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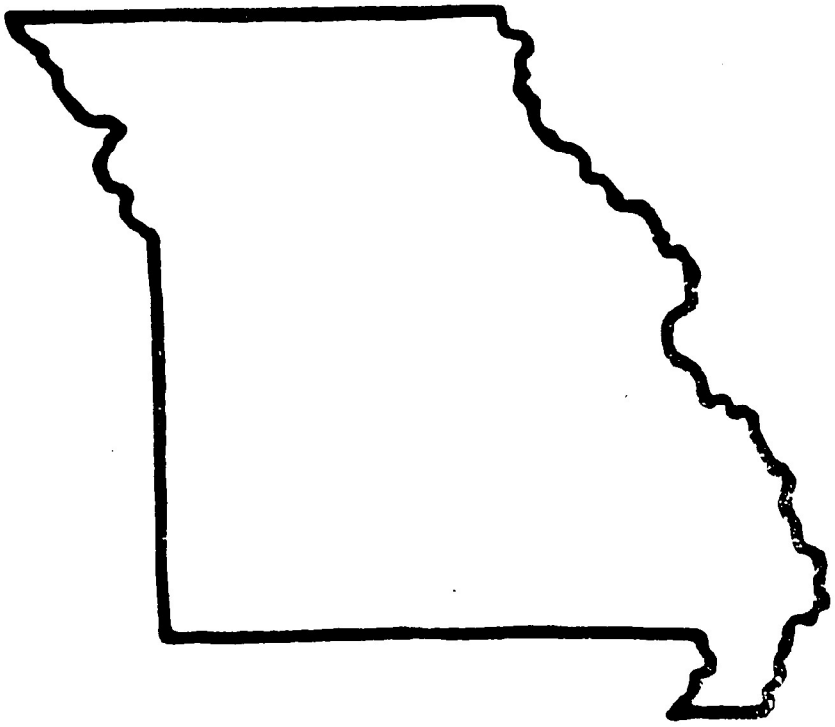

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MISSOURI GRADUATE STUDENT ABSTRACTS

PREFACE

The *Missouri Journal of Research in Music Education*, published by the Missouri Music Educators Association, is devoted to the needs and interests of teachers of music in Missouri and the nation. This issue is the thirty-first.

The members of the editorial committee are grateful to those readers who have written suggestions concerning the content of past issues and request that comments and suggestions again be sent to the editor concerning the content of this issue. We strive for a reasonable balance among music theory, history, philosophy, aesthetics, and pedagogy.

We express our deep gratitude to the Missouri Music Educators Association for their financial support to make it possible to continue to publish the *Missouri Journal of Research in Music Education*.

The Editorial Board

CORRECTION:

The research described in the article "Suitability of a Personal heart Rate Monitor for Use in Music Research" which appeared in Volume 30 of the *Missouri Journal of Research in Music Education* was supported by a grant from Yamaha Corporation of America, through the National Music Education Research Project. The editor apologizes to the authors, Albert LeBlanc, Patricia Shehan Campbell and Peggy Codding, for the omission of this information in Volume 30.

DEVICES FOR RECORDING ONGOING RESPONSES TO MUSIC IN EDUCATION AND THERAPY

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Much current research in the areas of music education and therapy requires measurement of human response to music. By recording, categorizing, and measuring responses, researchers gather information which can recommend a course of action for the educator or therapist. In this way, research and practice come together in a productive union.

In the past, measurement of musical response has often taken place "after the fact." Questionnaires, adjective lists, and free operant responses provided information about a subject's recollection of the phenomenon in question. While yielding a great deal of useful information, these methods may not paint the entire picture. There can be instances when the response is so far removed, temporally, from the actual event that subjects' memory of the perception has been altered slightly by time or subsequent events. But, if performed during the event, the act of recording could serve as a distraction from the music, again jeopardizing the accuracy of perception. There are also populations, most notably young children and some handicapped individuals, for whom "paper and pencil" responses are not practical.

In recent years, technology has allowed researchers to begin to use devices which allow for the ongoing measurement of responses to music. This became practical when the interfacing of response recording devices with computers gave researchers a means of recording subject responses in time (Madsen, 1990).

Review of Literature

While there have been many measurement tools developed for the specific needs of a particular study, a relatively small number have appeared in the literature which could be considered for a broader range of uses. The devices considered here are all capable of measuring human responses to music in real-time situations.

Clynes developed a device called the Sentograph to measure the expression of emotion in music, which he labeled Essentic Form. Clynes' research in this area led to the conclusion that "functional characteristics of Essentic Form were delineated from extensive studies of expressive finger pressure, a uniquely measurable type of expression" (Clynes & Netthelm, 1982, p. 51). The subject response portion of the device was designed to record varying degrees of pressure from subjects' fingers. A good description of the device is found in a replication by de Vries (1991):

> It consists of a small box, from which a button with a diameter of 2.5 cm protrudes; the button can give about 2 mm in all directions when pushed. Through strain gauges on bending strips and some electronic circuitry in the box, a pressure on the button is translated into a voltage that is

proportional to this pressure.

At about the same time, Nielsen (1983) developed a device designed to specifically measure subjects' ongoing perception of tension in music. A set of spring-loaded tongs, pressed in accordance with perceived musical tension, allowed responses to be recorded in real-time. This allowed the responses to be compared to the music in a direct relationship. A replication of Nielsen's experiment using the musical recording, similar populations, but a different device (a Continuous Response Digital Interface) found that the results appear to be reliable (Madsen & Fredrickson, 1993). Graphic analysis of data gathered in both experiments showed similar results from two very different devices used with separate groups of subjects.

Namba, Kuwano, Hatoh, and Kato (1991) developed a method for assessing emotional impressions of recorded music called "the method of continuous judgment by selected description." In a series of three experiments a list of descriptive adjectives was developed. Adjectives were assigned a key on a standard computer keyboard and subjects were given approximately 30 minutes of training in the use of the device. Subjects were instructed to press the key that corresponded to the adjective which described their feeling about the music at any given moment. Responses were measured in real-time by the computer. Multidimensional recording of response (more than one adjective for a given moment of music) was made possible by the pressing of two keys, one after the other, in "quick succession, like playing a trill on a piano" (Namba, Kuwano, Hatoh, & Kato, 1991, p. 261).

Another device currently in use, by a number of researchers, was developed in The Center for Music Research at the Florida State University. The Continuous Response Digital Interface (CRDI) was preceded by a device utilized by Cotter and later modified by Greer and Kuhn (Madsen, 1984). The CRDI is a potentiometer interfaced with a computer. A potentiometer is a device which allows voltage levels to be gradually raised and lowered. One of the more common uses of a potentiometer is as a "dimmer switch." The potentiometer is manipulated by the subject, either using a lever or a dial, depending upon the nature of the experiment. In one of its early uses, adjudicating high school choral performance, Robinson (1988) described the "dial" version of the device and its operation:

> The CRDI utilized a potentiometer which was enclosed in a protective case and mounted into a 1/4" thick plexiglas square (13" x 13") with only the stem of the potentiometer protruding through the plexiglas. Affixed to the potentiometer stem was a one-inch knob with a specially designed pointer and guide mechanism such that it could be moved left and right on an arc of two hundred fifty degrees. (p. 33)

The "lever" version is described in a study by Standley (1991) in which the device was used to measure subjects' level of comfort/discomfort as affected by vibrotactile and auditory stimuli:

> ...a rectangular box with a projecting potentiometer in the

shape of a lever. The lever was moved by the subject as often as desired across color coded tabs on an 11-point scale ranging from +5 to -5 with a 0 in the center. The top of the scale (+5) was labeled, COMFORT, with the bottom (-5) labeled, DISCOMFORT. (p. 125)

The CRDI has been used to measure responses in a variety of areas, including focus of attention during music listening (Madsen & Geringer, 1990; Rentz, 1992); music preferences for children (Edenfield, 1989), and adults (Brittin, 1991); adjudication in concert band (Johnson, 1992a) and marching band settings (Johnson, 1991); the aesthetic experience in music (Madsen, Brittin, & Sheldon, 1993; Sheldon, 1992); for musicians as well as nonmusicians (Madsen, Byrnes, Capperella-Sheldon, & Brittin, 1993); perception of tempo changes (Sheldon, 1991); good versus bad intonation (Madsen, Geringer, & Heller, 1991); use of rubato in musical performance (Johnson, 1992b); perceived tension in music (Madsen & Fredrickson, 1993); teacher self-evaluation (Gregory, Brittin, Edenfield, 1990) and music responses of special populations (Madsen, Capperella-Sheldon, & Johnson, 1991). It has proven to be a reliable device for collecting ongoing perceptual responses to various stimuli (Capperella, 1989; Madsen & Fredrickson, 1993). Although, over time, the reliability of this device appears to be quite strong, current research does not address the question of validity in a decisive manner.

Comparisons

The populations observed by researchers in the areas of music education and therapy are quite disparate. Age, musical proficiency, and physical limitations can be widely diverse. This can cause special problems for the researcher in search of a means of measuring the responses of a wide range of subjects to a variety of music and music related stimuli.

The Sentograph (Clynes & Netthelm, 1982) might be adapted to serve certain populations of interest to the music education/therapy researcher. Fine motor manipulation of fingers would be possible for a wide range of subjects. Developing appropriate associations between finger movements and music stimuli could allow an experimenter access to subjects' perceptions. However, replication of Clynes' research called into question the ability of subjects to accurately manipulate the device without extensive training, noting that it appeared that subjects tended to have "an individual way of handling the sentograph" (de Vries, 1991, p. 61). There might also be difficulties with populations for which such fine gradations of motor movement are not reliable or even possible.

Nielsen's (1983) device has proven itself to be reliable in measuring at least one aspect of musical perception (Madsen & Fredrickson, 1993). While functioning well for perceived "tension," the seemingly specialized nature of the subject response portion of the instrument raises the question of uses for the device in other applications. A problem for certain experimental populations might also be encountered when squeezing or pressing motions are required of the subject.

By altering a standard computer keyboard, Namba, et al, (1991) overcame the need for specialized devices and some of the problems associated with them. While these experiments show that it is possible to use

the computer keyboard effectively as the response device, the application for young and/or handicapped populations remains limited both by the need for fine motor response and the training time and/or comprehension necessary depending upon the complexity of the task. A keyboard also imposes limitations on the type of data that can be collected. Each key would have to represent a single level of response, so while recording of responses over time would be continuous, the responses themselves would start and stop with, as well as be limited by, key presses by the subject.

