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A COMPARISON OF THE EFFECTS OF REPEATED LISTENING AND PERFORMANCE EXPERIENCE ON HIGH SCHOOL BAND STUDENTS' MUSIC PREFERENCE

By

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ABSTRACT

A COMPARISON OF THE EFFECTS
OF REPEATED LISTENING AND PERFORMANCE EXPERIENCE
ON HIGH SCHOOL BAND STUDENTS'
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The purpose of this inquiry was to measure high school band students' preferences for selected musical compositions, and to attempt to increase student liking for two compositions initially identified as less preferred. Repeated listening and performance experience were employed in attempts to increase music preference, and the relative efficacy of the methods was measured.

In a pretest procedure, three groups of high school band students expressed preferences for ten recorded excerpts of band compositions. Two of the less-preferred compositions were performed repeatedly by one group, another group listened to them repeatedly, and a third group had no experiences with the compositions. Following the treatments, the students again expressed their preferences for the ten excerpts, and the effects of the differing treatments were compared.

Students demonstrated robustly stable music preferences over time for compositions receiving no

treatment. Performance experience markedly increased music preference; gains attributable to listening were much weaker.

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CHAPTER I

INTRODUCTION

The teaching methods and objectives of every school music instructor are, in part, determined by the music preferences of his students. The responsible teacher encourages students to exhibit a tolerance to many kinds of music, and to seek active or vicarious music involvement for himself (Sidnell, 1973, p. 47; Leonard & House, 1972, p. 257).

It is widely assumed that these broad goals of music education can be well served by school performance organizations such as orchestras, bands, and choirs. Sidnell (1973) stated,

> The purpose of the [performance] class is to contribute a vocabulary of musical skills, knowledge, perceptions, and attitudes to learners....Conductor/ teachers can provide for optimum musical development during the performance experience if they take a little care in planning total and varied musical experiences for students. (p. 14)

Having accepted (a) the goal of increasing student tolerance for many kinds of music, and (b) that this goal can be achieved in the performance class, the music educator must now choose effective techniques to accomplish it.

In performance classes, time is typically spent rehearsing and performing music. Another method available to the performance class is listening to music, perhaps repeatedly and with instruction, reproduced with audio equipment. The listening technique has been thoroughly researched; live performance has not.

The objective of the present inquiry was to compare the efficacy of repeated listening and performance experience as modifiers of students' music preferences.

Purpose

The purpose of this study was to measure high school band students' preferences for selected musical compositions, and attempt to increase student liking for two compositions initially identified as less preferred. Gains in preference were measured in three separate groups of subjects exposed to repeated listenings, repeated performance experiences, or no treatment.

Problem

It was hypothesized that repeated listening would increase students' preferences for a particular composition; that performance experience, as a form of

repeated listening, would increase students' preferences for a particular composition; and that performance experience would increase students' preferences for a particular composition more than would repeated listening.

The study addressed itself to the following questions:

1. Is performance experience an effective method of inducing familiarity with the aim of increasing music preference?

2. What difference, if any, is there in effect between the methods of repeated listening and performance experience in increasing music preference?

Definitions

Throughout this paper, certain words and terms will be used which need definition or clarification. They are the following:

Music preference is a student's stated liking for specific musical examples.

Performance experience includes full-ensemble recreation of specific musical examples in rehearsal or concert settings.

Instruction refers to the teaching of historical style, form, and harmony, with increased aural discrimination of these elements as its goal. Not included for the purposes of this study is teaching aimed at increasing technical facility on a musical

instrument.

Assumptions

The present study proceeded on the basis of the following assumptions:

1. It was assumed that increased preference for a particular composition or style of music will expand a growing body of student preference. Acquired preference for newly-introduced music need not cause the rejection of existing preferences.

2. It was assumed that performance experience is a form of repeated listening, and that one of its effects is induced familiarity.

3. It was assumed that a student's stated opinion is a valid measure of his music preference.

Limitations

The principal objective of this study was limited to an attempt to increase student preference for two musical selections. Conclusions and generalizations will necessarily be of a preliminary nature until the project can be replicated on a larger scale.

Because of the time required to complete the treatments, it was necessary to entrust the instructions and responsibility for treatment to the regular classroom teachers. Every effort was made to adequately train and supervise the teachers to restrain the effects of possible extraneous variables.

The success of a direct comparison between listening and performance might be limited by the instrumental abilities of the group that must perform. In this study, every effort was made to select music well within the abilities of the performing group.

Need for the Study

School band instructors have long assumed that the performance experiences in their classrooms have helped increase students' tolerance for many kinds of music. Since repeated listening has been shown to increase music preference, it is likely that the repeated rehearsal of music also increases music preference. This is only an assumption, however, and there is a need for instrumental school music to demonstrate the effectiveness of its methods in accomplishing its stated goals.

The typical school band devotes a vast majority of its time to rehearsal and performance. Some of the music is performed in public concerts, but the responsible teacher presumably introduces a repertoire of works aimed at increasing student preferences for many types of music. Much time is required to rehearse this repertoire adequately; a reasonably accurate performance is necessary for true aesthetic experience. The number and quality of experiences with unfamiliar music are limited in most classrooms by time and the capabilities of student performers.

If performance experience is indeed a highly

effective method of increasing music preference, it should by all means be pursued with its present intensity. If, however, performance experience is the mere equivalent of repeated listening in increasing student preference, the structure of instrumental music classes should be altered to include more listening.

Music educators must consider their products to be the young musicians emerging from their classrooms, not concerts or contests. The enlightened, student-oriented educator will use the most effective methods to produce the best possible products. Traditions and widely-held assumptions are precarious means of selecting effective methods. Evidence is needed to confirm the value of performance experience as a modifier of music preference.

CHAPTER II

RELATED LITERATURE

Overview

In the past several decades, researchers have shown great interest in music preference. At least 18 variables affecting music preference have been explored and findings have frequently varied widely. Wapnick (1976) and Kuhn (1980) have comprehensively reviewed music preference research. LeBlanc (1980), 1982) has advanced a theory of music preference, and has developed a model demonstrating the interaction of variables.

