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1113 East Meadowlark Lane
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Editorial Office: Department of Music
University of Missouri
8001 Natural Bridge Road
St. Louis, Missouri 63121-4449

Editorial Assistant: Shannon Hayden

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MISSOURI GRADUATE STUDENT AND FACULTY 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-third.

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, making it possible to continue to publish the *Missouri Journal of Research in Music Education.*

The Editorial Board

COMPARISON OF AN ACTIVITY-VERSUS NON-ACTIVITY-BASED APPROACH FOR TEACHING YOUTH CHOIR SOLFEGE CLASSES

Suzanne Rita Byrnes
Kansas City, Missouri

Abstract

Subjects (N=28) for this study were enrolled in the beginning level solfege class during a one-week summer choral camp held at a large southeastern university. Non-activity (without movement) and activity (with movement) teaching methods were alternated over the course of four daily sessions. A short questionnaire was administered at the end of each session to determine students' perception of the effectiveness of the class, of their own effectiveness during the class, and of the effectiveness of the instructor during the class. Paired-sample t-tests revealed no significant differences ($p > .01$) between non-activity and activity methods for all items. The consistently high level of all ratings might indicate the generally positive perception of the summer camp experience as a whole on the part of these students. Further research in this area might include comparing responses over a longer period of time, comparing responses in a regular classroom situation, and using a larger number of subjects.

Introduction

Training singers to read music can be a difficult and arduous task. Many singers initially learn all of their music by ear and come to rely on the rote method without ever developing the ability to read music. The first singing school in the United States was established in 1717 in Boston and had as its primary goal to teach proper vocal production. Later, singing schools became more concerned with teaching people to read music (Abeles, Hoffer, & Klotman, 1984). In present day United States, there exist many different ways of teaching vocal sight-reading. May (1993) reported that moveable do was the melody reading system used by 82% of survey respondents and a minor method (e.g., moveable la) was used by 68% of respondents to teach melody reading in minor keys. Other systems reported included a moveable system using numbers, fixed do, and the use of neutral syllables.

Bozone (1987) investigated the use of sight-singing as a prestudy aid for the improvement of the sight-reading skill of second-semester collegiate class piano students. The group employing sight-singing had a significantly higher group mean in pitch-accuracy scores, rhythm-accuracy scores, expression-accuracy scores and composite-accuracy scores. Bozone concluded that sight-singing can be a valuable aid in the improvement of piano sight-reading skill. Sight-singing can also be a valuable aid in the improvement of choral sight-reading skills. A study by Henry and Demorest (1994) showed that individuals receiving group sight-singing training read music with an average of 66% accuracy. Demorest and May (1995) found that time spent on sight-singing in choral programs had a positive effect. Cappers (1985) stated that sight singing makes middle school singers into high school musicians.

Instructors are often looking for new and exciting ways to teach solfege, particularly to beginning students who may not understand the need or benefits of the subject matter. Using a harmonic context has proved beneficial for improving sight singing accuracy (Boyle & Lucas, 1990; Lucas 1992). Mann (1991) investigated the use of a Kodaly treatment to compare three performance areas; instrumental sight-reading, sight-singing, and intonation accuracy. Results indicated that improvement was

attained in all three areas. There was, however, no statistically significant difference between the three areas. In another study, Persellin (1992) tested first-, third-, and fifth-graders visually, auditorily, kinestheticially, or with combinations of these modalities. First grade visual test results were significantly lower than results with older children. The author concluded that the incorporation of learning modalities into music teaching methods could result in more efficient learning of rhythm patterns. Martin (1991) tested the effects of hand signs, syllables, and letters on first graders' acquisition of tonal skills. Results showed that no method was significantly better for any group as a whole. Results of a study by Cassidy (1993) indicated that subjects using solfege coupled with Curwen hand signs, and solfege alone scored significantly better than subjects using staff letter names and those using the neutral syllable la.

Few studies deal with the students' perception of the effectiveness of a class or rehearsal. Robinson (1994, April) investigated participants' perspective on the outcomes of an all-state chorus experience. Results indicated significantly different ranking of pieces from the first rehearsal to the concert warm-up in both performance quality and preference. Additionally, students with more years experience reported significantly more social than musical outcomes as the most important thing learned. Fredrickson (1994, April) studied students' perception of their participation, the participation of the ensemble, and their impression of the director over the course of a band festival. Results indicated that increases in perceived effectiveness over the course of the festival were statistically significant for all categories.

Madsen and Geringer (1983) reported that in-class activity had a significant effect on attending behaviors in university music classes. The present investigation was concerned with comparing non-activity (without movement) and activity (with movement) teaching methods from the perspective of students enrolled in the beginning level solfege class.

Method

Subjects for this study were 28 students enrolled in the

beginning level solfege class during a one-week summer choral camp held at a large southeastern university. Mean age was 15.57 years (lowest 12, highest 18) and mean school grade level was 10 (lowest 7, highest 12).

A short questionnaire was administered at the end of each class session held on four consecutive days to determine students' perception of class effectiveness, self effectiveness, and instructor effectiveness. Ratings were given on a scale of 1-5 (1 being low, 5 being high). Thirty-six students were enrolled in the beginning class. After inaccurately completed questionnaires and students who had been absent for one or more class periods were eliminated, 28 responses remained. Class sessions on Days 1 and 3 were non-activity based (singing by rote and sight-singing, echo clapping, scale drills, etc.) whereas sessions on Days 2 and 4 were activity based (singing by rote and sight-singing paired with the use of Curwen hand signs, standing when singing "do"/sitting during other syllables and vice versa, scale drills with hand signs and stair climbing, echo clapping including movement of the beat in space, etc).