The Continuous Response Digital Interface (CRDI) has been employed in a variety of perception tasks. The CRDI dial can be used both to measure discreet items or points along a continuum. Rentz (1992) divided a CRDI box into sections labeled to represent different families of instruments. Subjects were then asked to move the lever to indicate which instrument family was being focused on at any given time during a recording. Madsen and Fredrickson (1993) replicated the work of Nielsen (1983) by asking subjects to indicate the perceived "tension" in a piece of music by moving a CRDI dial along a continuum or "tension curve." The results matched those collected by Nielsen using a device designed to simulate a feeling of tension. Here a graphic representation was able to substitute for the kinesthetic experience while taking a continuous measure along a continuum.

Brittin (1991) used CRDI dials for discreet and continuous measurement simultaneously by asking subjects to use one dial to classify different excerpts of popular music and, at the same time, rate their enjoyment of the music being played using a second dial. On the other end of the spectrum from a complex perceptual task involving two different forms of measurement, Madsen, Capperella-Sheldon, and Johnson (1991) utilized a CRDI lever and box to measure perceptions of various musical stimuli by handicapped and non-handicapped children. All the children, ages 2 to 5 years, were able to manipulate the lever and indicate preference along a continuum by moving between happy, neutral, and sad faces affixed to the lever box.

In one experiment, both versions (lever and dial) were used for recording different aspects of subject response. Standley (1991) gave subjects a CRDI lever which they moved to indicate the level of comfort or discomfort during a stimulus. At the same time the researcher monitored subjects' heart rate and recorded it by manipulating a CRDI dial marked with pulse beats-per-minute. Fredrickson (in press) had subjects use a dial to rate the ability of a second subject to play "in ensemble" with a band. The researcher also used the dial in a post hoc analysis of videotapes where eye-contact between an instrumentalist and conductor was recorded for later analysis. In these two examples the device was used to both record subjects' perceptions of a musical event, and to record data as observed by a researcher.

The data collected under these circumstances often lends itself to graphic analysis. A sample of a graph of a single subject response to a stimulus might appear as shown in Figure 1.

The researcher can use this information to pinpoint instances in time, when a subject responds during a musical stimulus. From there, conclusions might be drawn as they relate to what was happening in the stimulus during the point at which the subject response went up (or down) depending on the task.

Although a fairly large body of extant research using the Continuous

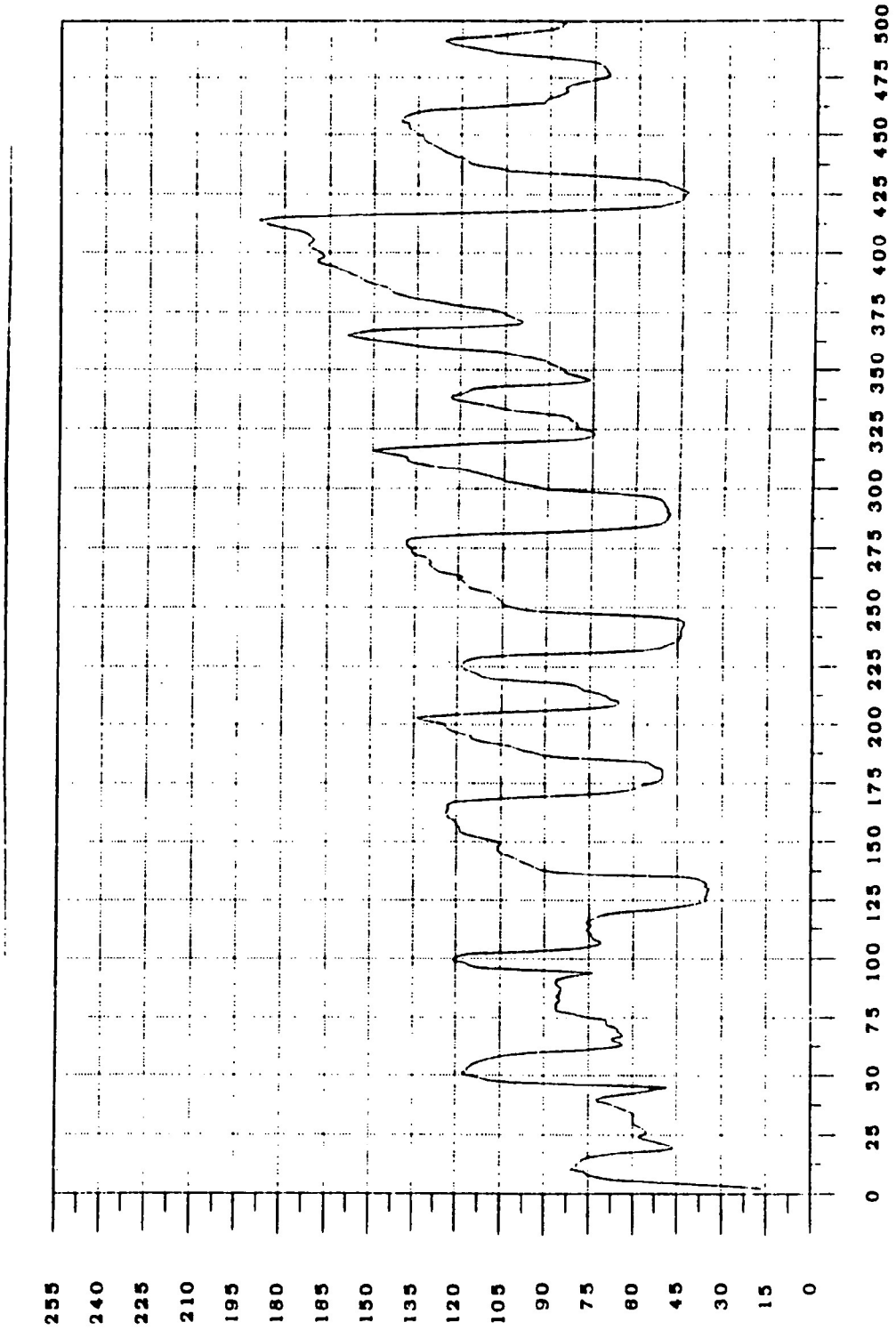

Figure 1. Graph of Sample Response Data

Response Digital Interface exists, some important questions about its use remain unanswered. The nature of perceptual research can make it difficult to establish validity (knowing exactly what is being measured, since it is the subjects' perception) even when reliability between and among subjects or devices has been established. Future research will need to address this as part of the larger question of exactly what human perception is. Another area includes the populations for which this is a useful device. Severely physically handicapped subjects might still find the dial and/or lever too limiting for accurate recording of responses.

Considerations

For the researcher considering the use of any device to record ongoing perceptions of musical events there are a number of considerations. The first might be the population. Will there be children (what ages), adults, and at what levels of musical experience? Will the population be handicapped in some way either physically or mentally? What types of responses are they capable of making?

The second might be the type of response necessary to collect the data. Will it be choosing one out of a group of several possibilities (the strings are playing, now the brasses are playing, etc.) or a yes/no type of response (the player is looking at the conductor vs. the player is not looking at the conductor)? Will it be a measure somewhere along a continuum, and if so, will the continuum be delineated by a Likert-type scale, a succession of sad through happy faces, numbers, letters, free zones simply going from negative to positive or will there be no visible representation for the subject so the response is gauged kinesthetically or aurally?

Data could be taken by observing a subject doing something. It would seem best for subjects to record their own responses to music directly, but there are cases in which an observation of a subject's reaction to a musical event can yield useful information. Does the musician appear to be on-task or off-task at any given point? What is the ensemble director doing at that moment? At what level is the "intensity" of the music teacher or even the student teacher in that setting? What is the client's heart rate or temperature, level of physical activity, eye-contact or attentiveness?

An important question is, how often is it really necessary to sample the reactions of the subject? If an event takes place over a long period of time (days, weeks, months) is a device for continuous measurement really necessary? Would simpler means of record keeping yield just as much information? Could the event be time-sampled rather than continuous? Even though the technology is available, does it provide more useful information? The latter may be the most important question the researcher asks in relation to any given situation.

The method of data analysis used must also be considered. The use of statistical and/or graphic analyses should be weighed as they relate to appropriate usage and the information they import. Statistics for their own sake add little to knowledge, but the proper use of statistics can lower the probability that the researcher is giving false or misleading information.

It would seem that, when it is appropriate, the technology is available to provide researchers in music education and music therapy with the means to record ongoing responses to music related activities. As in any field, time

and human curiosity will provide more advancements. But the primary focus of research must be the gathering of information to facilitate effective music education and therapy.

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THE EFFECT OF TIME FACTORS AND LEARNING ON SINGERS' PREFERENCE FOR SELECTED CHORAL REPERTOIRE

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Choral conductors are generally confronted with the responsibility of building a concert program that is both engaging and challenging for singers (Brunner, 1992). Unfortunately, this issue is not often addressed in conducting or music education texts. Conductors must frequently obtain repertoire and programming ideas from reading sessions or from experience--their own or that of others. While collecting programs may help, by providing ideas for building a concert program, the task is complicated by the specific needs of each group and of each concert occasion.

Decker and Kirk (1988) explained that the conductor of a pre-professional choral ensemble must be an interpreter of music, a teacher of skills, and an organizer of experiences; repertoire selection is an important contributing factor in the attainment of these goals. They also stated that criteria for repertory selection should include the "vocal and emotional maturity of singers; the attainment of teaching-learning objectives, with concern for age level, musical readiness, and rehearsal time available; the development of artistic potential and musical responsiveness; and the building of interesting and engaging concert programs that satisfy philosophical and practical considerations" (p. 151).

Concert programs can be developed using a number of methods which include a unifying theme (special occasion, specific composer, specific historical period, etc.), an historical continuum, sequenced tonalities, and so forth. Swears (1985) stated that "the choral performance should be organized with two primary concerns in mind--what will provide the best performance order for the chorus and what will be the most satisfactory presentation as a whole for the audience" (p. 170). On the other hand, Green (1987) suggested that the conductor consider interest, contrast, and sequence in programming with a particular emphasis on the audience's point of view. Regardless of reasons for making selections, texts imply that the program should have a shape, building up to some point of intensity.