This chapter concerns itself with (a) variables thought to alter music preference: familiarity and repeated listening, and adult and peer approval, and (b) studies that lend insight to the development of experimental design.

Familiarity and Repeated Listening

The music educator may be chagrined at the resistance mounted by students faced with unfamiliar musical genres. It is apparent that, in many cases, most-familiar music is also most-preferred music. In a 1977 study, Gibbons found that elderly people (age 65-95) prefer popular music of their young adult years

to later popular music. Chalmers (1978) held that familiarity did not significantly affect university students' music preferences, but two similar studies (Keston & Pinto, 1955; Darling, 1982) discovered that recognition of musical examples significantly affected subjects' attitudinal responses. The widespread preference for the familiar was demonstrated by Burmeister (1955), who found that 60% of adults sampled felt that more familiar music -- popular, folk, and hillbilly -- should be taught in Missouri public schools. In a study otherwise characterized by indifferent responses to various types of music, Shehan (1979) found middle school students particularly inhospitable toward ethnic, or "world" music, presumably because it was very unfamiliar.

Since familiarity can apparently increase music preference, researchers have experimented with inducing familiarity through repeated listening. Instruction is frequently associated with repeated listening, but there is disagreement about the efficacy of such instruction.

Schuckert and McDonald (1968) tested the music preferences of preschool children, and played the less preferred music during the children's play periods. After four listenings, 50% of the children changed their preferences. Getz (1963, 1966) developed an extensive string orchestra listening program for

seventh grade students. Five of the 40 selections were repeated 11 times during the four-week treatment period. Student responses were increasingly positive at each of the first 6 to 8 hearings, but subsequent hearings drew negative responses due to apparent fatigue.

Some studies of repeated listening with instruction (Archibeque, 1966; Hornyak, 1966) asserted that an understanding of musical components was necessary to positively influence music preference. Bartlett (1973) found that awareness of structural elements and repeated listening increased university students' preferences for classical music. Preferences for "best-liked popular" selections declined during the course of nine listening sessions. A series of three studies involving seventh grade students (Bradley, 1970; 1971; 1972) suggested that repeated listening is perhaps the single most effective modifier of music preference. While repeated listening increased the students' liking of specific compositions, preference for similar compositions (transfer) was accomplished only with analytical listening (instruction).

Evans (1966) investigated the effect of repeated listening combined with instruction in junior high school general music classes. One treatment group combined listening experiences with lessons in musical structure; a second group experienced listening without

instruction. A control group pursued other music related activities that included neither listening experiences nor lessons in musical structure. Instruction was found to have little or nothing to do with students' affective responses, but repeated listening apparently increased students' liking for art music.

It is evident that, to increase students' tolerance for unfamiliar music, teachers may well pursue a program of repeated listening. The research suggests that instruction aimed at increasing aural discrimination would be helpful in expanding music preferences.

Adult and Peer Influences

The music educator interested in expanding students' music preferences must be aware of the influences exerted by adults and peer groups. Particularly with younger children, adult approval can affect music preference. Three similar studies (Greer, Dorow, & Hanser, 1973; Greer, Dorow, Wachhaus, & White, 1973; Dorow, 1977) involving preschool and elementary school children showed that music taught in a high-approval setting was increasingly selected by the children in their private listening. For fifth grade students, Alpert (1982) found that music teachers' and disc jockeys' approvals increased classical music listening, while peers' approvals decreased classical

music listening.

Hughes (1980) discovered that peer models and peer approval were more effective than adult modelling and approval in shaping the music selection behavior of grade 12 students. Of particular interest to the present study, performing music was found to be an important vehicle for expanding music preference.

In attempts to expand students' music preferences, the secondary teacher should be aware that his encouragement and modelling are less significant influences than the attitudes and examples of the peer group.

Experimental Design

The extreme diversity of existing music preference research, while sometimes leading to difficulties in interpretation, has provided valuable insight in the area of experimental design.

Some researchers have distrusted the validity of self-reported (verbal) measures of music preference (Cotter & Toombs, 1966; Greer, Dorow, & Hanser, 1973; Huges, 1980). These have used time spent listening as the indicator of preference, as measured by the Operant Music Listening Recorder (OMLR) or the music selection recorder (MSR). While the MSR does provide a very accurate measure of preference, Flowers (1980) and Alpert (1982) have found that verbal preference ratings compare favorably with data obtained with the MSR. The

effective usefulness of the MSR is apparently limited to studies with small populations, and the ranking of more than two selections cannot be accurately measured (Kuhn, 1980; Kuhn, Sims, & Shehan, 1981). It appears that a researcher may confidently use verbal measures of music preference.

Testing the effect of gender on music preference may seem to be an anachronistic pursuit, but many studies support the notion that significant differences in music preference are associated with gender (Baumann, 1960; Broquist, 1961; MacGregor, 1968; Nolin, 1973; Rogers 1956; Schuckert & McDonald, 1968). There is a notable scarcity of research that tends to refute the gender factor (Noble, 1976; 1977). A manifestation of the gender effect was described by LeBlanc (1980): "The respondent's sex can influence decisions of taste, as in the case of a listener especially sensitive to the sexual charisma of attractive performers of the opposite sex" (p. 32). Current research must continue to consider the gender of the respondent.

The research stream provides two additional areas of information pertinent to the present study: (a) tempo and music preference, and (b) preferred music activity.

In 1980, Wapnick examined the tempo preferences of undergraduate music majors. Using a Lexicon Corporation Varispeech II Speed/Time Compressor/Expander, subjects

were to adjust the speed of recorded music until the most appropriate tempo was reached. Subjects were found to consistently favor tempi faster than those of the original recorded performance. Getz (1966), LeBlanc (1981), and LeBlanc and Cote (1983) discovered that middle school students respond positively to music with fast tempi and strong beats. LeBlanc and Cote, however, found that tempo interacted with generic style and performing medium, and could report no clear finding for the effect of tempo alone. In a follow-up study, LeBlanc and McCrary (1983) restrained the effects of style and medium by using a test consisting only of instrumental traditional jazz music of various tempi. Four levels of tempo were identified, and it was discovered that each increase in tempo resulted in a corresponding increase in preference.