Results

A small increase in rating was found when comparing the non-activity method to the activity method for all questions. Mean ratings and standard deviations for "class", "self", and "instructor" are summarized in Table 1.

Table 1

Mean and Standard Deviations for Ratings of "Class", "Self", and "Instructor" for Non-activity and Activity Methods

	Mean	SD
Class: Non-activity	3.98	.884
Class: Activity	4.21	.900
Self: Non-activity	3.96	.793
Self: Activity	4.21	.858
Instructor: Non-Activity	4.27	.811
Instructor: Activity	4.32	.819

Paired sample t-tests did not indicate any significant difference between methods ($p > .01$) for any of the three questionnaire items (see Tables 2-4).

Table 2

Paired Samples t-test on Non-activity "Class" versus Activity "Class"

Mean difference = -.223

SD difference = 0.606

T = -1.949 DF = 27 p = .062

Table 3

Paired Samples t-test on Non-activity "Self" versus Activity "Self"

Mean difference = -0.241

SD difference = 0.516

T = -2.473 DF = 27 p = .020

Table 4

Paired Samples t-test on Non-activity "Instructor" versus Activity "Instructor"

Mean difference = -0.054

SD difference = 0.550

T = -0.515 DF = 27 p = .611

Discussion

Results indicate that overall, students rated effectiveness of the class, themselves, and the instructor on the high end of the scale. Additionally, there was no significant difference between the two methods of instruction when comparing students' perception of class effectiveness, self effectiveness, and instructor effectiveness. It is interesting to note that though subjects' perception of "self" effectiveness was not significant at the .01 level, it was at the .05 level with effectiveness rising during the activity classes. A replication of this study using a larger number of subjects in a more controlled setting might yield different results. Students did not comment on activity days being more

fun and many felt that they were having fun while learning on those specific days. Perhaps including an activity, such as climbing stairs while singing the scale, can make learning more fun for youth beginning solfege, even though it was not necessarily perceived as being more effective in this case.

Daniels (1986) reported that the teacher's attitude towards sight-reading instruction was shown to be of greater significance than any particular pedagogical approach. The instructor's attitude may have indeed been a confounding variable in the present study. The consistently high level of all ratings might indicate the generally positive perception of the summer camp experience as a whole on the part of these students. Further research in this area might include comparing responses over a longer period of time, comparing responses in a regular classroom situation, or comparing responses of a control and experimental group.

References

Abeles, H.F., Hoffer, C.R., & Klotman, R.H. (1984). *Foundations of Music Education.* New York, NY: Schirmer Books.

Boyle, J.D., & Lucas, K.V. (1990). The effect of context on sightsinging. *Bulletin of the Council for Research in Music Education, 106,* 1-9.

Bozone, J.M. (1987). The use of sight singing as a prestudy aid for the improvement of the sight-reading skill of second-semester class piano students (Doctoral dissertation, The University of Oklahoma, 1986). *Dissertation Abstracts International, 47,* 2358/07A.

Cappers, P.K. (1985). Sightsinging makes middle school singers into high school musicians. *Music Educators Journal, 72* (2), 45-48.

Cassidy, J.W. (1993). Effects of various sightsinging strategies on nonmusic majors' pitch accuracy. *Journal of Research in Music Education, 41,* 293-302.

Daniels, R.D. (1986). Relationships among selected factors and the sight-reading ability of high school mixed choirs (Doctoral dissertation, University of South Carolina, 1985). *Dissertation Abstracts International, 47,* 114/01A.

Demorest, S.M., & May, W.V. (1995). Sight-singing instruction in the choral ensemble: Factors related to individual performance. *Journal of Research in Music Education, 43* (2), 156-167.

Fredrickson, W.E. (1994, April). *Student perceptions of a high school band festival experience.* Paper presented at the National Biennial In-service Conference of the Music Educators National Conference, Cincinnati, OH.

Henry, M., & Demorest, S.M. (1994). Individual sight-singing achievement in successful choral ensembles: A preliminary study. *Update: Applications of Research in Music Education, 13* (1), 4-8.

Lucas, K.V. (1992). The effect of contextual condition on the sightsinging achievement of middle school choral music students (Doctoral dissertation, University of Miami, 1991). *Dissertation Abstracts International, 52,* 2455/07A.

Madsen, C.K., & Geringer, J.M. (1983). Attending behavior as a function of in-class activity in university music classes. *Journal of Music Therapy, 20* (1), 30-38.

Mann, R.G. (1991). The use of Kodaly instruction to develop the sight-reading skills of undergraduate flute students (Doctoral dissertation, Arizona State University, 1991). *Dissertation Abstracts International, 52,* 2063/06A.

Martin, B.A. (1991). Effects of hand signs, syllables, and letters on first graders' acquisition of tonal skills. *Journal of Research in Music Education, 39,* 161-170.

May, J.A. (1993). A description of current practices in the teaching of choral melody reading in the high schools of Texas (Doctoral dissertation, University of Houston, 1993). *Dissertation Abstracts International, 54,* 856/03A.

Persellin, D.C. (1992). Responses to rhythm patterns when presented to children through auditory, visual, and kinesthetic modalities. *Journal of Research in Music Education, 40,* 306-315.

Robinson, C.R. (1994, April). *Outcomes of an all-state chorus experience: The participants' perspective.* Paper presented at the National Biennial In-service Conference of the Music Educators National Conference, Cincinnati, OH.