Studies show that repeated listenings and listening instruction tend to increase likability of musical selections (Bartlett, 1973; Bradley, 1971; Bradley, 1972; Brown, 1978; Getz, 1966; Hargreaves, 1984; LeBlanc, 1982; Moskovitz, 1992; Price, 1988; Price & Swanson, 1990). Finnäs (1989) summarized a series of studies which showed that repeated listening to serious musical pieces or excerpts may lead to higher preference. Studies concerning the effect of familiarity with music are also discussed. All of the above cited studies deal with listening as a static activity, as opposed to the evolution of certain listening skills such as those which occur over time and are often developed by performing in an ensemble.

Lantz (1991) addressed specific questions regarding factors influencing preference decisions for selected choral repertoire. Specific questions addressed by Lantz' study included the effect of group membership on preference ratings for selected choral repertoire, the difference between teacher and student preferences, and the effects of age and educational

experience on preference ratings. Additionally, the author investigated whether or not there were specific factors which influenced preference decisions. Results indicated that group membership had an effect on preference ratings, that no factors were significantly more influential than other factors on preference decisions, and that students' "most" and "least" favorite selections were different than teachers'. Lantz suggested that further research should include the measure of singers' preferences over an extended rehearsal period through performance.

The present study was designed to examine whether or not singers' preference for selected repertoire reflects commonly held ideas of concert programming. Additionally, the effect of learning and time on preference were investigated. Nested within the study were questions regarding perceived advantages of single and multiple performances and singer preference regarding one or the other.

Method

Subjects ($N = 50$) were singing members of an auditioned choral group at a large southeastern university. Though the group consisted of 65 members, not all members went on tour, and of those that did go on tour, not all completed both the pretour and posttour surveys. The mean age was 20.9 years, with a range between 18 and 30 years of age. Of the fifty, 7 were Freshmen, 11 were Sophomores, 12 were Juniors, and 20 were Seniors; forty were music majors and 10 were non-music majors. There were 16 Sopranos, 13 Altos, 10 Tenors, and 11 Basses.

Subjects were asked to fill out a survey prior to their concert tour and a second survey following the tour. On the survey, subjects were asked to rank-order their preference for the six sections of the concert program. Additionally, they were asked to state their first and second preferred pieces. Finally, subjects were asked to state reasons for selection preference. Program and program section delimitations are included in Table 1.

Results

Group means for rankings of each program section were calculated, thus treating the ranking as if it were an individual rating of the section on a scale of 1 (best) to 6 (worst). Means for pre- and posttour ratings by sections are reported in Table 2 and Figure 1. Mean ratings were then used for comparison purposes. No significant differences were found when paired samples t-tests were run on pre- and posttour rating of program sections (Section 1, $t = .093$, $p = .926$; Section 2, $t = .552$, $p = .584$; Section 3, $t = .051$, $p = .051$; Section 4, $t = .151$, $p = .881$; Section 5, $t = 1.033$, $p = .306$; Section 6, $t = 1.609$, $p = .114$).

Paired sample t-tests comparing program sections in pretour survey results revealed significant differences between Sections 1 and 2 ($t = 3.271$, $p = .002$), Sections 1 and 3 ($t = 3.564$, $p = .001$), Sections 1 and 5 ($t = 4.633$, $p = .001$), Sections 3 and 6 ($t = 3.064$, $p = .004$), Sections 4 and 6 ($t = 2.695$, $p = .010$), and Sections 5 and 6 ($t = 2.796$, $p = .007$). Paired sample t-tests comparing program sections in posttour survey results revealed significant differences between Section 1 and 2 ($t = 2.953$, $p = .005$), Sections 1 and 3

Table 1

Program order and selection titles/composers

Section 1	
With a Voice of Singing	Kenneth Jennings
Ave Maria	Franz Biebl
All You Works of the Lord	Kenneth Jennings
Section 2	
Sing Joyfully	William Byrd
When David Heard	Thomas Weelkes
Hosanna to the Son of David	Orlando Gibbons
Section 3	
Jauchzet dem Herrn	Johann Pachelbel
Section 4	
Trois Chansons Bretonnes	Henk Badings
La Nuit en Mer	
La Complainte des Ames	
Soir D'Ete	
Section 5	
Get to Bed	arr. Derek Healey
Danse, mon moin', dansel	arr. Derek Healey
Tvenne folkvisor	Lars Edlund
Ant han dansa med mej (The Dance)	
Femton finnar (Fifteen Finns)	
Section 6	
John Saw Duh Numbuh	arr. Parker-Shaw
Death is Gonna Lay His Cold	André J. Thomas
I Will Pray	Richard Smallwood

Table 2

Pretour and Posttour mean ratings by program section

Section	1	2	3	4	5	6
Pretour rank	2.52	3.64	4.08	3.92	3.84	2.90
Posttour rank	2.50	3.54	4.48	3.90	4.00	2.58

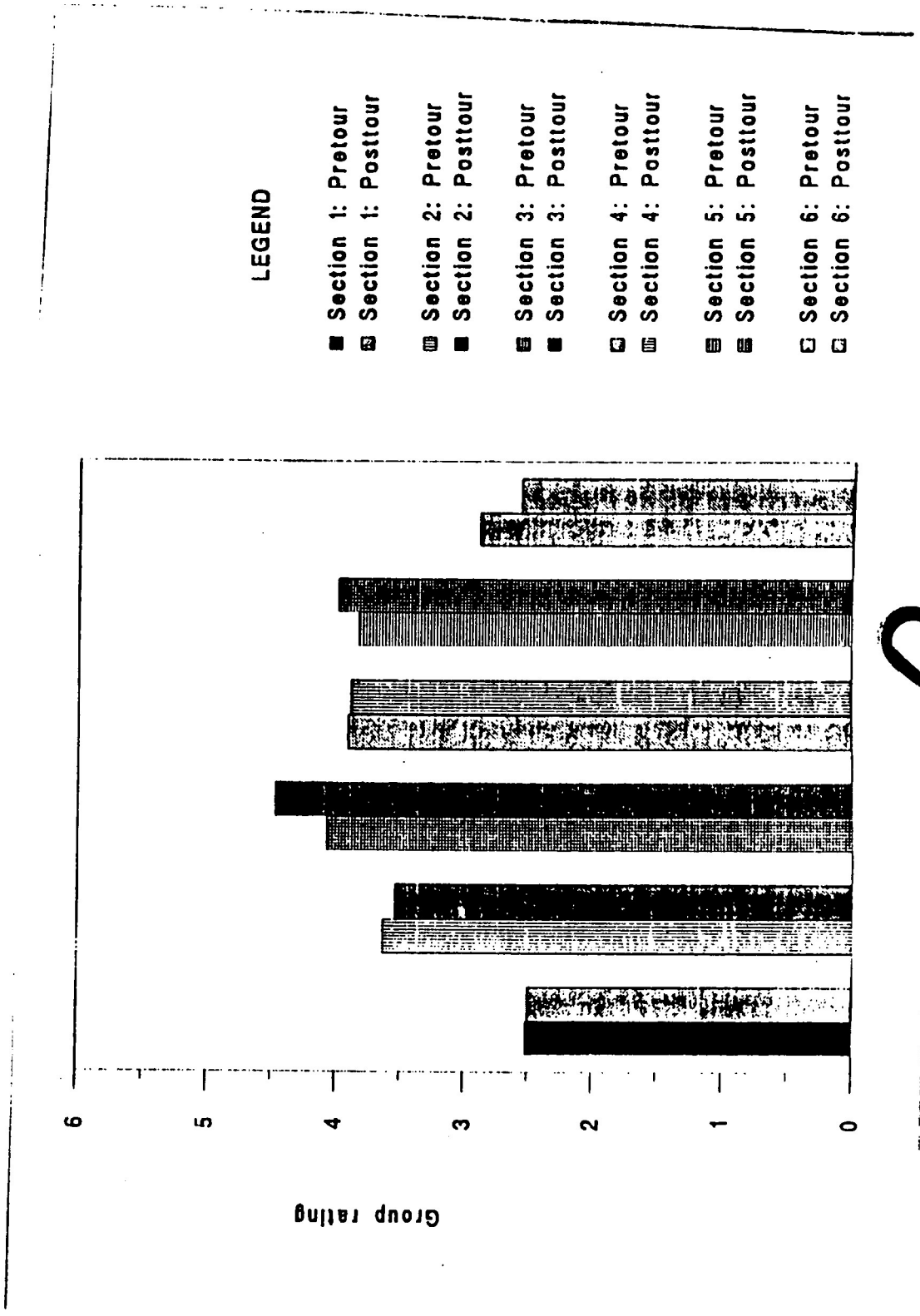

Figure 1. Pre- and Posttour Comparison of Program Sections

(t 6.114, p=.001), Sections 1 and 4 (t=3.862, p=.001), Sections 1 and 5 (t=5.526, p=.001), Sections 2 and 3 (t=2.974, p=.005), Sections 2 and 6 (t=2.577, p=.013), Sections 3 and 6 (t=5.112, p=.001), Sections 4 and 6 (t=3.430, p=.001), and Sections 5 and 6 (t=5.124, p=.001).

Percentage responses for individual pieces ranged from 0% to 18%. Combined percentages (first and second choice) for each piece are reported in Table 3.

In free-operant responses, subjects supplied specific reasons for selection preference. These ranged from personal comments, such as "fun to perform," "it's neat, it's cool, it's great," and "it kills the audiences" to musical comments such as "rich harmony," "the polyphonic style," and "Baroque/Renaissance color."

Of the 52 responses to the question "What, in your opinion, are the advantages of a single performance of a program?," 5.7% stated no advantages, 3.8% were audience related. An equal number of comments dealt with having a single opportunity to give it their best or attaining appropriate performance level, and less time involvement with the music or freshness and spontaneity of program.

In the 66 responses to the question "What, in your opinion, are the advantages of multiple performances of a program?," 62.1% were related to improvement or the opportunity to correct mistakes; 13.6% dealt with musical growth, 6.1% mentioned reaching different audiences, 6.1% on performing in different settings, 6.1% travel and social ties with colleagues, 3% with time issues, and 3% commented on reduced stress for the singers.

When asked about number of times a program should be performed, 2 subjects indicated that they preferred to perform it once, 24 indicated that they preferred multiple performances, while 24 indicated no preference for one or the other.

Discussion

This study was an empirical investigation of commonly held ideas of concert programming; specifically, examining whether or not singers' preference for selected repertoire reflected some of those concepts. Decker and Kirk (1988) suggested that "each group of selections in a well-conceived concert will have its own shape and its arresting moments" (p. 158). In this case, it appears that, when graphed, singers' preference indications for program sections show a definite curve which peaks at Section 3 and then decreases. Upon examination of data in Table 3, one might conclude that each program section did indeed have its own shape, and that the last section showed an increase in preference through each musical selection.