Gibbons (1977) found, somewhat unexpectedly, that many elderly people prefer "stimulative" music to "sedative" music. Blyler (1960), LeBlanc (1981) and Darling (1982) suggested that faster music was preferred to slower music. Music teachers can expect to find that music preference is influenced by tempo; faster music is more likely to be readily favored.

Finally, two earlier studies (Broquist, 1961; MacGregor, 1968) found that elementary school children preferred playing instruments to other music class activities (listening, singing, dancing). These

findings may suggest that the primary involvement offered by instrumental music-making is itself a modifier of attitudes toward music. Clearly, more research is needed to explore the potential influence of performance experience in the development of music preference.

CHAPTER III

PROCEDURE

A music preference inventory (MPI) was prepared using ten recorded examples of band music. The examples were chosen from professionally-recorded albums by the Eastman Wind Ensemble and the Michigan State University Symphonic Band. Two of the compositions were to be used in the treatment process; it was necessary that these be available in published editions. The remaining eight examples served both as distractor variables and as internal checks on the pretest-posttest reliability of the MPI. There was no need to obtain music scores or parts for these compositions. It was anticipated that students' initial preferences on the MPI would be formed largely on the basis of tempo and the presence of a strong beat (Blyler, 1960; Darling, 1982; Getz, 1966; LeBlanc,1981; LeBlanc & Cote, 1983; LeBlanc & McCrary, 1983), so a wide range of tempi and rhythmic characteristics was represented. Each excerpt featured a "full band" timbre, to reduce the possibility that student preference for certain instruments would intervene as

an extraneous variable.

The researcher attempted to make selections that offered a diversity of historical styles while maintaining reasonably high musical standards. The MPI included transcriptions of keyboard, orchestral, and orchestral/vocal works from the sixteenth and nineteenth centuries. Six selections were original twentieth century works for winds, ranging from circus marches and jazz to a neo-classical "intermezzo" for band. Compositions chosen for the MPI are shown in Figure 3-1 with their composers and recording labels.

Recorded examples were started at the beginning of each composition, and were one minute in duration with ten-second response intervals between excerpts. The one-minute duration was chosen to give students an accurate impression of each work and time to consider their responses without consuming too much class time or creating an atmosphere of boredom.

The MPI was recorded from vinyl discs to TDK Corporation Acoustic Dynamic (AD) cassette tape by the investigator, using a Sharp RT-150 tape deck and a Technics SL-B350 turntable, both operating through a Pioneer SX-303 stereo receiver. The same tape deck, receiver, and a pair of Sansui S-517 loudspeakers were transported to participating schools for each administration of the MPI.

A student response form was devised consisting of

Figure 3-1. Compositions Used on the MPI

Composition ID	Title	Composer/Arranger	Record Label/Number
KING	Circus Days	K. King	Mercury SRI75087
BENNETT 1	Suite of Old American Dances	R. R. Bennett	Mercury SRI75086
	I. Cake Walk		
BYRD I	William Byrd Suite	W. Byrd/G. Jacob	Mercury SRI75028
	I. The Earle of Oxford's Marche		
BENCRISCUTTO	Symphonic Jazz Suite	F. Bencriscutto	Mark MC1199
	I. Blues		
BYRD 2	William Byrd Suite	W. Byrd/ G. Jacob	Mercury SRI75028
	II. Pavana		
FARRAR	Bombasto March	Farrar	Mercury SRI75087
PISTON	Tunbridge Fair	W. Piston	Mercury SRI75086
OFFENBACH	Overture: The Drum Major's Daughter	J. Offenbach/ L. Odom	Marc MC1199
BENNETT 5	Suite of Old American Dances	R. R. Bennett	Mercury SRI75086
	V. Rag		
VERDI	Requiem (Dies irae)	G. Verdi/ E. Mollenhauer	Mark MC1199

ten five-point response continua using a Likert-type scale (see Appendix A). Students were instructed to choose one of the following responses for each example: strongly dislike, dislike, undecided, like, or strongly like. Information concerning the respondent's age, grade, sex, major instrument, and years of experience was also collected on the response form.

The author desired to compare individual students' pretest and posttest scores on the MPI; a means of identifying student response forms was required. To assure compliance with the Family Educational Rights and Privacy Act of 1974, numbered identification cards were used at the pretest, collected and stored by the classroom teachers until the posttest, after which they were returned to the classroom teachers for disposal. At no time did the researcher have access to students' names, and individually identifiable test responses were not made available to the classroom teacher. By using the identification numbers, the investigator was able to match individuals' pretest and posttest responses.

The Pilot Test

The MPI was pilot-tested in May and September 1984 with 64 high school band students at Lansing Christian High School, Lansing, Michigan, and Lutheran High School Northwest, Farmington Hills, Michigan. Preference ratings for this pilot-test group are shown

in Figure 3-2. BYRD 1 and BYRD 2, the two examples chosen for the treatment procedure, were ranked eighth and tenth out of ten, respectively. Because the objective of the treatments was to measurably increase preference for BYRD 1 and BYRD 2, initial low preference for these compositions was considered desirable.

As expected, preference rankings of the pilot-test group were closely tied to the tempi of the MPI selections. With the exception of the best-liked composition, FARRAR, students' relative preferences decline in direct proportion to the tempo of each selection. Because FARRAR is in compound meter with many heavily accented eighth note passages, one might even argue that it was perceived as "fastest" by the students. If this is the case, student preference was tied to tempo with marked uniformity.

The high and low mean scores of 4.00 and 2.03, as well as visual examination of the pilot test response forms, reveal a reluctance on the part of students to choose the extremes of the five-point response scale. LeBlanc (1979, 1981), LeBlanc and Cote (1983) and LeBlanc and McCrary (1983) reported good results with a seven-point Likert-type scale with only the extremes verbally anchored. The researcher elected to retain the five-point scale, verbally anchoring each point. In so doing, it was hoped that capricious or random responses would be discouraged.