THE EFFECT OF LISTENING TO A CONCERT RECORDING OF SINGERS' SELF-EVALUATION OF CHORAL PERFORMANCE

Mark Rohwer
Ohio State University

Abstract

This study investigated the effects of listening to a choral performance recording on students' self-evaluation. College singers (N=130) filled out the Cooksey Choral Performance Rating Scale (CPRS), evaluating a concert in which they had performed the evening before. Of that population, the CPRS-only group (n = 69) completed the CPRS based on their recollection alone, while the CPRS-Audiotape group (n = 61) was played a recording of the performance prior to their completing the CPRS. Results showed no significant difference between the composite or individual factor scores of either group. For one of the ensembles, the director also took the CPRS; results showed that the mean scores of the chorus were very similar to that of the director. Although students may be more attuned to certain specific musical components, such as tempo and dynamics, unguided student self-evaluations are not likely to change by allowing students to hear a tape of the performance.

It has long been thought that by evaluating students' musical performance, one is actually assessing things far more broad than techniques or skills. Elliott (1995) states, "a performance of a work is especially valuable in assessing musical thinking" (p. 76) "Performance gives us an excellent opportunity to evaluate the growth of aesthetic reaction," suggests Reimer (1989, p. 204). In sum, performance evaluation "is an integral part of any vocal or instrumental lesson or ensemble rehearsal" (Boyle, 1992, p. 258).

Educational theorists consider student self-evaluation to be a positive, useful tool for educational growth (Fiske, 1992; Gardner, 1993; Glasser, 1992). Some have argued that strong ties exist to student self-acceptance and self-esteem, although the extent of this is in question (Dewhurst, 1993; Statman, 1993). Public schools and educators have supported the use of self-evaluation in a variety of settings (Aebischer, 1971; Agol, 1962; Hewitt, 1993; Oregon State Department of Education, 1977; Oregon State Department of Education, 1980).

Therefore, it has been suggested that educators consider evaluating the ability of students to explain and assess their own musical work:

> As our performance curriculum becomes more broadly conceived, we will have to demonstrate that relevant conceptual learnings are taking place, that skills of analysis (which means abilities to understand and explain how musical expressiveness has been accomplished) are growing, that competence in judging music sensitively and knowledgeably is deepening. (Reimer, 1989, p. 205)

The National Standards for Arts Education (Consortium of National Arts Education Associations, 1994) contains important suggestions concerning students' ability to assess their musical work in a meaningful way. Students should be able to "evaluate the quality and effectiveness of their own and others' performances, compositions, arrangements, and improvisations" (p. 44).

The self-evaluation of musical performance, however, is difficult to quantify, although comparisons of evaluative descriptions or rating scales can be made. There is an "inherent

subjectivity in the assessment or measurement of performance, faculty, attitudes, and other impression-creating events, people, or circumstances" (Radocy, 1986, p. 26). Still, global judgments of a singer's impressions can be made, and techniques can be applied which allow some consensus through description and/or quantification (Radocy, 1986).

Some studies have indicated that certain conditions complicate the use of self-evaluation. Saloman & McDonald (1970) found that in order for self-evaluation to lead to behavioral or attitudinal change, it must serve as feedback suggesting the difference between the original performance and a desired performance. Felker (1972) indicated that students' self-evaluations of their academic work may be influenced by personality variables, concluding that self-evaluation may be a product of students' performance and their self-concept. Statman (1992) argues that people who are "modest" or "humble" may have an inaccurately low self-assessment.

Conversely, many subjects have been found to assess themselves with higher ratings than peers or experts in the field would rate them (Bergee, 1993; Byo, 1990; Byo, 1994; Cassidy, 1993; Colwell, 1995; Madsen, Standley, & Cassidy, 1989; Salomon & McDonald, 1970), although practice with the format used sometimes the decreased the discrepancy (Cassidy, 1993). As Bergee stated, "precise self-evaluation of performance skills calls for careful structure" (1993, p. 26). Research has indicated, however, that although the raw scores of young or untrained listeners differ from the scores of more accomplished listeners, evaluative rankings tend to be highly correlated, with both untrained and accomplished listeners seeming to agree about the relative ability or groups when compared to each other (Byo, 1994; Robinson, 1988; Winter, 1989).

Much consideration has been given to developing a measure to evaluate performance criteria. Building on the work of Abeles (1973), Cooksey (1977) used the facet-factorial approach in developing a Likert scale, for use by both students and professionals, to rate high school choral music performance. The scale rates seven factors of choral performance: diction, precision, dynamics, tone control, tempo, balance/blend, and interpretation/musical effect (Cooksey, 1982). Research in this particular area has continued (Larkin, 1986; Weymuth, 1986), and

a design using the facet-factorial approach for vocal solo performance has also been developed (Jones, 1986). Giersch (1994) developed an instrument for the self-evaluation of high school choral directors relating to their skills in identifying and solving rehearsal problems. Whatever the measure, there are indications that students' involvement in evaluation of their own work serves to increase learning and enhance the students' attitudes relating to music class (Sparks, 1990; Williams, 1990).

In an investigation of the nature of collegiate singers' self-assessment of choral performance quality, Robinson (1993) suggested that self-evaluation did not differ significantly whether based on recent recollection or on the evaluation of a concert tape. Comparing written comments under two conditions, next-day recollection and concert tape evaluation, Robinson found that the students' opinion of the best, worst, or their personal favorite piece did not change from one condition to the other. Robinson argued that this may indicate either that the performer's recollections are accurate without the assistance of a recorded reminder of the performance, or that the performer's perceptions are fixed to such a degree that they may be hard to alter even with a recorded reminder.