Paired sample t-tests also showed some significant differences between sections. In analyses of both pre- and posttour data, significant differences were found between Sections 1 and 2, 3, 4, 5, and between Sections 6 and 3, 4, 5, demonstrating a definite shape. Significant differences were also found between Sections 2 and 3 in posttour analyses demonstrating the achievement of a higher peak in posttour preference ratings.

The piece receiving the highest percentage rate for both pre- and posttour ratings was *When David Heard* by Weelkes (pretour=17%, posttour=18%). Only one piece, *Get to Bed*, achieved 0% preference, and

Table 3

Combined percentage; first and second choice

Section 1	Pretour	Posttour
With a Voice of Singing	3	1
Ave Maria	15	17
All You Works of the Lord	11	9
Section 2		
Sing Joyfully	1	1
When David Heard	17	18
Hosanna to the Son of David	1	1
Section 3		
Jauchzet dem Herrn	9	4
Section 4		
Trois Chansons Bretonnes (combined)	2	1
La Nuit en Mer	5	4
La Complainte des Ames	4	5
Soir D'Ete	2	2
Section 5		
Get to Bed	3	0
Danse, mon moin', dansel	1	1
Tvenne folkvisor (combined)	0	1
Ant han dansa med mej (The Dance)	2	4
Femton finnar (Fifteen Finns)	5	3
Section 6		
John Saw Duh Numbuh	3	1
Death is Gonna Lay His Cold	7	11.5
I Will Pray	9	15.5

this in the posttour survey only. *Hosanna to the Son of David, Get to Bed,* and *Danse, mon moin', dansel* were prepared and conducted by graduate assistants. This may have been a confounding variable in preference ratings for these selections. The two pieces receiving the greatest percentage increase, between pre- and posttour, were *Death is Gonna Lay* by Thomas (4.5%) and *I Will Pray* by Smallwood (6.5%). Both these selections were spirituals and included soloists. *Jauchzet dem Herrn* by Pachelbel showed the greatest decrease in pre- to posttour percentages (5%). Interestingly enough, though this piece decreased in preference ratings, when it was considered as a section of the program, it received the highest rating of all. It may be that its double choir composition and level of difficulty contributed to its position as the culminating point of the program. This piece may have presented the greatest challenge to the choir overall, due to its compositional style and because it was in German. Time passage (tour) and learning (rehearsals and

performances) seemed to affect preference somewhat, but preference contour of the general program was maintained.

A wide variety of advantages for single and multiple performances were listed by survey participants. Of particular interest were comments regarding possible boredom with music that was performed several times (included under the rubric of "freshness and spontaneity of a single performance"). This type of comment might encourage educators to help singers continue to become more musically sophisticated as they rehearse and perform repertoire in order to keep the experience "fresh." Ideas for technical improvement and musical refinement should be a part of every repetition in order to encourage on-task performance and musical growth. Nevertheless, despite the reoccurrence of this type of comment, when singers were asked about advantages of a single performance, 48% of those surveyed indicated that they preferred multiple performances and 48% indicated that they had no particular preference. This may suggest that the choir had been challenged by the repertoire and perhaps indicates an appreciation for a second chance at singing the program.

Programming may be the crux of a performance ensemble's survival, both from the singers' and audience's point of view. As educators, it is our responsibility to provide learning experiences for our students which engender an appreciation for a wide variety of styles of music and understanding of the need for repetition in the process of refining selections in performance. Additionally, it may be to the students' and ensemble's advantage to perform the concert program more than once, given that so much time and effort is put into the learning of the material. Further research might focus on different types and sizes of performing ensembles or on a variety of concert programs. Additionally, an investigation of this type could be done over the course of a whole semester or from the introduction of a specific piece, to its performance. Findings might help choral educators better understand what styles of music or types of compositional elements are both challenging and rewarding for their students.

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THE EFFECT OF LIVE VERSUS VIDEOTAPE INSTRUCTION ON HIGH SCHOOL SINGERS' FRENCH DICTION

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It has been said that the beauty of the choral art is found within the unique expression of words through music. Music may enable hidden thoughts and ideas to emerge from the text evoking a more powerful impression on the listener. Douglas McEwen stated in a text by Glenn that "special music seems to be that which illumines and gives dimension to the textual idea in a particularly expressive way" (McEwen, 1991, p. 84). One responsibility of the conductor is to bring the music to life, and for this to occur, the text should flow naturally from the musical phrase. A challenge faced by choral conductors is the unification of word flow during ensemble singing. It is through the application of diction training that the choral conductor unifies the individual sound, allowing the text to be understood without diminishing the impact of the musical phrase.

Very little research has been devoted to the pedagogy of non-English diction in the choral rehearsal. The French language in particular is avoided, due in part to the difficulty it presents regarding unification; and, because there are fewer sounds that are equivalent in the English language, especially when compared to languages such as Latin and Italian (Dahlman, 1991; Epp, 1993; Grubb, 1979). French is a "legato" language, and one that has inherent singing qualities which are conducive to training proper breath support and tonal resonance in young singers (Bernac, 1970; Grubb, 1979). The language should not be an obstacle to the beauty of the choral music, but rather may enhance the possibilities for its realization.

Through the review of literature the researcher found an extremely small percentage of French choral music taught in today's choral music programs (Wolverton, 1990). Many explanations may be offered: (a) French diction takes too much time to perfect, (b) French literature is not suited to one's particular ensemble, or (c) the director is not "comfortable" with French. In a recent study by Epp (1993) 198 respondents were asked to indicate their level of comfort for 14 non-English languages using a Likert scale of 1-5 (1 = least comfortable to 5 = most comfortable). The French language yielded a mean comfort level of 2.65. It was apparent that further French diction instruction would be useful for the secondary public school choral director. Since choral rehearsal time is precious to most choral directors, efficiency is key to teaching technique. The time required for diction training within the rehearsal may be minimized if incorporated into the warm-up procedure. "Exercises and vocalises in the warm-up period are invaluable vocal training as well as ideal opportunities to emphasize specific vowel sounds" (Decker, 1977, p. 7). Decker also suggests that singers need to memorize vowel sounds physically and mentally before they can produce them effectively. Memorization results from repetition (Peters & Miller, 1982). In order to produce correct vowel sounds one should have many opportunities for repeated practice. It would seem beneficial then, to vocalize on many different vowels and not concentrate solely on the Italian-based sounds. Before presenting a

selection to the choir that contains unfamiliar vowel sounds, singers should experience these new sounds through the exercise routine, and begin to memorize the feeling of producing less familiar vowels. Subsequent rehearsal of the new selection should be more efficient and successful.

The effective teacher is one who presents material in a variety of ways to stimulate the learning process. Audio, video, and computer-assisted instruction have become popular teaching tools in the foreign language classroom. Studies show students enjoy learning and retention levels are high when computer and video-assisted learning takes place (Otten, 1988; Klinghammer, 1990; Tomizawa, 1991). Instructional videotapes within the choral music classroom have been limited to conducting, rehearsal technique, and vocal technique (Adams, 1991; Ehly, 1988; Haasemaan & Jordan, 1989; Pfautsch, 1988). Therefore, the purpose of this study was to determine the effectiveness of using videotape versus live instruction to teach French vowel sounds during choral warm-up procedures.

Method

A total of 120 high school choral singers were subjects for this study. The singers were members of the select ensemble from six schools. the investigator selected schools known to have outstanding choral programs based on the following information: superior contest ratings in the past five years, program growth and stability, and the investigator's personal knowledge of each director. The enrollment of each school was between 700 and 1400. The number of students ($N=89$) completing the study reflects a 26% mortality rate. Directors were asked questions concerning the use of French diction in the particular ensemble, and were chosen to participate if the students had never been exposed to French in choir. The students were given a Students Diction Survey (SDS) to complete before the investigator's first visit. Student stating any current or prior experience with French were asked not to participate in the lesson and taping procedures, but were asked to complete a French Student Evaluation form answering questions concerning each lesson to insure that all students were on task.

Time restriction is a factor when planning any rehearsal, and was therefore, an important consideration in the design. The lessons were designed with a variety of concise instructions and exercises, allowing many practice opportunities with further instruction, and closing with a sense of anticipation toward the next lesson. Reinforcement was more difficult to plan, and was offered in association with the concept of intrinsic motivation. By giving students enough information in a variety of ways, thus enabling them to form the correct response, the students' innate drive for competence might become self-sustaining.

Pre-Treatment Evaluation

During the first class meeting students were separated into "participating" and "non-participating" groups. This distinction resulted from information gathered via the SDS. The two Testing Phrases (TP1 and TP2) were distributed (see Figure 1). The melodies were composed to enhance the natural syllabic stress of the French text. Range was limited and conducive to any voice type, and the tunes were written to be sight-read with ease. The

students listened as a group to TP1 as it was played on the piano. They were asked to sing TP1 on the syllable "la" two times. The investigator paused for ten seconds while the students silently read the text to themselves with no diction instruction given. Students were instructed to make an educated guess as to what they thought the words might sound like. Following this procedure, students were asked to read the text silently in rhythm while the melody was played on the piano. Students were then asked to sing TP1 on "la" a third time. The same procedure immediately followed for TP2, with the total time for the melody introduction portion of the pre-treatment evaluation taking approximately 10 minutes. Taping of individual students' responses took place in a quiet room away from the choral rehearsal room. Students entered and signed their names on a numbered list indicating individual tape numbers. Students were recorded on high quality magnetic tape using a Shure unidirectional microphone and a Marantz PMD 420 cassette recorder with the recording level set between 7 and 8, standing approximately 3 to 4 inches from the microphone.