Figure 3-2. MPI Pilot Test: Preference Ratings and Rankings

Composition ID	Mean Rating	Rank	Position on Tape
FARRAR	4.00	1	6
VERDI	3.81	2	10
KING	3.78	3	1
BENCRISCUTTO	3.63	4	4
BENNETT 5	3.21	5	9
BENNETT 1	3.09	6	2
PISTON	2.63	7	7
BYRD 1	2.54	8	3
OFFENBACH	2.12	9	8
BYRD 2	2.03	10	5

Procedures for the Main Study

Three Michigan Lutheran high school bands were selected to form the sample for the main study. The number of participants was 135; the number of valid cases was reduced to 127 by absence on either of the test days. The necessity for one treatment group to perform music made random assignment of subjects impractical; each school band comprised a treatment or control group. Decisions regarding the assignment to a specific treatment or control group were based on the pragmatic considerations of each group's available time and performance ability. Interviews with the band directors determined that none of the MPI compositions had been played by the participating bands in at least four years, and that few, if any, of the students would have heard any of the MPI excerpts.

Two of the participating school bands received differing treatments (repeated listening or repeated performance); the third band served as the control group. All groups received pretest and posttest administrations of the MPI. The pretest and the posttest were identical, although the students were led to believe that they differed. LeBlanc (1979) had discovered that fifth grade students became impatient with a posttest procedure when they discovered it was identical to a previous test. To avoid such a reaction to the MPI posttest, students were told they were taking

a similar test, and the appearance of the response form was altered by using paper of a different color, following LeBlanc's (1979) suggestion.

During a treatment period of 15 school days, the group receiving treatment A (performance) rehearsed BYRD 1 and BYRD 2, two of the less-preferred MPI selections, exactly eight times. Additional repetitions would have improved the quality of performance, but Getz (1963, 1966) had suggested that additional repetitions might erode gains in preference due to fatigue. Treatment group B (listening) listened to vinyl disc recordings of BYRD 1 and BYRD 2 exactly eight times. To focus listener attention on the recordings, instrumental parts for the compositions were distributed to Group B. Group C (control) pursued its regular class activities, and was permitted to neither hear nor play the Byrd selections until posttest data had been collected.

To disassociate the MPI and the researcher from the treatment procedures, pretesting took place 21 to 28 days before treatment began. The regular classroom teachers carried out the treatments in accordance with written instructions provided by the author (see Appendices B & C); students remained unaware of the relationship between the treatment and the MPI. The researcher returned to each school 21 days after treatment ceased to administer the posttest.

Pretest and posttest data were analyzed to (a) determine whether Groups A, B, and C initially shared similar preferences in music, (b) evaluate the stability of students' responses over time, and (c) measure any gains in preference and determine whether pretest and posttest scores differed significantly for any of the three groups.

CHAPTER IV

ANALYSIS OF DATA

Test scores and descriptive statistics for this study were computed using a Statistical Package for the Social Sciences (SPSS) program. The presentation of data includes discussion of test scored for the treatment and control groups, reliability analysis of the pretest-posttest design, and evaluation of the experimental treatments.

Group Test Results

Pretest preference results for the total sample, treatment groups, and control group are shown in Table 4-1. Pretest preference rankings for all groups were combined for this exhibit, and are listed in rank-order of preference. Mean ratings are based on a scale of one to five, with five indicating greatest preference. Pretest mean ratings for all groups combined ranged from 2.43 to 4.54. Also shown in Table 4-1 are metronome markings (MM) for each MPI example. As expected, there appeared to be a strong relationship between tempo and music preference, with the faster compositions receiving higher preference ratings. Mean

Table 4-1. MPI Metronome Markings and Pretest Preference Results for All Groups

Selection ID	MM	Total Sample N=127		Group A N=37		Group B N=40		Group C N=50	
		Mean Rating	Rank	Mean Rating	Rank	Mean Rating	Rank	Mean Rating	Rank
FARRAR	144	4.25	1	4.18	2	3.95	3	4.54	1
VERDI	184	4.24	2	4.35	1	4.17	1	4.22	2
KING	184	3.85	3	4.02	3	3.75	4	3.80	4
BENCRISCUTTO	144	3.84	4	3.81	4	4.02	2	3.72	5
BENNETT 5	144	3.69	5	3.59	5	3.55	5	3.88	3
BENNETT 1	116	3.29	6	3.27	6	3.10	6	3.46	6
OFFENBACH	72	3.00	7	2.67	9	3.02	9	3.22	7
BYRD 1	72	2.93	8	2.73	8	3.30	8	2.80	8
PISTON	100	2.78	9	3.16	7	2.57	7	2.68	9
BYRD 2	42	2.59	10	2.43	10	2.72	10	2.62	10

ratings were used to rank-order the MPI excerpts, and a Spearman's rank-order correlation coefficient (rho) was computed to assess the degree of relationship between preference and tempo. A coefficient of .858 was obtained, which was significant at the .01 level. The low preference rating of Walter Piston's "Tunbridge Fair", in spite of its moderately fast tempo, seems to support LeBlanc's (1981) assertion that style is a stronger variable than tempo in determining preference response. "Tunbridge Fair", a pandiatonic and rhythmically complex work, drew grimaces and other non-verbal gestures of disapproval. It was the only composition to receive such ridicule, and one may speculate that twentieth century compositional techniques were quite foreign to the students. Bradley (1970, 1972), LeBlanc (1981), and Shehan (1979) reported negative student responses to unfamiliar musical genres.