As accurate self-evaluation is a valued skill that is considered as indicative of advanced musical thinking, procedures used to ascertain that information deserve study. Do singers' evaluation of their musical performance differ if they listen to a recording of their performance prior to the evaluation? Is there some aspect of a performance (diction, balance/blend, etc.) that differs more significantly between an evaluation based on recollection alone and one based on recollection with an aural reminder? How do students' performance evaluations compare to the ensemble director's evaluation of that same performance? The purpose of this study was to compare the performance self-evaluation of students who listened to a recording of the performance with students who did not, as well as to compare students' evaluations with those of their director.

Method

The subjects (N=130) were members of two different, entry-level choirs in a large midwestern university. Subjects in

both choirs were college students, a majority of whom were undergraduates majoring in fields other than music. While a few attended the university part-time or were non-traditional students, the vast majority of members of the choirs were 18-22 year olds, attending the university as full-time students.

Each student had performed as part of a concert the evening preceding the evaluation. The evaluative sessions occurred approximately 18 hours later, during the next scheduled meeting of each ensemble. The directors of the ensembles did not give any commentary to the students regarding the performance until after the evaluation was completed.

For the evaluation, each choir was divided randomly into two groups. The two groups were then randomly assigned as either the "CPRS-only" group or the "CPRS-Audiotape" group, and sent into separate classrooms. The CPRS-only group (n = 69) was given the revised Choral Performance Rating Scale (CPRS) (Cooksey, 1982) and asked to rate the preceding evening's performance. The CPRS-Audiotape group (n =61) was also given the CPRS, but was asked only to read it through while listening to an audio-tape of the preceding evening's performance. This was done in order to avoid the possible confounding effect of writing while listening (Wolfe, 1983). After the audio-tape playback, the students in the CPRS-Audiotape group were asked to rate the performance. The CPRS-Audiotape sessions were administered by the researcher, while the ensemble directors administered the CPRS-only sessions. The director of Chorus A, an accomplished and experienced faculty member, was also asked to complete the CPRS. The director was not played the audio tape of the performance. The director of Chorus B was unavailable for this portion of the study.

The CPRS was chosen because it was designed with student ensembles in mind, and also because of its mention in leading reviews of assessment literature (Abeles, Hoffer, & Klotman, 1994; Boyle, 1992). Cooksey (1977, 1982) found the construction of the CPRS to have high criterion-related validity (above .85) and inter-judge reliability (above .87). In order to attest to the content validity of the CPRS in the context of this particular study, a panel of experts in choral performance was asked to consider each question with regard to the musical skills of the singers involved. Questions which caused concern were

altered so as to avoid terminology unfamiliar to the subjects in the study. The subjects' scores on the CPRS were considered both as a single, composite score and as a collection of scores from seven subsets: balance/blend, diction, dynamics, interpretation, precision, tempo and tone color. The version of the Choral Performance Rating Scale used for this study can be found in the Appendix.

Results

Possible composite scores of the CPRS can range from 35 (low-negative) to 175 (high-positive). As the students in both Chorus A and Chorus B are of similar ages and had similar levels of experience, their scores were pooled together. For this study, an *a priori* level of significance was set at .05. Table 1 shows the results of a *t* -test comparison of the composite scores of the CPRS for the CPRS-only and CPRS-Audiotape groups. The *t*-test revealed no significant difference (N=130, df=128,t=.339,p<.74).

Table 1

Results of t-test Comparison of Composite CPRS Scores in CPRS-only and CPRS-Audiotape Groups

Group	Mean	Std Dev	*t*
CPRS-only	114.5	20.9	.34
CPRS-Audiotape	115.8	22.7	

Table 2 shows the results of a *t* - test comparison of each of the individual factors in the CPRS. The *t* - test revealed no significant difference between the CPRS-only and CPRS-Audiotape groups for any factor.

Table 2

Results of t-test Comparison of CPRS Factor Scores in CPRS-only (G1) and CPRS-Audiotape (G2) Groups

Factor	Mean		Std Dev		*t*	*p*
	G1	G2	G1	G2		
Balance/Blend	16.95	17.70	4.93	4.37	.307	.36
Diction	15.36	16.31	3.56	4.41	1.033	.18
Dynamics	16.25	14.80	3.25	4.38	-1.573	.06
Interpretation	18.42	19.07	3.34	3.78	1.356	.30
Precision	22.54	22.82	4.48	6.01	.910	.76
Tempo	9.04	8.34	2.34	2.73	-1.888	.12
Tone Color	16.46	16.62	3.81	3.93	.234	.82

Within Chorus A, the scores of the CPRS-only group were extracted, and means for that subgroup were established. This was done in order to compare the scores of the students who did not hear the recording to those of the director, who did not hear the recording either. As the director of Chorus B was unavailable, the scores of the Chorus B students were not considered for this part of the study. Table 3 shows a comparison of the mean scores of the Chorus A control group with the CPRS scores of the Chorus A director.

Table 3

Comparison of CPRS Factor and Composite Scores between CPRS-only Mean Scores (Chorus A) and Director (Chorus A)

Factor	Control group	Director
Balance/Blend	20.9	23
Diction	17.25	17
Dynamics	18	13
Interpretation	20.5	21
Precision	25.6	26
Tempo	10.4	9
Tone Color	18.4	21
Composite Score	131	130

On visual inspection, it can be noted that the mean scores of Chorus A (n =28) are strikingly similar to the scores of the Chorus A director.

Discussion

For each question in this study, the mean composite scores of the CPRS-only and CPRS-Audiotape groups did not differ significantly; these results seem to support the Robinson (1993) study, which also found no significant difference in self-evaluation based either on recollection alone or on an auditory reminder. Further, no significant difference was found between groups for any musical factor that the CPRS evaluates. Finally, there was no significant difference between the mean scores of the CPRS-only students of Chorus A and their director.