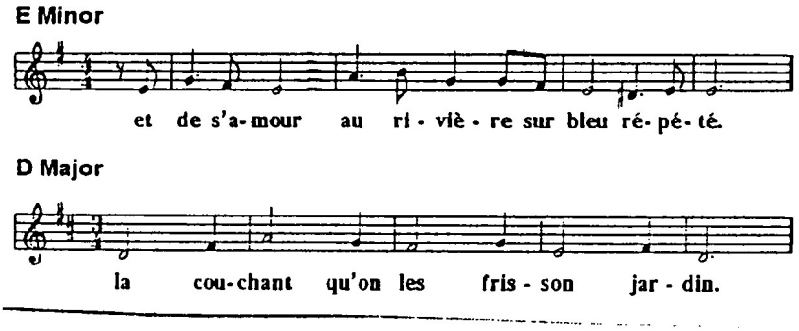

Figure 1. Testing Phrases

Before taping, TP1 was played on the piano to refresh the memory and to aid in relaxing the students. Motivation and encouragement were considered a key factor at this point. Each student was told there would not be a "grade" given for the response but that it was important to make the most educated guess possible and to sing with confidence. The same procedure immediately followed using TP2. Pre-treatment evaluation taping required approximately 3 minutes per student. Students not participating in the study stayed in the rehearsal room working on assignments given them by their choir director or practiced in other rooms.

Experimental Group Treatment #1

The six ensembles were randomly divided to receive video instruction on either Lesson 1 or Lesson 2. Three groups received video instruction on Lesson 1, the remaining three received live instruction. The groups received the opposite method of instruction on Lesson 2. Care was taken by the investigator to make lessons as much alike as possible except for the experimental variable (see Figure 2).

At the first lesson, the appropriate worksheet was distributed. For students receiving video instruction, a brief scenario was described, explaining

LESSON 1 SCRIPT:

We will begin with exercise 1 on your song sheet, reviewing vowels you commonly sing and placing them in French words. Repeat [i] [e] [ ]. Sing after me. **SING EXERCISE 1A**

The two words will utilize the flipped or rolled "r." Repeat "ri." Use a light "d" sound if you are unable to flip the "r." **SING EXERCISE 1A & B**

There are two "a" vowels in French, a bright and a dark. Repeat [ ] [a]. We will use the bright [a] in this exercise. **SING EXERCISE 1C**

The word "au" is simply the [o] vowel but with lips pulled over the teeth. Say "au." The [u] is one for which you really need to pucker. Say "s'amour." **SING EXERCISE 1D**

Now to the French pucker vowels. The first sound will have the most pucker and it starts with the [i] vowel. When saying [i] keep the sides of the tongue on the upper molars and the tip on the bottom front teeth. Now pucker your lips over that tongue position. You should feel lip tension...

LESSON 2 SCRIPT:

Bonjour Classe. Today before we begin singing we are going to experiment with some new sounds. These are the French nasal vowels. The tone for these vowels is resonated in the nasal cavities, it is never placed in the nose. The feeling is somewhat like a yawn that might be felt behind the nose. The key to producing a correct nasal vowel is to start with the correct foundation vowel and then move the back of the tongue to achieve the nasal quality. In the following exercises we will end with a word using the nasal vowel. The squiggle mark above some vowels is called a tilde and indicates that it is a nasalized vowel. Let's practice first with the dark [ɑ̃]. When you sing [ɑ̃] lift the back of the tongue slightly, being careful not to close the throat by touching the tip of the tongue on the bottom front teeth.

SING EXERCISE 1. Sing after me. Remember to only lift the back of the tongue slightly. Sing again after me.

Now begin with the open [ɛ̃] vowel. The middle of your tongue should drop as the back lifts slightly. Your mouth should be in a half smile when nasalizing this vowel. It may sound a little funny to you. Repeat [ɛ̃]. **Sing after me.** Now let's alternate between "dans" and "din" to feel and hear the difference. **Sing after me "dans" "din," "dans" "din."**

The next vowel to nasalize will be the sound in the word "bleu." Repeat [oe] [œ̃]. Now keep that tip on the bottom front teeth and leave your month in a half pucker. **Sing again after me.**

Alternate between these three nasals. Be sure to pucker more on "d'un" and think [ɑ̃] for "dans." **Sing after me "dans" "din" "d'un," "dans" "din" "d'un."**

Remember when producing a nasal, never allow the tip of the tongue to touch the hard palette making an "n" sound...

Figure 2. Lesson Scripts

how and why video may be used in a choral rehearsal. This scenario was used primarily as a motivation technique. The students receiving live instruction were given a brief explanation concerning the use of a script in the lesson. Both introductions were less than one minute, and Lesson 1 was approximately 15 minutes in length.

Following the lesson, students returned to the taping facility in the order of the pre-examination taping. No further instruction was given other than a single playing of TP1 for each student to refresh the memory and to aid in relaxation. Post-treatment taping of TP1 took approximately 30 seconds. Students were taped individually, therefore some tested immediately after instruction, others waited up to 20 minutes after instruction. An ANOVA was applied to study the scores as they related to time delay.

Experimental Group Treatment #2

Lesson 2 was presented in the final class meeting. Lesson worksheet 2 was distributed. The second method of instruction was presented and the above scenarios were again paired with the appropriate method. Lesson 2 was approximately 15 minutes in length. The final taping immediately followed the presentation of Lesson 2. No further instruction was given other than a single playing of TP2. Post-treatment taping of TP2 took approximately 10 seconds. At the close of each lesson the lesson worksheets and the evaluation forms were collected.

Selection of Adjudicators

The adjudicating procedure was crucial to this project. Six judges were selected to participate in the evaluation procedure of the study. Three were chosen due to their extensive choral conducting background and experience with French choral literature at both the high school and college levels of instruction, and three were chosen on the basis of their experience as professional singers and voice teachers, and their knowledge of the French language in song.

Tape Evaluation

Two master tapes were created from the individual tapes ($N = 89$) with the four selections per student randomly mixed to control for possible judging bias (Fisher, 1989). Three master tape sets were made presenting individual students' responses in differing order to control for judges' fatigue (Fisher, 1989). The first set began with student number 1, the second set began with student number 30, and the third set began with student number 60. After evaluating each group of ten students judges were instructed to take a three-minute break. At the mid-way point in the tape evaluations, judges took a 15-minute break. Sony UX90 High Bias Extra Uniaxial tape was utilized in each master tape set, and a Sony FM/AM Stereo Cassette-Corder CF3-W301 was used to create the master tape from the individual evaluation tapes.

All judges met at the same time to complete the evaluation, and were divided into three pairs (choral expert and vocal expert in each group, matching the number of master tape sets). Each was given a packet which included a letter of directions to evaluators and evaluation forms. For each student evaluation, judges circled any French word(s) from TP1 and TP2 that they considered inaccurate and rated the diction of each sung phrase on a Likert

Scale of 1 = worst to 5 = best. Because judges' evaluations revealed that half had been trained in "standard" French and half favored pronunciations from regional dialects, only the evaluations of the three trained in standard French were used since the taped lessons employed the standard French pronunciation. An inter-judge reliability rate of 81% was calculated for these three for the data as outlined by Madsen and Madsen (1981).

As an introduction to the evaluation procedure the investigator presented the directions to the adjudicators verbally in order to answer any questions concerning the form and to clarify possible pronunciation questions. The entire evaluation process took approximately 3 hours.

Results

Data concerning the dependent variable of this study (the accuracy of French diction) were analyzed using the MYSTAT computer program (Hale, 1992). The collected data were based on a Likert 1-5 rating scale (1 = worst, 5 = best). A series of independent and dependent *t*-tests were applied to determine if significant differences existed between video and live instruction methods, and also between TP1 and TP2. An Analysis of Variance (ANOVA) was applied to investigate the difference in scores as a function of the amount of time between instruction and testing. Data indicated differences in the groups' pretest scores ($t = 1.985$, $df = 87$, $p = .05$) therefore gain rather than posttest data were used in the analysis.

An independent *t*-test was used to compare the gain scores across the instructional methods. Results (Table 1) indicated no significant difference in each group's mean gain score ($t = .773$, $df = 87$, $p = .442$) since both instructional methods yielded an approximate gain of 1 point for TP1.

An independent *t*-test also was used to compare the means of the gain scores between instructional methods for TP2. Results again indicated no significant difference in each group's mean gain score ($t = .201$, $df = 87$, $p = .841$) as both instructional methods yielded a gain of over 1 point. These results revealed equivalent learning (change) occurring for groups receiving taped or live instruction.

An ANOVA was performed on the combined groups' posttest data ($N = 87$) to evaluate the possible effect of time delay on retention of the information. It was determined that up to five students in each of the six choir settings were able to tape during a 5 minute time period. Four groupings resulted with increasing increments of 5 minutes each (Table 2). Data indicated there was no significant difference in posttest scores of four groups for TP1 ($F[3,83] = .303$, $p > .05$) as a function of test administration delay.

A second ANOVA was performed on the combined groups' posttest scores for TP2. Results were found to be similar to those of TP1 (Table 2). Data indicated there was no significant difference in posttest scores of four groups for TP2 ($F[3,83] = 2.05$, $p > .05$) as a function of test administration delay. Those students testing 20 minutes after instruction had scores similar to those testing immediately following instruction.

A paired sample dependent *t*-test was administered on the pretest versus posttest scores for TP1 live instruction ($n = 34$). Data indicate a significant difference between pretest and posttest scores following a 15-minute live instruction ($t[33] = 6.766$, $p < .001$). The posttest scores were .87

Table 1

Video Versus Live Pretest/Posttest and Gain Scores for Testing Phrases 1 and 2

Testing Phrase 1

Group	Pretest *M*	Pretest *SD*	Posttest *M*	Posttest *SD*	Gain *M*	Gain *SD*
TP1 Live ($n=34$)	2.20	.83	3.05	.93	.87	.75
TP1 Video ($n=55$)	1.91	.53	2.90	.66	1.00	.65

Testing Phrase 2

Group	Pretest *M*	Pretest *SD*	Posttest *M*	Posttest *SD*	Gain *M*	Gain *SD*
TP2 Live ($n=55$)	2.24	.81	3.32	.7	1.08	.76
TP2 Video ($n=34$)	2.11	.88	3.18	1.05	1.07	.90

higher. Data indicate a significant difference in pretest and posttest scores following a 15-minute video instruction ($t[54]=11.414, p<.001$). The posttest scores were 1.00 higher. Posttest scores were slightly higher with video instruction on TP1.

A paired sample dependent *t*-test was also utilized on the pretest versus posttest scores for TP2 video instruction ($n=34$). Data indicate a significant difference in pretest and posttest scores following a 15-minute video instruction ($t[33]=7.143, p<.001$). The posttest scores were 1.07 higher. Data indicate a significant difference in pretest and posttest scores following a 15-minute live instruction ($t[54]=10.475, p<.001$). The posttest scores were 1.08 higher. Posttest scores were relatively similar for both instruction methods on TP2.