The effects of ghe experimental treatments were to be measured by comparing the pretest and posttest scores of individuals; it was not essential to the study to demonstrate that the groups shared equivalent pretest preferences. However, because strongly divergent preferences among groups could erode confidence in the reliability of the MPI, pretest preference rankings for the three groups were tested to determine the degree of their association (see Table 4-1). The mean scores which each group accorded to each composition were transformed

to ranks, and the overall agreement of the three sets of rankings was assessed using Kendall's coefficient of concordance (W). The value of W was .897. Because the number of entities ranked exceeded seven, it was necessary to transform W to a chi square value to determine the level of significance (Siegel, 1956, p. 236). The transformation yielded a chi square of 24.235, significant at the .01 level. This analysis of the pretest rankings suggests that the three groups were very largely in agreement regarding preferences for MPI excerpts.

A number of earlier studies had found significant differences in the expressed music preference of males and females (Baumann, 1960; Broquist, 1961; MacGregor, 1968; Nolin, 1973; Rogers, 1956; Schuckert & McDonald, 1968). It was decided to compare the preferences of males and females on the MPI pretest. A simple Spearman's rho was computed between MPI rankings accorded by each gender, and a coefficient of .96 was obtained (see Table 4-2). This demonstrated a high level of agreement between the expressed preferences of males and females on the MPI.

Reliability Analysis

Because random assignment to treatment or control groups was impractical, this study employed a nonequivalent control-group design (Borg & Gall, 1979, p. 559). In this type of design, a test re-test

Table 4-2. Pretest Preference Results for Males and Females

	Males N=63		Females N=64	
Composition ID	Mean Rating	Rank	Mean Rating	Rank
FARRAR	4.20	1	4.29	1.5
VERDI	4.19	2	4.29	1.5
KING	3.74	4.5	3.95	3
BENCRISCUTTO	3.98	3	3.70	4
BENNETT 5	3.74	4.5	3.64	5
BENNETT 1	3.25	6	3.32	6
OFFENBACH	2.69	9	3.29	7
BYRD 1	2.95	7	2.92	8
PISTON	1.69	8	2.85	9
BYRD 2	2.36	10	2.82	10

Spearman's rho = .96

procedure is used to demonstrate the stability, or consistency, of subjects' responses over time. The reliability of the MPI was determined by comparing group mean pretest and posttest scores for control group C. For treatment groups A and B, pretest and posttest scores for only the eight distractor examples were scrutinized. Pretest and posttest rankings and mean ratings for all groups are shown in Table 4-3. Spearman's rho was computed for each group, and values of .923, .976, and .952 were obtained for groups A, B, and C. respectively. The time interval between testings ranged from 63-70 days (see Table 4-3). This level of stability was considered quite good in light of the long time interval between testings. LeBlanc (1979) obtained coefficients ranging from .829 for a 23-day interval to .956 for a 42-day interval.

The MPI was a self-reported inventory of attitude, and, with such a subjective measure, there is a risk that expressed preferences are not wholly accurate, or that responses will fluctuate from one administration of the test to another. The stability of responses over time on the MPI increased the likelihood that any gains in music preference could be attributed to the experimental treatments.

Effects of the Experimental Treatments

The principal focus of this study was to compare the effects of repeated listening and performance

Table 4-3. Pretest-Posttest Reliability by Group

	Group A Time[1] = 63 days				Group B Time = 63 days				Group C Time = 70 days			
	Pretest		Posttest		Pretest		Posttest		Pretest		Posttest	
Composition ID	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
FARRAR	4.18	2	4.21	1	3.95	3	3.90	3	4.54	1	4.36	1
VERDI	4.35	1	4.16	2	4.17	1	4,40	1	4.42	2	4.18	2
KING	4.02	3	3.94	3.5	3.75	4	3.80	4	3.80	4	4.00	3
BENCRISCUTTO	3.81	4	3.94	3.5	4.02	2	4.10	2	3.72	5	3.90	4
BENNETT 5	3.59	5	3.59	6	3.55	5	3.67	5	3.88	3	3.82	5
BENNETT 1	3.27	6	3.64	5	3.10	6	3.22	7	3.46	6	3.48	6
OFFENBACH	2.67	8	2.73	7	3.02	7	3.25	6	3.22	7	3.30	7
BYRD 1[2]	-	-	-	-	-	-	-	-	2.80	8	2.84	9
PISTON	3.16	7	2.70	8	2.57	8	2.87	8	2.68	9	2.88	8
BYRD 2	-	-	-	-	-	-	-	-	2.62	10	2.58	10
Spearman's rho	.923				.976				.952			

[1]Reliability testing was based on stability of mean ratings over time. Time refers to the number of days between testing.

[2]Compositions receiving treatment, BYRD 1 and BYRD 2, were omitted from the reliability analyses for treatment groups A and B.

experience on students' music preferences. The effects were measured by (a) contrasting pretest and posttest scores for MPI selections that received the prescribed treatments, (b) determining whether the two treatments increased preference for specific compositions, and (c) assessing the relative efficacy of listening and performance as modifiers of music preference.

SPSS subprogram WILCOXON was used to apply the Wilcoxon matched-pairs signed-ranks test to pretest and posttest data for treatment groups A and B, and control group C. The Wilcoxon test measured the direction (positive or negative) and magnitude of changes in individual subjects' expressed preferences for each MPI musical excerpt. The direction of change in group preference was expressed by the number of ranks above the original mean (+ranks) and the number of ranks below the original mean (-ranks). Where the +ranks and -ranks values differed significantly, an apparent change in preference had occurred. The magnitude of the change was expressed by $\underline{Z}$, which demonstrated in units of standard deviation how far the posttest mean was removed from the pretest mean. Complete findings of the Wilcoxon procedure for the MPI are shown for groups A, B, and C in Tables 4-4, 4-5, and 4-6, respectively.

Group A performed BYRD 1 and BYRD 2 eight times. The effect of this treatment on preference for BYRD 2 was especially dramatic. Of the 37 students in group A, 27

expressed increased preference after treatment. The preference of eight students remained unchanged, and two students expressed decreased preference. A Z of 4.357 was obtained ($p < .001$). Repeated performance of BYRD 1 also resulted in significant, although less-pronounced, gains in preference. After treatment, 23 students expressed increased preference, 3 expressed decreased preference, and 11 expressed no change in preference. A Z of 3.848 was obtained ($p < .001$). The results obtained with group A for BYRD 1 and BYRD 2 are highly significant, and suggest a very strong effect for the performance treatment.