As the use of a recording had no significant effect on the students' self-evaluation, directors seem to be able to choose either to use or not use a recording as a reminder, without dramatically altering the students' perceptions of the event. Director may use a recording for many other reasons, of course,

but it appears unnecessary to do so for the students' evaluative benefit.

The directors of the ensembles in this study were somewhat surprised that the means of the composite CPRS scores did not differ significantly across groups. In fact, prior to the evaluative session, one director became uncomfortable with the study, fearing that those students hearing a recording of the performance without the mitigating presence of a director would be so critical of themselves that it would be difficult to recover from the resulting loss of morale. The results of this study do not reveal the CPRS-Audiotape group to be extraordinarily critical, however. Actually, the CPRS-only group was more critical of the performance than the CPRS-Audiotape group, although not by a significant margin.

None of the individual musical factors tested in the CPRS differed significantly between groups; the largest differences are seen in the factors of tempo (p =.12) and dynamics (p =.06), while the remaining factors (balance/blend, diction, interpretation, precision and tone color) show smaller differences. The meaning of this is unclear, but a possible answer could be that the subjects in the CPRS-Audiotape group evaluated certain factors of performance more critically than those in the CPRS-only group. Also, listening to the recording of the performance could have attuned the members of the CPRS-Audiotape group to matters of dynamics more than to matters of tone color (p =.82), for example. This may indicate that the use of a recording could be helpful for certain specific constructs of musical performance, such as dynamics, tempo and diction. Students may find that using a recording to focus on these elements gives them a slightly different interpretation than recollection alone would have served. Again, although the differences for these individual factors is interesting, they are still not statistically significant.

For all of the respective scores, both composite and by factor, the CPRS-Audiotape group was more critical than the CPRS-only group in evaluation for only dynamics and tempo. In all other cases, the CPRS-only scores show a more critical evaluation. Comments from participants in the CPRS-Audiotape group suggest that this is what they expected would happen. Several participants remarked that, although they thought that the

recording would make them more critical, they actually felt better about the performance than they did prior to listening to the recording. Again, these positive evaluations do not carry over to the factors with the most difference between groups. As a reminder, these differences, even at their most extreme, were not found to be statistically significant, possibly reducing the power of these findings.

It is interesting to consider that the overall evaluative mean of a group is similar to that of the ensemble's director, and a visual inspection of the CPRS scores of the control group and the director of Chorus A show a remarkable similarity. These results are tempered somewhat if the range of scores within the control group are considered. Although the mean composite score is 131, the individual scores range from a low score of 93 to a high score of 161, an overall range of 68 points. Considering that fairly substantial range for Chorus A, it may be concluded that an individual student's evaluative scores may differ considerably from that of the director, even though the group's scores are almost identical to the director's scores. This same phenomenon can be seen when observing the overall composite score range of the full populations in each group; even though the means are similar, the individual scores range from 66 to 161 in the CPRS-only group, and from 69 to 163 in the CPRS-Audiotape group.

The large range leads to consideration that participants in this study evaluate the same event in very different ways. Further research should investigate how it is that differences in evaluation occur. Could factors such as placement within the ensemble, the passage of time after a performance or the voice part of the participant result in differences in evaluation? Furthermore, it is important to consider how it is that evaluation skills are taught and learned. It is possible that many students are not able to accurately evaluate themselves, resulting in widely disparate interpretations of a performance; this would have clear implications for music educators.

The speculation that individuals evaluate their ensemble's performance differently should not cloud the questions and results of this study, however. The means of composite scores and the means of individual factors on the CPRS show no statistical difference between those who based their evaluations on recall and those who were able to hear a recording of the

performance that they were evaluating. Although students may be more attuned to certain specific musical components, such as tempo and dynamics, unguided student self-evaluations are not likely to change by allowing students to hear a tape of the performance.

References

Abeles, H. (1973). Development and validation of a clarinet performance adjudication scale. *Journal of Research in Music Education, 21*, 246-255.

Abeles, H., Hoffer, C., & Klotman, R. (1994). *Foundations of music education* (2nd ed.). New York: Schirmer Books.

Aebischer, D. (1971). *Self-evaluation checklist for school music programs.* Salem, OR: Oregon State Board of Education. (ERIC Document Reproduction Service No. ED 069 582)

Agol, A. (1962). *Humanities enrichment program for gifted students of VUHS.* Visalia, CA: Visalia Union High School District. (ERIC Document Reproduction Service No. ED 001 191)

Bergee, M. (1993). A comparison of faculty, peer, and self-evaluation of applied brass jury performances. *Journal of Research in Music Education, 41* (1), 19-27.

Boyle, J.D. (1992). Evaluation of music ability. In R. Colwell (Ed.), *Handbook of research on music teaching and learning* (pp. 247-265). New York: Schirmer Books.

Byo, J. (1990). Recognition of intensity contrasts in the gestures of beginning conductors. *Journal of Research in Music Education, 38*, 157-163.

Byo, J. & Brooks, R. (1994). A comparison of junior high musicians' and music educators' performance evaluations of instrumental music. *Contributions to Music Education, 21*, 26-38.

Cassidy, J. (1993). A comparison between students' self-observation and instructor observation of teacher intensity behaviors. *Bulletin of the Council for Research*

in Music Education, 115, 15-29.

Colwell, C. (1995). Effect of teaching setting and self-evaluation on teacher intensity behaviors. *Journal of Research in Music Education, 43,* 6-21.

Consortium of National Arts Education Associations (1994). *National standards for arts education: What every young American should know and be able to do in the arts.* Reston, VA: Music Educators National Conference.