All students were asked to participate in a final summative evaluation of each lesson to aid the author in future research. Students generally felt that their performance of TP1 material was average to good with either method of instruction, and the same was true for TP2.

A final question was posed concerning students' views regarding videotaped lessons and students' willingness to work with a videotape in the future. Results were generally favorable. Seventy-nine percent said that they felt the video instruction was helpful and they would enjoy future video instruction.

Table 2

Summary of Posttest Scores for Testing Phrases 1 and 2

Testing Phrase 1

Time Between Study and Testing	*N*	*M*	*SD*
0-5 minutes (Group 1)	30	2.99	.86
6-11 minutes (Group 2)	25	3.01	.85
12-17 minutes (Group 3)	22	2.83	.72
18-23 minutes (Group 4)	10	3.07	.49

Testing Phrase 2

Time Between Study and Testing	*N*	*M*	*SD*
0-5 minutes (Group 1)	30	2.99	.86
6-11 minutes (Group 2)	25	3.01	.85
12-17 minutes (Group 3)	22	2.83	.72
18-23 minutes (Group 4)	10	3.07	.49

Discussion

The purpose of this study was to investigate and compare the effectiveness of videotape versus live instruction in high school choral ensembles for French diction for individuals. A systematic approach utilizing the warm-up/vocalise strategy was incorporated into a live and a videotaped presentation with both methods using the same material. The vocalise method was designed to teach unfamiliar vowels in a familiar exercise setting, and gradually incorporate new words into the final song, or in this case, the testing phrases.

Two lessons were designed. The first lesson focused on the French pucker vowels, and the second lesson focused on the nasal vowels. A comparison of the live instruction posttest scores and the videotape instruction posttest scores for Lesson 1 revealed no significant difference. Each method yielded an approximate gain of 1.0, however the videotape instruction method yielded a slightly higher gain. A comparison of the live posttest scores and the

videotape posttest scores for Lesson 2 also revealed no significant difference. The gain was over 1.0, possibly indicating the French nasal vowels may be easier for the beginner to reproduce than the pucker vowels.

The investigator compared the scores as they related to time of taping following instruction. ANOVA results revealed no significant differences in posttest scores from the taping of the first subject to the taping of the last subject, suggesting no memory loss after 20 minutes. In fact, scores of those tested 15 to 20 minutes after instruction were actually slightly higher than scores from subjects tested 0-15 minutes after instruction for phrase 1 and phrase 2. Given the relatively short (15-minute) instructional period, the resulting gain of approximately 1.0 (a gain shown for both methods of instruction) seems notable. The combined data for TP2 may suggest that the French nasal vowels (TP2) are easier for the singer to reproduce in a short amount of instructional time, than the French pucker vowels (TP1). Adjudicator agreement as to "correctness of sound" was also greater for the nasal vowels.

The researcher chose to teach standard French diction as presented in the definitive Larousse and Harrup's Dictionaries, and discussed this with the adjudicators prior to evaluation. Analysis of the data in general revealed disagreement among experienced choral directors and singers as to "correct" French diction. An interjudge reliability ratio of 81% was attained by utilizing the scores from 3 of the 6 original judges. This study revealed a possible inconsistency in agreement among the "experts," and therefore, poses a problem which confronts future researchers.

Technology has made its way into the music classroom and the use of video information should be considered by the choral director. While this study utilized group viewing of video instruction, research indicates that individual use of audio/video aides can facilitate learning. Therefore, a study offering individual videotaped instruction as a supplement to the classroom rehearsal also might improve diction accuracy.

French diction provides the young singer many opportunities for improving technique. Incorporating these sounds into a planned vocalise routine for a greater length of time should strengthen the vocal mechanism while preparing the singer to perform French literature. The focus of this study was primarily French diction skills. A study concerning group video instruction of other languages may provide choral directors further teaching and programming options.

Choral music is an art with a foundation in communication, and as we move into the twenty-first century, choral music educators must increase awareness of communication in many languages. One essential task of the choral director is to continuously strive for new and effective approaches toward teaching. Further research is therefore suggested, that would combine diction training with advanced technological equipment, and the examination of resulting instructional influences.

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TEACHERS' PERCEPTIONS OF THE USE AND EFFECTIVENESS OF ELEMENTARY MUSIC TEXTBOOKS IN PUBLIC SCHOOLS OF SOUTHWEST MISSOURI

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Introduction

Elementary classroom teachers may be encountering the educational reform term, "textbook bound" more frequently. Educational critics suggest that teachers who are "textbook bound" or "textbook driven" are less effective in the classroom (Guskey, 1987). Reactions to the "textbook bound" phenomenon vary from modifications of teaching methods via more diverse resources to the total elimination of textbooks in some areas of the curriculum. Reformers attack classroom teachers who merely "cover the material," (e.g., pp. 1-43) rather than "teach skill."

Background

Pilot programs designed to master specific areas of learning without the help of textbooks are emerging in many elementary classrooms. The teachers plan units designed to master particular skills established as curriculum goals for the school district. The ultimate intent is to raise minimum assessment test scores. Such a model has been in practice at Gray Elementary, in the Springfield, Missouri R-12 School District for one year and test results have been favorable. Although textbooks may still be used as teacher resource material, future purchases of text sets for students is unlikely.

Is there a possibility for textbook elimination in the area of elementary vocal music? As the textbook elimination movement gains momentum, music series books could be endangered. Before elementary music series books become history, the question should be addressed: Do teachers feel that basal series books facilitate instruction and learning in the elementary music classroom?

Purpose of Study

Elementary vocal music teachers and students would be directly affected by textbook elimination. Their impressions, observations and insights on the use and effectiveness of music textbooks should be considered prior to ratifying textbook abandonment. It is important to consider what alternatives would be available to teachers if books no longer existed as well as the ramifications of the adoption of such alternatives. Information collected from the teachers on these issues could influence future decisions regarding the retention or elimination of the series books.

Research Questions

The following questions were addressed in a survey of elementary vocal music teachers:

1. What system (e.g. Orff, Kodaly, series books, etc.) do teachers use most in classroom instruction?
2. How much instructional material is taken from basal series texts?
3. Are some musical concepts more easily taught using textbooks and

if so, which ones?

4. Would text removal affect planning time?
5. Do students learn more about all aspects of music using series books?
6. Would students' attitudes regarding music and books be affected?
7. Would off-task behavior increase if books were removed?
8. What other resources could teachers use if basal series were not available?

Importance of the Study

To date, music researchers have failed to collect and analyze data relating to the necessity and effectiveness of elementary music books in mastering music skills and concepts which are described and prescribed in the National Standards for Education in the Arts (1994). This preliminary study attempted to report teachers' opinions, observations and assessments of current textbook usage and importance.

Definition of Terms

For the purposes of this study the terms basal music books or music series books or elementary series books refer to elementary vocal music textbooks for grades K-6 published by either Silver Burdett Ginn or Holt Reinhardt in either the 1988 or 1991 editions. The terms "textbook bound" and "textbook driven" are understood to mean teachers who teach from the book exclusively, presenting material in the order in which it is introduced by the author.

Limitations of this Study

Silver Burdett Ginn (1988 & 1991) and Holt Reinhardt (1988) were the only textbooks being used by teachers responding to the survey. Only Springfield Public Schools and ten selected area schools were surveyed. Two respondents had Kodaly certification and none had Orff or other certification. The study only reflects the opinions of the teachers surveyed.

Survey of Literature

Elementary classroom textbooks are the subject of extensive on-going research. Parents, educators and legislators are focussed on educational reform. At the heart of reform looms the textbook dilemma (Altbach, 1991). Textbooks in general are the subject of continuous scrutiny and evaluation. Extensive research exists which focuses on the evaluation of numerous texts. Critics have attacked textbooks from various perspectives.

Bias & Accuracy

Some proponents of textbook reform argue that historical information is not only inaccurate, but sexually, racially and culturally biased, and that teachers have little control over content (Carus, 1986). Teacher awareness is seen as the key to dealing with sexual and cultural bias in the classroom. New materials and activities to correct imbalances in the curriculum are outlined in the handbook, Confronting the Stereotypes: Grades 5-8. The author suggests that textbooks compound the "bias" problem and should be eliminated (Kirk,

1985).

Cultural bias has also been targeted by music researchers. One study noted that while elementary music texts contained some examples of African American music, they lacked background information to aid the music teacher in accurate presentation of the culture (Ellis, 1990).

Textbook Studies in Non-Music Areas

Freeman and Porter (1989) discovered differences between the text content and the teacher's topic selection, content emphasis and sequence of instruction in the 4th grade math curriculum in four Michigan classrooms. Similarly, another study found three teachers' explanations of their use of textbooks differed significantly from what was actually observed in each of their classrooms. This contradiction indicated ambiguity which might serve to confuse students (Hinchmann, 1987).

Gilbert Sewall (1989), criticized American history books and recommended extensive reform and revision. Other history texts were reported to contain inconsiderate text (Kantor, 1983) and/or lack of meaningful concepts (Haas, 1988) which resulted in general dissatisfaction with text content (Crismore, 1981). Television received more favorable marks for social studies content than texts (Hamm, 1988).

Science books sometimes encourage misconceptions (Abraham, 1992) and accompanying textbook tests failed to elicit higher-level thinking skills (Risner, 1987).

Marketing

According to Woodward (1987, p. 17),

> Publishers of textbooks seem caught up in a hectic revision cycle focussed on newness, artwork and copyright date, with little regard to actual improvement in instructional quality. Marketing ploys convince educators that they are buying something better than was previously available. Those reforming the textbook selection process are insisting on improved quality of textbooks but may be fueling the argument for textbook elimination.

Bernstein and Harriet Tyson criticized the textbook industry on the basis of bad writing, lack of ethical standards and test preoccupation. They advocated immediate reform of the industry (1988).

Selectors and Selection Criteria

Textbook selection is influenced by diverse curricular requirements, testing requirements, funding, readability formulas, physical standards and significant political influences. State and local adoptions for particular series often do not take into account individual teacher and student needs, according to How Can We Improve Textbooks which makes numerous recommendations regarding the textbook selection process (Armstrong, 1986).

States, such as Texas, which have adopted "selection criteria" for texts have long dictated national textbook content. However, one study shows

that the "criteria" are vague and ambiguous and that final selection was based on the publisher's presentation rather than any criteria (Marshall, 1987). Teachers should play an important role in both textbook selection and content according to Howard Mehlinger who compared textbook reform in the U.S. with Soviet textbook reform (1989). The future of textbooks is uncertain, but change from the "status quo" is inevitable (Maxwell, 1985).