A limitation of the Wilcoxon procedure was discovered upon examination of its findings for MPI example PISTON. Although this composition was neither performed nor heard, output from subprogram WILCOXON indicated that expressed preferences of group A for PISTON had decreased significantly ($Z = 2.45$, $p < .01$). A peculiarity of the Wilcoxon computation is that all tied rankings are dropped from the analysis, and remaining cases form the basis of all critical values (Siegel, 1956, p. 76). On the posttest for group A, 16 students expressed unchanged preference while 6 expressed increased preference and 15 expressed decreased preference. The large number of tied rankings, 43% of group A respondents, made it seem unreasonable to suggest that a significant shift in preference had occurred.

Table 4-4. Wilcoxon Findings for Group A (Performance) N=37

Composition ID	Ties	+Ranks	-Ranks	Pretest Mean	Posttest Mean	$\underline{Z}$[1]	$\underline{p}$[2]
KING	28	3	6	4.02	3.94	.89	.37
BENNETT I	13	15	9	3.27	3.64	1.78	.07
BYRD I	11	23	3	2.73	3.62	3.85	.00
BENCRISCUTTO	22	9	6	3.81	3.94	1.02	.31
BYRD 2	8	27	2	2.43	3.54	4.36	.00
FARRAR	22	8	7	4.18	4.21	.19	.84
PISTON	16	6	15	3.16	2.70	2.45	.01
OFFENBACH	17	10	10	2.67	2.73	.37	.71
BENNETT 5	14	11	12	3.59	3.59	.03	.97
VERDI	22	6	9	4.35	4.16	1.19	.23

[1] $\underline{Z}$ scores reflect the magnitude of group preference changes in units of standard deviation.

[2] $\underline{p}$_ indicates probability.

It was judged that the Wilcoxon results for PISTON are rendered doubtful by the large number of tied rankings. The obvious trend toward less preference in the remaining cases, however, merits attention. Because the data offers little insight into possible reasons for this unexpected occurrence, its discussion is reserved for the following chapter.

Group B listened to BYRD 1 and BYRD 2 eight times respectively. This treatment yielded results which were neither dramatic nor conclusive (Table 4-5). The most important statistic for both BYRD 1 and BYRD 2 was the high incidence of tied rankings. While both Z and p values for BYRD 1 appear to indicate significant gains in preference, group A findings for PISTON and the resulting judgement require that, for the sake of consistency, no claim be made for significant gains in preference for group B. Fifty percent of the 40 respondents expressed no change in preference for BYRD 1, while 17 of the remaining cases recorded positive gains in preference. The distractor selection PISTON recorded a gain nearly as strong as that recorded for BYRD 1, reinforcing the judgement against claiming significant effects for the listening treatment. BYRD 2 appeared to be completely unaffected by repeated listening, recording an almost equal distribution of +ranks and -ranks, as well as a large number of tied rankings.

Bradley (1970, 1971, 1972), Evans (1966), Getz

Table 4-5. Wilcoxon Findings for Group B (Listening) N=40

Composition ID	Ties	+Ranks	-Ranks	Pretest Mean	Posttest Mean	Z	p
KING	25	8	7	3.75	3.80	.37	.71
BENNETT 1	25	9	6	3.10	3.22	.85	.39
BYRD 1	20	17	3	3.30	3.80	2.52	.01
BENCRISCUTTO	19	10	11	4.02	4.10	.43	.66
BYRD 2	16	11	13	2.72	2.62	.58	.55
FARRAR	16	12	12	3.95	3.90	.20	.84
PISTON	19	15	6	2.57	2.97	2.34	.02
OFFENBACH	13	16	11	3.02	3.25	.96	.33
BENNETT 5	17	12	11	3.55	3.67	.68	.49
VERDI	20	12	8	4.17	4.40	1.19	.23

(1963, 1966), and Schuckert and McDonald (1968) found that repeated listening, of itself, increased students' liking for music. Archibeque (1966), Bartlett (1973), and Hornyak (1966) maintained that repeated listening increased music preference, but instruction was a necessary component in the process. The results of the present study (employing no instruction) did not support the first assertion, and lent only passive support to the second. Repeated listening with and without instruction certainly merits further investigation as a modifier of music preference.

Control group C participated in the pretest and posttest, but neither performed nor heard any MPI selections in the intervening nine weeks. No significant changes in group preference were recorded for any of the MPI examples (see Table 4-6). With 50 students in this group, the number of tied pretest-posttest rankings ranged from 22 to 34, with 50% or more of the students recording ties in eight of the ten selections. Especially for the examples with fewer ties, the +ranks and -ranks were evenly distributed. Z and p values indicated that shifts in preference that did occur were of low magnitude, and none were found to be statistically significant.

The test results of group C supported the reliability analysis of the MPI and suggested that the intervention of extraneous variables was adequately

Table 4-6. Wilcoxon Findings for Group C (Control) N=50

Composition ID	Ties	+Ranks	-Ranks	Pretest Mean	Posttest Mean	Z	p
KING	34	12	4	3.80	4.00	1.34	.18
BENNETT 1	23	13	14	3.46	3.48	.25	.80
BYRD 1	22	14	14	2.80	1.84	.31	.75
BENCRISCUTTO	31	12	7	3.72	3.90	.94	.34
BYRD 2	25	11	14	2.62	2.58	.06	.94
FARRAR	32	5	13	4.54	4.36	1.41	.15
PISTON	26	15	9	2.68	2.88	1.10	.27
OFFENBACH	27	14	9	3.22	3.30	.31	.75
BENNETT 5	26	10	14	3.88	3.82	.17	.86
VERDI	25	14	11	4.22	4.18	.28	.78

controlled.

Summary

The results of this study suggest that students' expressed music preferences on the MPI were based largely on tempo, and retained a rather robust stability over time. Although no attempt was made to establish the equivalence of the three participating groups, their preference rankings were shown to be highly similar. A strong correlation was also found between pretest and posttest rankings of non-treated compositions for all groups. The reliability analysis was also supported by the findings of the Wilcoxon test on the non-treated compositions.