Cooksey, J. (1977). A facet-factorial approach to rating high school choral music performance. *Journal of Research in Music Education, 25,* 100-114.

Cooksey, J. (1982). Developing an objective approach to evaluating music performance. In R. Colwell (Ed.), *Symposium in Music Education: A Festschrift for Charles Leonard* (pp. 197-229). Urbana, IL: University of Illinois, Champaign-Urbana.

Dewhurst, D. (1993). The appropriateness of self-esteem: a response to Nesbitt and Statman. *Journal of Moral Education, 22*(1), 63-65.

Elliot, D. (1995). *Music matters: A new philosophy of music education.* New York: Oxford University Press.

Felker, D. (1972). Prediction of specific self-evaluations from performance and personality measures. *Psychological Reports, 31,* 823-826.

Fiske, E. (1992). *Smart schools, smart kids: Why do some schools work?* New York: Touchstone.

Gardner, H. (1993). *Multiple intelligences: The theory in practice.* New York: Basic Books.

Giersch, D. (1994). Choral diagnostic evaluation model: A self-administered and self-scored instrument for high school choral teachers to evaluate their skills in identifying and solving rehearsal problems (Doctoral dissertation, Temple University). *Dissertation Abstracts International, 54,* 2501A.

Glasser, W. (1992). *The Quality School* (2nd ed). New York: Harper Collins.

Hewitt, C. (1993, April). *Assessment of student learning in fine arts*. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, GA. (ERIC Document Reproduction Service No. ED 358 166)

Jones, H. (1986). An application of the facet-factorial approach to scale construction in the development of a rating scale for high school vocal performance (adjudication, evaluation, voice) (Doctoral dissertation, The University of Oklahoma). *Dissertation Abstracts International, 47,* 1230A.

Larkin, M. (1986). The construction and validation of rating scales for the objective measurement of five dimensions of achievement in choral music performance (diagnostic, evaluation) (Doctoral dissertation, Temple University). *Dissertation Abstracts International, 46,* 2223A.

Madsen, C., Standley, J., & Cassidy, J. (1989). Demonstration and recognition of high and low contrasts in teacher intensity. *Journal of Research in Music Education 37,* 85-92.

Oregon State Department of Education (1977). *Self-evaluation checklist for school music programs: Orchestra music grades 4-12.* Salem, OR: Oregon State Board of Education. (ERIC Document Reproduction Service No. ED 152 662)

Oregon State Department of Education (1980). *Classroom music: Grades 5-8,* Salem, OR: Oregon State Department of Education. (ERIC Document Reproduction Service No. ED 204 234)

Radocy, R. (1986). On quantifying the uncountable in musical behavior. *Bulletin of the Council for Research in Music Education, 88,* 22-31.

Reimer, B. (1989). *A philosophy of music education* (2nd ed). Englewood Cliffs, NJ: Prentice Hall.

Robinson, C. (1988). Differentiated modes of choral performance evaluation using traditional procedures and a continuous response digital interface device (Doctoral dissertation, The Florida State University). *Dissertation Abstracts International, 49,* 2445A.

Robinson, C. (1993). Singers' self-assessment of choral performance: Next-day recollections versus concert tape evaluation. *Southeastern Journal of Music Education, 4,* 224-233.

Salomon, G., & McDonald, F. (1970). Pretest and posttest reactions to self-viewing one's teaching performance on video tape. *Journal of Educational Psychology, 81* (4), 280-286.

Sparks, G. (1990). The effect of self-evaluation on musical achievement, attentiveness, and attitudes of elementary school instrumental students (Doctoral dissertation, The Louisiana State University and Agricultural and Mechanical College). *Dissertation Abstracts International, 51,* 3009A.

Statman, D. (1992). Modesty, pride and realistic self-assessment. *The Philosophical Quarterly, 42,* 420-438.

Statman, D. (1993). Self-assessment, self-esteem and self-acceptance. *Journal of Moral Education, 22*(1), 55-62.

Weymuth, R. (1986). The development and evaluation of a cognitive music achievement test to evaluate Missouri high school choral music students (Doctoral dissertation, University of Miami). *Dissertation Abstracts International, 47,* 4316A.

Williams, M. (1990). The effects of evaluative questioning on selected student outcomes. *Southeastern Journal of Music Education, 2,* 55-67.

Winter, C. (1989). The effects of primacy/recency and excerpted versus full-length performance on large instrumental group adjudication (Doctoral dissertation, The University of Alabama). *Dissertation Abstracts International, 51, 780A.*

Wolfe, D. (1983). Effects of music loudness on task performance and self-report of college-aged students. *Journal of Research in Music Education, 31* (3), 191-201.

Appendix:
Choral Performance Rating Scale
(Cooksey, 1977, 1982)

The purpose of the following questions is to have you describe the performance which you have just heard as accurately as possible. Please indicate the extent to which you agree or disagree that the statement is descriptive of the performance. Use the following five-point scale:

SD - Strongly disagree that the statement is descriptive
D - Disagree that the statement is descriptive
NN - Neither disagree nor agree that the statement is descriptive
A - Agree that the statement is descriptive
SA - Strongly agree that the statement is descriptive

Please choose only one response to each question. Please attempt to answer every question. Circle responses.