Music

Fewer studies have addressed the evaluation and analysis of elementary music series books. One such study looked at the learning sequences for melodic and rhythmic skill development in three different series texts comparing the stated texts' philosophies with Gordon's approach to sequential learning. Not only were the stated philosophies inconsistent with the learning sequences, "Stepwise and spiral movement in the learning sequences, curriculum organization, and the use of instructional techniques and methodology, were found to be incompatible with the Gordon approach (Byrd, 1989, p. 244)."

Michael Clementz analyzed 1988 elementary music series texts for content based on a composite of goals proposed by MENC and the Illinois Fine Arts Goals. He made the following conclusions: (a) goals for notation, vocabulary, and performance were emphasized in texts, (b) expressive qualities and aesthetics were emphasized to a lesser degree, and (c) improvisation, creativity, independent learning and commitment were rarely addressed. The study ranked each series according to lesson objective emphases at each K-5 level (Clementz, 1990).

Other researchers have addressed the recent technological advances in the area of elementary music programs to determine the applicability of computer teaching in the elementary music classroom. Students were tested on melody, rhythm, texture and tonality with the aid of computer instruction. Test results were very favorable (Venn, 1990).

Textbook Bound

An analysis of instructional research in the area of reading produced the label "textbook bound" as one of the four possible modes of instruction. Distinctions in the four categories included: (1) textbook-bound/designed, (2) textbook-bound/responsive, (3) textbook-free/designed, and (4) textbook-free/responsive. The textbook-bound modes of instruction always focused on student response to directed practice. The researchers philosophically suggested that the textbook-free modes of instruction were more effective pedagogical approaches because they allowed students to respond spontaneously when the teacher exposed students to the task in various ways (Duffy & Roehler, 1982, p. 3). Textbook-free instruction appears to be an important topic in current educational circles. Elementary vocal music teachers must be included in the decisions regarding textbook elimination in the elementary curriculum and should contemplate alternative teaching resources.

Methods and Procedures

Thirty-five elementary vocal music teachers in and around the Springfield, Missouri area were mailed a twenty-question survey instrument in February, 1994. The questionnaire was designed to investigate the use and

effectiveness of elementary vocal music textbooks. Elementary vocal music teachers were specifically asked which text they used, what grades used texts, and were asked which grade levels of the text in use they preferred. The survey asked what percentage of total teaching time was text oriented, and teachers' opinions as to the effectiveness of the text in teaching specific music concepts. Other information gathered included pupils' preferences regarding materials, the respondents' teaching experience, certification levels, and weekly planning time. Surveys were sent through the Springfield Public School system mail department and ten were mailed to elementary vocal music teachers in nearby school districts. Included in the mailings were stamped, self-addressed envelopes for respondents to return the survey to the researcher.

Twenty of the thirty-five surveys (57%) were completed and returned. Responses were counted for each question and percentages were determined based on the total number of respondents. Data were then analyzed to determine use, preference, alternatives, projected student attitudes and achievement.

Results

Percentages were figured on each question of the survey after totaling all responses.

All teachers who responded to the survey had at least four years of teaching experience in elementary vocal music, with 55% reporting ten years or more experience. Fifty-five percent also held a Bachelor's in Music Education degree while 45% held a Master's Degree. Most of the respondents (60%) had participated in the selection process for textbooks.

The majority of teachers, (90%) use series music books. Use of books in combination with other systems such as Orff, Kodaly and Dalcroze was selected by 75% of all teachers surveyed. Silver Burdett Ginn (1991) series books were used by 80% of teachers with 20% of teachers using the Holt Reinhardt (1988) series. Series books were used with all grades according to 95% of teachers responding. Second and third grade texts were rated the strongest (40% of respondents) followed by the fourth grade text with 30% of teachers preferring that text. Regarding percentage of overall teaching materials, 80% responded that series books were used for more than 50% of their teaching materials.

On the importance of series books relating to teaching concepts, 80% agreed that some concepts are more easily taught with series books. Seven teachers felt all concepts are more easily taught using series books. Specific concepts mentioned that were more easily taught using series books included reading music, songs and form.

Teachers were asked about planning time and what they would anticipate if series books were eliminated. Planning time varied from less than one hour per week to more than four hours per week. Nineteen respondents (95%) said planning time would increase if books were eliminated. The one respondent who indicated no change in planning time used the Kodaly teaching system without series books.

The inquiry regarding meeting curriculum guidelines revealed that 60% felt series books partially meet those standards and 40% felt the guidelines were totally met by the series books.

Responses to the statement "students learn more about all aspects of music using series books," revealed that 55% of teachers agreed with the statement and 35% disagreed.

Teachers were asked to predict students' reactions to the removal of series books. Most teachers (55%) felt students would be less interested, while 40% thought there would be no change in students' interest level. Teachers did feel that students like their series books, with only 15% suggesting that students were indifferent to books.

Off-task behavior would likely increase according to 50% of those surveyed with 25% unsure about the effects on behavior.

All respondents indicated they would use accumulated files of resources if books were not available. One teacher pointed out the economic impact of eliminating books, since she would choose octavos and computer resources to teach her classes.

Series books seem to serve an important purpose in the elementary music classroom. The majority of teachers responding to the survey considered books a valuable necessity to their teaching effort. Thirteen different responses were recorded concerning what teachers liked most about series books. There were five or more teachers that mentioned multicultural lessons, listening lessons and general planning format as the series' strongest point in their opinion.

Discussion

The survey responses indicate that according to teachers in this sample, the removal of series books would indeed, impact teaching methods, lesson content, and planning time. Teachers predict that student attitude and achievement would decline. Additionally, off-task behavior would increase in their opinions. Music teachers are responsible for so much content in music concepts and aesthetic appreciation that is covered quite efficiently and sequentially in music texts. The common negative comments among elementary vocal music teachers about their profession relate to the time and physical demands which accompany the position. Indirectly, the survey responses seemed to indicate preferences for texts due to time constraints involved in Mastery Learning or other thematic approaches without texts.

Teachers who selected the textbooks quite naturally would favor the textbooks' continued use. This study revealed that even the teachers not involved in the selection process were still generally pleased with the text and found it helpful in planning and concept instruction.

Replicating this study in another school district could further validate the results. Teachers in southwest Missouri seem typical of teachers of Missouri and perhaps the country, but a survey beyond the regional boundaries of southwest Missouri would provide more global validity.

The respondents in this study generally were veteran teachers with more than ten years experience. Perhaps the teachers with less experience failed to respond due to demands on their time. A follow-up questionnaire could provide the answer to why less-experienced teachers did not reply.

This study surveyed music teachers and their opinions regarding student preference and reaction to text elimination. Another study could focus on the student for responses concerning texts. Also, with classroom teachers

steering away from text use, would they prefer that music teachers follow suit?

Further experimental research into the actual effectiveness of series books in teaching students music concepts might validate the conclusions from these survey findings. Such a study should compare music achievements of elementary students taught using series books as well as achievements of students taught without series books.

Conclusion

Textbook usage is currently under intense scrutiny as shown in the numerous research studies on textbook reform, evaluation, and/or elimination. One trend currently being funded in some areas by government grants is total removal of series books on the elementary level. Elementary vocal music series books have not been targeted for removal, yet the uncomplimentary label of "textbook bound" or "textbook driven" has been used to describe some approaches to teaching music. The present research attempted to document music teachers' feelings and opinions about the presence or removal of textbooks in their music classrooms. This study indicates a generally favorable attitude regarding elementary music series books by the teachers who use them.

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THE EFFECT OF ACCOMPANIMENT TYPES ON SIGHTSINGING NOTE ACCURACY

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The purpose of this study was to determine the effect of different accompaniment types on sightsinging note accuracy. A secondary hypothesis was to confirm the effect of musical experience other than choral experience on sightsinging skill.

Preparation for the study involved the development of a survey of musical experience, two warm-up and four test melodies, and accompaniments for each melody. The accompaniment types used were block, arpeggiated, and independent. A capella was added as a fourth accompaniment condition to serve as a control.

The study was conducted with 152 high school students involved in concert choir. Experience was scored using a weighting system. Subjects were divided into three experience groups. The melodies were judged and scored giving one point per note.

The results were assessed using a two factor repeated measures analysis of variance. No significant difference in note accuracy was found as a result of the four accompaniment conditions. It was also found that musical experience other than choral experience does have a significant effect on sightsinging skill. No significant interaction between the accompaniment types and experience was found.

The results indicate that, although not significant, independent accompaniment provides the strongest link between melodic expectation and the notes or intervals to be sung followed by arpeggiated accompaniment, block accompaniment, and a cappella.

THE EFFECT OF MUSICAL TRAINING, GENDER AND MUSIC CURRICULUM ON MUSIC APTITUDE TEST RESULTS OF EIGHTH AND NINTH GRADE CHORAL STUDENTS

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The purpose of this study was to examine the results of a survey, including a music aptitude test administered to eighth and ninth grade choral music students ($N = 262$). The survey also collected information regarding subjects' musical training (including instrumental study), gender and grade. The music aptitude test was designed to test knowledge of musical terminology, aural identification of voice parts, instruments, excerpts from ranging style periods and exercises in choral adjudication. All instructions were given on tape, and answers written on a response sheet. The results of the study indicated significant differences in aptitude test results as a function of students' instrumental background and among individual schools. A positive correlation was found between students with instrumental background and higher aptitude test scores. Overall aptitude test scores ranged from 1 to 8 (8 = highest possible score), with a $M = 5.88$, $SD = 1.55$. Other statistical results include student rankings of two choral music examples of differing performance quality (good versus bad). Rankings of the two choral music examples were remarkably different. Curriculum guidelines were collected from each school, with two schools from the same district having the same guidelines. Curricular comparisons cannot be computed statistically, but are compared in the discussion portion of the study. Future study should be considered in the area of gender and curriculum as they relate to music aptitude results.

A COMPARISON OF THE EFFECTIVENESS OF TWO SEQUENCES FOR TEACHING RHYTHMIC PERFORMANCE AT THE COLLEGE LEVEL

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The purpose of this research was to examine the effect of teaching performance understanding of rhythms before teaching the rhythmic icons at the college level.

Fifty-five college students participated in this study. Thirty-five students were asked to perform rhythms taught to them by rote and were then shown the notation and asked to perform again. Twenty students were taught rhythmic notation using a numeric counting system. The students were then asked to perform these rhythms without any rote instruction. All fifty-five students were given the same pre- and post-tests.

