

Moskovitz, E. M. (1992). The effect of repetition on tempo preferences of elementary children. Journal of Research in Music Education, 40, 193-203.

Mull, H. K. (1957). The effect of repetition upon the enjoyment of modern music. Journal of Psychology, 43, 155-162.

Nakazawa, N. (1988). School music, environment, and music preferences: A comparison of Japanese students living in Japan and Japanese students living in the United States (Doctoral dissertation, Columbia University, 1988). Dissertation Abstracts International, 49, 2575A.

National Assessment of Educational Progress. (1974). An assessment of attitudes toward music. (Music Report No. 03-MU-03). Washington, DC: U.S. Government Printing Office.

Neufeldt, V., ed. (1990). Webster's new world dictionary. New York: Warner Books, Inc.

Noble, R. F. (1977). A multivariate analysis of factors in attitudinal levels of Wyoming adults toward music. Journal of Research in Music Education, 25, 59-67.

O'Brien, W. (1992). The effects of figurative language in music listening instruction. Contributions to Music Education, 19, 20-31.

Palmquist, J. E. (1990). Apparent time passage and music preference by music and nonmusic majors. Journal of Research in Music Education, 38, 206-214.

Pantle, J. E. (1978). The effect of teacher approval of music on music selection and music verbal preference (Doctoral dissertation, University of Maryland, 1978). Dissertation Abstracts International, 38, 4010A.

Peery, J., & Peery, I. (1986). Effects of exposure to classical music on the musical preferences of preschool children. Journal of Research in Music Education, 34, 24-33.

Price, H. E. (1986). A proposed glossary for use in affective response literature in music. Journal of Research in Music Education, 34, 151-159.

Price, H. E. (1988). The effect of a music appreciation course on students' verbally expressed preferences for composers. Journal of Research in Music Education, 36, 35-46.

- Price, H. E., & Swanson, P. (1990). Changes in musical attitudes, opinions, and knowledge of music appreciation students. Journal of Research in Music Education, 38, 39-48.
- Price, H. E., & Yarbrough, C. (1987). Expressed Opinions of Composers, Musical Training, Recording Ownership, and Their Interrelationship. In C. K. Madsen & C. A. Prickett (Eds.), Applications of Research in Music Behavior (pp. 232-243). Tuscaloosa, AL: University of Alabama Press.
- Prince, W. F. (1974). Effects of guided listening on musical enjoyment of junior high school students. Journal of Research in Music Education, 22, 45-51.
- Radocy, R. E. (1982). Preference for classical music: A test for the hedgehog. Psychology of Music (Special issue): 91-95.
- Rittelmeyer, C. (1971). Zur Auswirkung der Prestigesuggestion auf die Beurteilung der Neuen Musik (The suggestion of prestige: Its effect on judging modern music). Musik und Bildung, 3 (February 1971): 72-74.
- Rubin-Rabson, G. (1940). The influence of age, intelligence, and training on reactions to classic and modern music. Journal of General Psychology, 22, 413-429.
- Russell, P. (1986). Experimental aesthetics of popular music recordings: Pleasingness, familiarity and chart performance. Psychology of Music, 14, 33-43.
- Schuessler, K. (1948). Social background and musical taste. American Sociological Review, 18, 330-335.
- Schuessler, K. F. (1980). Musical taste and socio-economic background. New York: Arno Press.
- Schulten, M. L. (1987). Musical preference: A new approach to investigate its structure and development. Bulletin of the Council for Research in Music Education, 91, 160-165.
- Shehan, P. K. (1981). Student preferences for ethnic music styles. Contributions to Music Education, 9, 21-28.

Shehan, P. K. (1984). Effect of instruction method on the preference, achievement, and attentiveness for Indonesian gamelan music. Psychology of Music, 12, 34-42.

Shehan, P. K. (1985). Transfer of preference from taught to untaught pieces of non-Western music genres. Journal of Research in Music Education, 33, 149-158.

Sims, W. L. (1986). The effect of high versus low teacher affect and passive versus active student activity during music listening on preschool children's attention, piece preference, time spent listening, and piece recognition. Journal of Research in Music Education, 34, 173-191.

Sims, W. L. (1987). Effect of tempo on music preference of preschool through fourth grade children. In C. K. Madsen & C. A. Prickett (Eds.), Applications of research in music behavior (p 15-25). Tuscaloosa, AL: University of Alabama Press.

Smith, C. M. (1982). Effects of two music appreciation texts on students' musical perception and aesthetic judgement. College Student Journal, 16, 124-130.

Steele, A. (1967). Effects of social reinforcement on the music preferences of mentally retarded children. Journal of Music Therapy, 4, 57-62.

Stewart, J. W. (1962). Influence of public school music education as revealed by a comparison of forty selected high school music and non-music students (Doctoral dissertation, Florida State University, 1961). Dissertation Abstracts International, 22, 2822-2823.

Tanner, F. D. (1976). The effect of disc jockey approval of music and peer approval of music on music selection (Doctoral dissertation, Columbia University, 1976). Dissertation Abstracts International, 37, 3492A-3493A.

Trammell, P. T. (1978). An investigation of the effectiveness of repetition and guided listening in developing enjoyable music listening experiences for second grade students (Doctoral dissertation, Texas Woman's University, 1977). Dissertation Abstracts International, 38, 5323A-5324A.

Valentine, C. W. (1913). The aesthetic appreciation of musical intervals among children and adults. British Journal of Psychology, 6, 190-216.

Wapnick, J. A. (1976). A review of research on attitude and preference. Bulletin of the Council for Research in Music Education, 48, 1-20.

Wapnick, J. A. (1980). Pitch, tempo, and timbral preferences in recorded piano music. Journal of Research in Music Education, 28, 43-58.

Wapnick, J., & Rosenquist, M. J. (1991). Preferences of undergraduate music majors for sequenced versus performed piano music. Journal of Research in Music Education, 39, 152-160.

Webster, P. R., & Hamilton, R. A. (1981/1982). Effects of peer influence, rhythmic quality, and violin timbre on the musical preferences of fourth, fifth, and sixth grade children. Contributions to Music Education, 9, 11-20.

Wheeler, B. L. (1985). Relationship of personal characteristics to mood and enjoyment after hearing live and recorded music and to musical taste. Psychology of Music, 13, 81-92.

Wig, Jacob A., Jr., & Boyle, J. D. (1982). The effect of keyboard learning experiences on middle school general music students' music achievement and attitudes. Journal of Research in Music Education, 30, 163-172.

Yarbrough, C. & Price, H. (1987). The effect of instruction and repeated listening on behavioral preference, behavioral intent, verbal opinion, and ratings of familiarity and complexity. Update: The Applications of Research in Music Education, 5, 6-9.

Zimmerman, G. E. (1979). The effect of role-playing on attitudes toward music (Doctoral dissertation, West Virginia University, 1978). Dissertation Abstracts International, 39, 4112A.