SD D NN A SA	1.	Excellent rhythmic vitality
SD D NN A SA	2.	Attacks and releases of many notes are imprecise
SD D NN A SA	3.	Excellent unity of style
SD D NN A SA	4.	Dynamics handled well in relation to phrase development
SD D NN A SA	5.	Lowest part balances upper parts very well
SD D NN A SA	6.	Excellent use of "pp"
SD D NN A SA	7.	Tendency to rush tempo
SD D NN A SA	8.	The tone quality is too harsh in forte passages
SD D NN A SA	9.	Lovely changes in dynamics
SD D NN A SA	10.	Sloppy rhythms
SD D NN A SA	11.	All part entrances are very precise
SD D NN A SA	12.	Unsteady rhythmic sections
SD D NN A SA	13.	Needs wider dynamic contrasts
SD D NN A SA	14.	The tone quality is often "forced" in this choir
SD D NN A SA	15.	Words clearly understandable
SD D NN A SA	16.	Top voices cover up lower voices

SD D NN A SA 17. A musical and artistic effort...fluid and vital
SD D NN A SA 18. Good overall blend of all parts
SD D NN A SA 19. Initial consonants need more emphasis
SD D NN A SA 20. The choir projects the mood of each selection very well
SD D NN A SA 21. Excellent control of tempo
SD D NN A SA 22. Excellent control of intonation at forte levels
SD D NN A SA 23. Emotional concept of word meanings very well expressed
SD D NN A SA 24. Excellent balance between all parts
SD D NN A SA 25. Attacks are consistently weak
SD D NN A SA 26. Performance exhibits the proper stylistic interpretation
SD D NN A SA 27. Articulation was clear and precise
SD D NN A SA 28. Men's voices balance the choir very well
SD D NN A SA 29. Delicate, expressive shading in dynamics
SD D NN A SA 30. Diction is muddy
SD D NN A SA 31. Tempo unsteady in some sections
SD D NN A SA 32. Intonation in all parts excellent throughout
SD D NN A SA 33. Some poor entrances by different parts
SD D NN A SA 34. Soprano sound forced in upper pitch and dynamic range
SD D NN A SA 35. Inner parts balance the outer voices very well
SD D NN A SA 36. The diction of this group is excellent

THE EFFECT OF VERBAL, WRITTEN, GESTURAL, AND CHORAL STIMULI ON SINGERS' PERFORMANCE RESPONSES TO DYNAMIC CHANGES IN MUSIC

Julie A. Skadsem
University of Alabama

Abstract

The purpose of this study was to determine the effects of verbal, written, gestural, and choral stimuli on singers' responses to dynamic changes in music. Participants (N=37) included choral ensemble students randomly selected from two high schools. Participants were taught a simple folk song by their classroom teacher and were tested individually. They watched a video tape of a conductor, listened to a choir through headphones, referred to written musical examples, and sang along with the tape. The stimulus tape repeated the song 10 times yielding 10 music examples. Instructions regarding the dynamic level (soft or loud) of the second phrase in the musical example were given utilizing the four instructional stimuli (verbal instructions from the conductor, written instructions on the music, gestural changes in the size of the conductor's beat pattern, and the choir suddenly changing volume). Participants' performance responses were recorded onto an audio tape and evaluated by three judges using a Continuous Response Digital Interface (CRDI). Results indicated significant differences among the four instructional stimuli except gestural and choral, and gestural and written. No significant differences were found between the correct soft and loud responses of the participants, nor between less and more experienced singers.

Many music education researchers have been interested in determining the most effective way to teach musical concepts. In an extensive review of literature, Hair (1987) presented what recent studies had found regarding children's responses to music stimuli. The studies found that children develop nonverbal skills quicker than verbal skills as they relate to responding to and labeling musical concepts. Based on the research regarding aural and visual response modes, Hair suggests that children learn aural skills better without visual stimuli, and that the process of responding aurally or visually may be quite different. This second finding was confirmed in a study done by Brittin (1993) in which nonmusic majors interpreted visual images of tempo changes differently from aural.

Other researchers have focused on the use of class time (Spradling, 1985; Witt, 1986; Yarbrough, 1981). These studies showed a significant increase in off-task behavior during nonperformance activities, including verbal instruction. One might infer, then, that less time spent on nonperformance activities will lead to more efficient and effective rehearsals. But Grechesky (1985) found that some verbal instruction is necessary in a choral rehearsal. This verbalization has the most impact when it includes imagery.

Many music professionals maintain that many musical concepts are more effectively taught through nonverbal means. Body movement is a useful technique in facilitating and enhancing musical performances (Wis, 1993). Incorporating these body movement techniques into one's conducting gesture can remind singers of the kinesthetic response that created the appropriate sound. This kind of modeling can also function as instruction. In a study comparing the effects of verbal and nonverbal (modeling) instruction on the performances of instrumental ensembles, participants receiving modeling instruction achieved significantly higher scores on ear-to-hand and kinesthetic skills tests (Dickey, 1991). Furthermore, it was stated that music discrimination skills are not efficiently taught through verbal instruction alone.

Visual cues appear to be important in developing accurate tuning skills in beginning guitar students as well. Codding (1987) discovered that the withdrawal of visual instruction substantially decreased the tuning accuracy of

beginning guitar students. Visual perceptions were also an important factor in determining the attitude or performance manner of performers in a study analyzing the movements of soloists (Davidson, 1993). In this study, the soloists were visually, aurally, and visually/aurally observed. Fluorescent bands around the pivotal points of the body and special lighting effects helped to exemplify and isolate the visual image of the performer. Results implied that the condition involving vision alone more clearly defined the performance manner of the soloist.

Fredrickson (1992) conducted a study similar in design to the previous one, but from a performance perspective. Instrumental musicians in his study played along (individually) with a band recording and watched a conductor on a video tape. At some point, participants lost either visual and/or aural stimuli but continued to play. Naturally, the participants receiving both visual and aural stimuli throughout scored highest on eye-contact and performance scores. However, participants with only visual or aural cues scored nearly the same.