There was found to be no significant difference in rhythmic accuracy between those students who learned to perform rhythms by rote first and those who learned the notation first.

AN EVALUATION BY MISSOURI HIGH SCHOOL BAND DIRECTORS OF CRITERIA USED TO SELECT CONCERT BAND MUSIC

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The purpose of this study was to determine the rank order of the importance of selected criteria used in choosing band literature, and to explore whether school size, band program size, teaching experience, teacher education level, teacher attendance at state or national music conventions, or participation of concert bands in a festival or contest affects the rank order of criteria used for selecting band literature. Of additional interest was concert band music performed by Missouri high school bands that the band directors felt best represented music of the highest quality. The study was also designed to determine what literature the band directors felt best represented music of the highest quality from among all concert band literature.

The Criteria for Selecting Band Literature Survey (CSBLS) was mailed to 523 Missouri high schools, and 210 (40.1%) usable surveys were returned. Although there were no statistically significant differences in the rankings of the selected criteria for any of the independent variables, individual groups of criteria can be extracted from the entire list by locating the largest differences between adjacent means. Except for slight variances concerning band program size, band participation at festivals or contests, and teacher attendance at music conventions, these clusters of criteria remain consistent throughout the study. The following clusters of criteria were formed, from highest ranked to lowest ranked; Group 1: Musical quality/aesthetic value, Difficulty, Instrumentation, Well crafted composition, and Teaching goals; Group 2: Conductor appeal, Festival/contest suitability, Student appeal, and Highly recommended; Group 3: Audience appeal, Programming factors, Style/form/historical significance, Composer/arranger, and Features individual or group of band; Group 4: Transcription (exposure to other mediums); Group 5: Publisher's designated grade level, Original band work, and Cost; and Group 6: Publisher.

Respondents also indicated that of the 332 compositions performed during the school year, 92 were performed by two or more bands and 57 of the 190 composers of recommended pieces were listed by two or more directors. Although this study provides information which may assist the band director in selecting music, further research is suggested that would continue to examine this issue.

THE EFFECT OF COMBINED MUSIC CLASSES ON BEHAVIOR AND LEARNING

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Behavior and learning among 99 second-grade students and 98 third-grade students was measured in both a combined music class (two second- or third-grade classes with two music teachers meeting in the same space used for single classes) and a single music class setting (one second- or third-grade class with one music teacher). For the purposes of this study, off-task behavior was defined as talking and/or touching. Classes were videotaped in order to tabulate off-task behaviors. Because of the variance in the number of students per group, off-task behaviors were transformed to a ratio of off-task behaviors per 25 students. After the transformation it was found that no significant difference in the number of off-task behaviors in the single class verses combined class settings existed. The learning study used a pretest-posttest control group design. Second-grade students were tested on identification of instruments of the brass family. Third grade students were tested on correct placement of bar-lines in three different meters. Within each grade level, students were randomly selected to participate in a single or a double class. Results showed no significant difference in learning for combined classes as compared to the single or a double class. Results indicate that learning and behavior need not be a major concern for administrators who are considering combining classes due to limited space.

ANALYZING FLUTE PEDAGOGY: A DISCUSSION WITH SELECTED PEDAGOGUES

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The purpose of this study was to compile information gathered from successful flute pedagogues in this country regarding flute instruction at the college level. An extant compendium of pedagogical approaches was not found. It was thought that this type of research could provide a much-needed base of knowledge for both performers and teachers of the flute. Topics researched included warm-up procedures, daily practice routine, tone production, tone color, circular breathing, vibrato, articulation, rhythmic alterations, alternate fingerings, method books, range, sight-reading, phrasing, repertoire, twentieth-century extended techniques, reading resources, and equipment selection.

The Flute Pedagogy Survey (FPS) was sent to the following outstanding artist/teachers: Julius Baker, John Barcellona, Samuel Baron, Frances Blaisdell, Julia Bogorad, Bonita Boyd, Leone Buyse, Linda Chesis, Michel Debost, Arthur Hoberman, Karl Kraber, Walfrid Kujala, Mary Posses, Paula Robison, Roger Stevens, and Gary Woodward. Fourteen of the surveys (88%) were returned.

The results of the FPS generally yielded a consensus response pattern. Thirty-four topics were listed as areas of agreement while only 14 areas of difference were documented. The majority of the flute instructors were in agreement regarding the following: warm-up procedures, exercises typically included in the daily practice routine, circular breathing, production of vibrato, method of teaching vibrato, approach to double tonguing, use of rhythmic alterations, use of alternate fingerings, recommended method/etude books, recommended repertoire at various levels, inclusion of extended techniques, recommended reading resources, and group class instruction. There was no agreement regarding preference for specific makes and models of instruments and headjoints.

Areas of diversity included use of whistle tones and note-bending exercises, division of practice time, recommended "essential" exercises, recommended lip formation, recommended method of tonguing (i.e., tongue placement, preferred syllables), expected upper range, and recommended repertoire used to develop specific abilities.

Future research is suggested to examine the teaching methodologies of other groups of flute instructors such as private instructors at the elementary and secondary levels. In addition, it may be beneficial to conduct a national study to better reflect the views of all college level flute instructors.

TOWARD A UNIFIED APPROACH TO BASS PEDAGOGY

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The purpose of this paper is to explore the similarities in pedagogical techniques between "classical" and jazz bass. One pedagogical strategy would be to find general etudes that will simultaneously help a bass player's development in both styles. A large number of method books have been written concerning each individual style but very little discussion has taken place about developing a bass player's proficiency in both areas. In today's world a bassist would be well-served to develop both styles in order to be more successful at a time when the number of bassists proficient in both areas is growing.

Classically trained bassists tend to have an underdeveloped pizzicato technique, while it is generally agreed that most jazz bassists have an underdeveloped bow technique. The advantage of acquiring a more highly developed pizzicato technique for a classical player is the added control of timbre and pitch, not to mention increased dexterity and a more accurate concept of time as it relates to the steady click of the metronome or drum machine. The advantages of developing bow technique for the jazz player includes the attention given to melodic lines and the production of tone.

Classical bass etudes utilize melodic ideas in which the bassist must focus attention on good bowing technique in order to fully express the musical phrasing. In jazz styles, concentration on the melodic figures in such etudes can help facilitate the creation of intelligent melodies in solos and improvised bass lines. With attention also being focused on tone production, the jazz bassist can begin to experiment with the sounds available through a developed use of pizzicato.

The general demands in bass playing could be solved by compiling etudes that address the technical areas of timbre, pitch, dexterity, time, and the improvisation of meaningful solos and bass lines. This paper will explore classical and jazz etudes which address these technical areas and can be utilized by bassists to improve their technique in all facets of bass playing.

ADJUDICATORS,' CHORAL DIRECTORS' AND CHORAL STUDENTS' HIERARCHIES OF MUSICAL ELEMENTS USED IN THE PREPARATION AND EVALUATION OF HIGH SCHOOL CHORAL CONTEST PERFORMANCE

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The purpose of this study was to establish a hierarchy of musical elements used in the preparation and evaluation of a high school large choral ensemble. Adjudicators ($n = 54$), choral directors ($n = 34$), and choral students ($n = 1290$) from Arkansas, Colorado, Kansas, Missouri, New Mexico, Oklahoma and Texas completed the Music Contest Priority Survey (MCPS). Subjects ranked eight musical elements (balance and blend, diction, interpretation and musicianship, intonation, other performance factors, rhythm, technique, and tone quality) in order of importance when preparing and evaluating high school choral contest performance. Of the three groups, adjudicators and directors ranked elements most similarly, identifying intonation and tone quality as the first and second elements in importance. All groups identified other performance factors as the least important element.

Variables of students' experience in choral ensembles, private voice, and private piano were also considered in analyses of the data. Students with two or more years of piano experience were most accurate (34.1%) in predicting adjudicators' and directors' most important element (intonation), while students with two or more years of voice experience most accurately predicted the least important element (other performance factors) to adjudicators and directors.

In addition, directors were asked to predict the elements that would be most important and least important to their students. Results indicated directors achieved 12.48% accuracy (students' most important element) and 31.63% accuracy (students' least important element). Students correctly identified their directors' most and least important elements 17.72% and 39.64% of the time respectively. Overall percentages of correct predictions are somewhat low, but results indicate that students predict their director's priorities better than directors predict those of students.

This study establishes a hierarchy of musical elements used by directors and students and adjudicators to prepare and evaluate large high school choral contest performances. This information may assist directors and students preparing for music contests by helping clarify common goals and objectives. Further research seems warranted that would continue the establishment of priorities in the area of preparation and adjudication in music contests.

CHANGES IN THE BAND PROGRAMS OF MISSOURI PUBLIC HIGH SCHOOLS USING THE EIGHT-BLOCK SYSTEM OF SCHEDULING

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Scheduling is an important aspect of music education. Research has not investigated the relationship between the distribution of instructional time in traditional and nontraditional schedules and the quality of instrumental music programs.

The purpose of this study was to examine the changes found in the band programs of Missouri public schools that have adopted the eight-block system of scheduling. In the eight-block system, students are scheduled for eight classes but only meet four of these classes per day for 88 to 90 minutes per period. The schedule alternates every day so a complete cycle of classes requires two weeks.

The respondents in this study were band directors and principals working in the 13 Missouri public schools that used the eight-block system of scheduling during the 1993-94 school year. To qualify for the study, teachers ($n = 11$) and principals ($n = 13$) were required to have worked for a minimum of one year with a traditional schedule and a minimum of one year with an eight-block schedule.

Questionnaires were sent to the subjects that dealt with changes in the quality of the band program, the enrollment of the band program, discipline problems, teaching methods, and views on the eight-block schedule.

Results of the study showed that since using the eight-block system:

(a) Only 18% of the schools showed improvement in one or more areas used to evaluate quality, while 54% had a drop in at least one of the three areas.

(b) With regard to enrollment, 45% of the band directors indicated an increase and 55% saw no change.

(c) In the area of discipline, 82% of the band directors saw no change in the amount of discipline problems while 9% saw an increase and 9% saw a decrease.

(d) With regard to teaching methods, 36% had not changed their methods while other responses included more emphasis on fundamentals, sectionals, history, theory, listening, and work sheets.

(e) Principals and teachers agreed on the positive aspects of the eight-block system but not on the negative aspects.

INSTRUCTIONS TO CONTRIBUTORS

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