Repeated performances of William Byrd's "Earle of Oxford's Marche" and "Pavana" resulted in significant gains in preference for these compositions. Repeated listening to the same compositions yielded no significant gains in preference. Based on available data, it was concluded that performance is a greater modifier of music preference than repeated listening.

The presence of Walter Piston's "Tunbridge Fair" on the MPI generated some interesting statistical problems for the study. First, the expressed level of preference for PISTON was not consistent with the generalization that preference is related to tempo. The cause of this inconsistency was outside the scope of this study, but it is hypothesized that the style of PISTON,

unfamiliar to the subjects, became the predominant factor in determining students' preference for it. Second, output from SPSS subprogram WILCOXON indicated that significant changes had occurred for PISTON in the two treatment groups. The credibility of this effect is doubtful; it was apparently caused by a peculiarity in the computation of the Wilcoxon test. The Wilcoxon data obtained for PISTON drew attention to the apparently weak effects of repeated listening as a modifier of preference for MPI compositions.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to measure high school band students music preferences for selected musical compositions, and to attempt to increase student liking for two compositions initially identified as less preferred. Two teaching methods, repeated listening and performance experience, were employed in attempts to increase music preference, and the relative efficacy of the methods was measured.

In a pretest procedure, three groups of high school band students expressed their preferences for ten recorded excerpts of band compositions. Students were found to express greater preference for compositions with faster tempi and less preference for compositions with slower tempi.

Two of the less-preferred compositions were performed repeatedly by one group, while another group listened to them repeatedly and the third group had no experiences with the compositions. Following the treatments, the students again expressed their

preferences for the ten musical excerpts, and the effects of the differing treatments were compared.

Students demonstrated robustly stable music preferences over time for those compositions receiving no treatment. While performance experience clearly increased music preference, gains in preference attributable to listening were found to be statistically insignificant.

Discussion

Before any conclusions could be drawn about the effects of listening and performance in this study, it was essential to establish the test-retest reliability of the MPI. Spearman's rho analysis indicated excellent stability of classwide preference rankings over time intervals ranging from 63 to 70 days. Rho values for the three participating groups were .923, .952, and .976. These values compare favorably with those obtained by LeBlanc (1979) in a similar test.

Although the consistency of student responses over a nine-to-ten week period established the overall reliability of the MPI, two of the three groups posted statistically significant shifts in preference for one MPI composition that received no treatment. Using the Wilcoxon matched-pairs signed-ranks test, Z scores of 2.45 and 2.34 were obtained by groups A and B for Walter Piston's "Tunbridge Fair". Interestingly, the magnitude of group A's decreased preference for the

composition closely matched group B's increased preference for it.

What caused these unexpected shifts of preference, and do they confound the results of the study? Unfortunately, the data offers few clues about possible causes. That the phenomenon manifested itself on the same composition in two separate groups, however, suggests that it is not attributable to mere chance. "Tunbridge Fair", although not avante-garde, makes use of changing and superimposed meters, complex harmony, and widely leaping melodies. Most high school band repertoire is less adventurous than Piston, and one may speculate that students' fluctuating preferences indicated uncertain responses to an unfamiliar musical genre. Piston's bright tempo and vigorous rhythms may have cued a positive response while the "strange" melodies and harmony, and metric ambiguity suggested a negative response. A similar phenomenon was discovered by Shehan (1979), who discovered that students responded negatively to non-western music because of the unfamiliar tonalities. Under these circumstances, reversals might be expected on two successive measures of music preference.

The researcher believes that the unexpected results obtained for "Tunbridge Fair" do not confound the results of the entire inquiry. The two groups' test scores which yielded the significant Z scores for "Tunbridge Fair" included a large number of tied rankings

(43% of respondents in group A, 48% in group B). As discussed in Chapter 4, large numbers of tied rankings may yield questionable Wilcoxon Z scores. Furthermore, some Z scores obtained for compositions that did receive treatment were considerably higher than those apparently obtained by chance, lending credence to claims that performance experience prompted truly significant changes in music preference.

The questions raised by the students' preference responses for "Tunbridge Fair" could be adequately addressed only by undertaking an entirely new inquiry. Archibeque (1966), Bradley (1970, 1972), and Chalmers (1978) have examined students' attitudes toward twentieth century music and found them to be initially negative. One might now test the stability, or certainty, of these attitudes toward musical styles that remain unfamiliar to most school musicians.

Conclusions

Previous research has established that students prefer music with which they are familiar. Familiarity can apparently be induced, and this has frequently been accomplished through repeated listening. In the present study, repeated listening produced disappointing gains in preference: Insignificant mean score gains of 0.5 and 0.1 were obtained for William Byrd's "Earle of Oxford's Marche" and "Pavana", respectively. It is likely that these gains could have been improved

considerably by combining repeated listening with instruction in musical structure (Archibeque, 1968; Bartlett, 1973, Bradley, 1970, 1971, 1972; Evans, 1966; Hornyak, 1966). Such instruction was deliberately omitted from this study to limit the possible interaction of instruction with other variables. It is less likely that gains in preference could have been improved by increasing the number of listening repetitions. Getz (1965, 1966) found that gains in preference began to erode after six to eight repetitions due to apparent fatigue. Repeated listening may indeed increase students' liking for previously unfamiliar music, but this study tends to support the assertion that instruction is an important, perhaps necessary, adjunct to the listening process. Teachers who wish to use listening experiences in their classrooms should support these experiences with instruction. Future research might explore which types of instruction best support listening, for efficiency of instruction is an important consideration when class time is limited.

Perhaps the most significant outcome of this study is that it begins to establish the effects of performance experience on music preference. It will probably surprise no one that performance has a positive effect on preference, but the relative magnitude of this effect was previously unexplored. This study suggests that performance experience is a very powerful

influence on music preference indeed: Wilcoxon Z scores for Byrd's "Earle of Oxford's Marche" and "Pavana" were 3.85 and 4.36 respectively, for the group that performed them. The students' posttest behavior underscored the effects of the treatments. While the listening group showed little recognition of the selections it had heard eight times, the performance group reacted to the Byrd excerpts with enthusiasm. Most of the students, genuinely surprised to discover a piece from their repertoire on the MPI, responded with non-verbal gestures of approval and took their parts for "William Byrd Suite" from their folders to follow along. The eight performances apparently transformed attitudes of strong dislike into those of general approval.

The findings of this study carry several implications for the teaching of school music as well as future research. Teachers will wish to choose repertoire for their performing groups of the highest possible quality and representing a broad range of historical periods and styles. Conductors of student groups are apparently able to instill in their students an appreciation of even the most "serious" art music, but the purposes of music education will not be served if conductors select a preponderance of "American Top-40" arrangements and novelty tunes. One must also question other unfortunate practices in music education in the light of these findings. A large repertoire of

reasonably well-rehearsed compositions is probably preferable to three works polished over the course of four months in order to win a state contest. Activities geared toward providing community entertainment, such as marching bands, pep bands, and "show" choirs are also suspect if class time is devoted to a severely restricted or trite repertoire.

Teachers should not be daunted by initial student dislike for any composition; it is likely that student response to the composition will become increasingly positive with successive readings. This study suggests that preference will increase even without instruction, although one may intuitively conclude that instruction could further enhance the process.

The present study confirms the role of the performing organization in music education. Participation in such organizations is much more than a character-building or social activity; it is perhaps the most effective introduction to aesthetic experience in music. If these newly-acquired music preferences prompt students to seek additional experiences with similar music via recordings, live concerts, or amateur performance, then the proliferation of school performance groups should be encouraged. Why should only 15 percent of the population learn to understand and value this important part of the human experience?

Recommendations

Any practical applicability of the present study remains speculative without additional supporting research. Because this project was a pilot study, many avenues of further investigation remain to be explored.

It would be profitable to replicate this study using a much larger sample of the population and attempting to increase preference for several compositions selected from a variety of historical styles. Many instances of increased preference for a large list of compositions are required to confidently assert that performance experience universally increases music preference. Similar studies could also be conducted using subjects of various age groupings to determine if age is a factor in receptivity toward performed or recorded music. One might also undertake a study similar to the present one, but using a seven-point rather than a five-point Likert-type scale. It is possible that this would facilitate greater discrimination in student responses and permit clearer statistical definition of any changes in music preference.

The matter of instruction combined with repeated listening merits further study. It is possible that the instruction factor interacts with performance differently than it interacts with listening, so comparisons between the two teaching methods can continue to be drawn.

The purpose of this study was to increase band students preference for two specific band compositions. It remains to be seen if preference acquired in this way can be transferred to other performing media. For example, would the students in this study continue to show approval for the William Byrd selections if they were performed on harpsichord or organ? Can preference for orchestral or vocal works be increased by performing them in wind band transcriptions?

One also questions whether preferences can be transferred to other compositions in similar styles. It is unknown how preference for a Haydn symphony would affect attitudes toward a Mozart symphony, or even another Haydn symphony.

There are many unanswered and partially answered questions concerning the acquisition of music preference. They are not only of interest to the curious researcher; they are of critical importance to all music educators. Performing music classes are laboratories where students gain musical knowledge, skills, and uniquely profound aesthetic experiences with the works they perform. By understanding the attitudes of students toward music, and the impact of classroom activities on those attitudes, teachers can better serve their students and communities, and the purposes of music education.

APPENDIX A

I.D. Card Number _____

Circle One: Male Female Band Instrument_____

Your Age_____ Years in Band _____

Grade _____

Selection

1.	Strongly Dislike	Dislike	Undecided	Like	Strongly Like
2.	Strongly Dislike	Dislike	Undecided	Like	Strongly Like
3.	Strongly Dislike	Dislike	Undecided	Like	Strongly Like
4.	Strongly Dislike	Dislike	Undecided	Like	Strongly Like
5.	Strongly Dislike	Dislike	Undecided	Like	Strongly Like
6.	Strongly Dislike	Dislike	Undecided	Like	Strongly Like
7.	Strongly Dislike	Dislike	Undecided	Like	Strongly Like
8.	Strongly Dislike	Dislike	Undecided	Like	Strongly Like
9.	Strongly Dislike	Dislike	Undecided	Like	Strongly Like
10.	Strongly Dislike	Dislike	Undecided	Like	Strongly Like

APPENDIX B

INSTRUCTIONS FOR THE LISTENING GROUP

The term examples refers to "William Byrd Suite" by Gordon Jacob, the first movement ("Earle of Oxford's Marche") and the second movement ("Pavana").

1. Do not reveal that this treatment is related to Paul Dombroske or the listening pretest the students have taken.
2. Distribute the individual instrumental parts for the examples.
3. Listen to the recorded examples exactly eight times during the three-week treatment period.
4. Each example must be heard in its entirety.
5. Draw the students' attention to their instrumental parts during each listening. Do not discuss the style, form, or harmony of the examples.
6. Do not let the entire ensemble play the examples until after the posttest.
7. When the eight repeated listenings are completed, do not listen to the recorded examples until after the posttest.

Thank you for your cooperation.

APPENDIX C

INSTRUCTIONS FOR THE PERFORMING GROUP

The term examples refers to "William Byrd Suite" by Gordon Jacob, the first movement (Earle of Oxford's Marche") and the second movement ("Pavana").

1. Do not reveal that this treatment is related to Paul Dombroske or the listening pretest the students have taken.
2. The full ensemble must play the examples exactly eight times during the three week treatment period.
3. Do not rehearse details or by sections. If it becomes necessary to stop, resume full-ensemble performance at the nearest rehearsal letter passed. Count the interrupted reading as one playing.
4. Do not discuss the style, form, or harmony of the examples.
5. Do not listen to any recordings of the examples until after the posttest.
6. When the eight readings are completed, do not play the examples again until after the posttest.

Thank you for your cooperation.

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