Music Education researchers have revealed information regarding how music students learn in ensemble rehearsals, and have begun to determine effective uses of class time. The present study continues the exploration of visual and aural stimuli in the choral rehearsal. The purpose of this study was to determine the effect of verbal, written, gestural, or choral stimuli on singers' performance responses to dynamic changes in music. The following null hypotheses were formulated:

Ho #1: There will be no significant difference in student responses to the four instructional modes (verbal, written, gestural, or choral).

Ho #2: There will be no significant difference in the number of correct student responses in loud and soft passages as a result of the instructional stimuli (verbal, written, gestural, or choral).

Ho #3: There will be no significant difference in the dynamic performance responses of less and more experienced singers.

Method

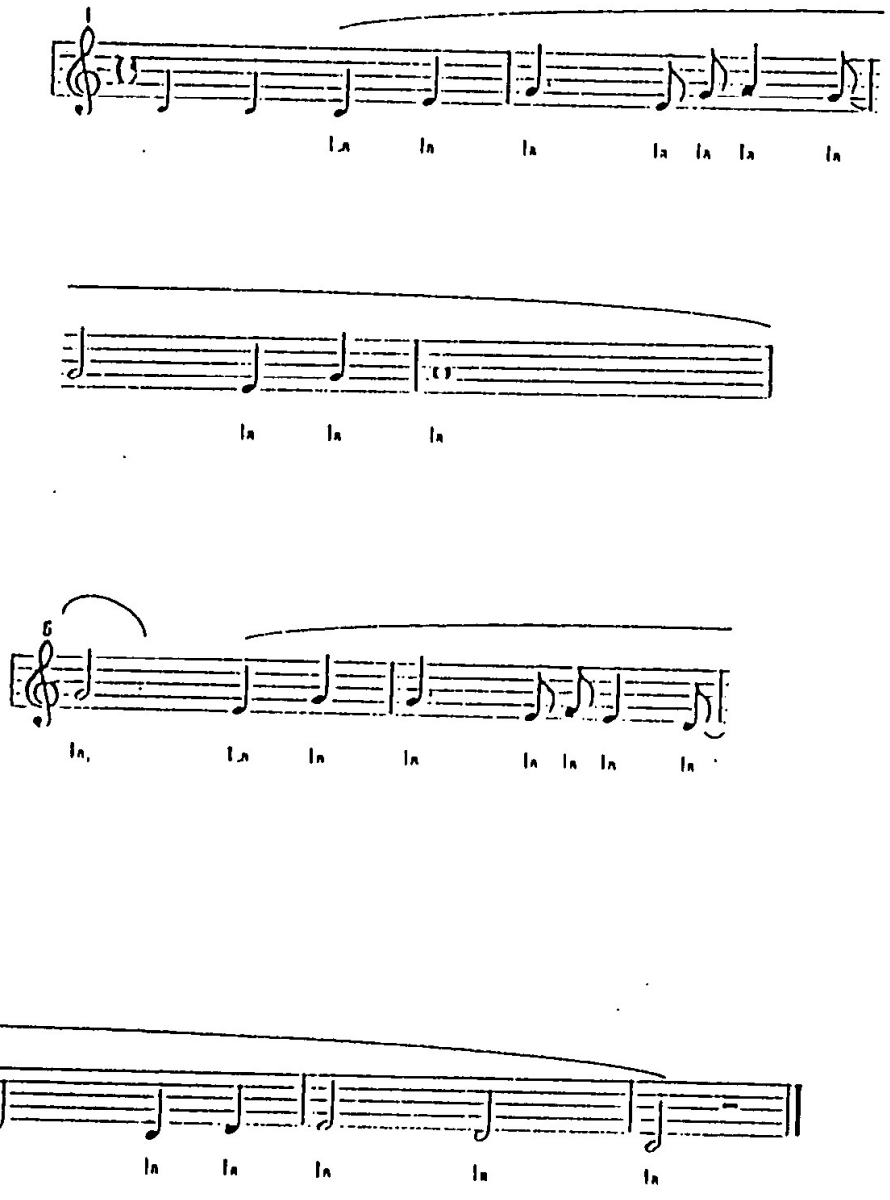
Participants

Thirty-seven high school singers were randomly selected from two suburban high schools in a large metropolitan community in the Midwest. The singers were members of choirs with varying degrees of experience and ranged in grade level from 9th to 12th grade.

Design and Procedure

The folk song, "Michael Row the Boat Ashore," (Figure 1) was selected as the musical example for the experiment. The song contained an antecedent and a consequent phrase that were similar in rhythmic and melodic structure. It also had a narrow range and started and ended on the tonic pitch.

Figure 1



Experience has shown that a comfortable singing range for adults is one that revolves around the pitch f#. Therefore, the song was recorded in the key of C# major, allowing the center pitch to be f#. Since the C# major key signature may have been intimidating or distracting for some singers, the music sheets showed the piece transposed into the key of C major.

The song was recorded by 6 singers, 3 male and 3 female, onto an audio tape. Six singers was thought to be a large enough number to sound like an ensemble, and small enough to still control confounding variables. The singers sang the piece with limited vibrato and dynamic contrast so as not to influence the participants' tone quality or dynamic performance.

A stimulus video tape was prepared for participant viewing. The visual picture showed a conductor (from the waist up) conducting the prerecorded musical example. The conductor exhibited neutral facial expression and conducted a basic four pattern using only the right hand.

The musical excerpt was repeated on the video tape 10 times making 10 musical examples. Instructions regarding the dynamic level (loud or soft) of the second phrase of music were given through verbal, written, gestural, and choral cues on 8 of the 10 examples (figure 2). Two of the examples included no instructions. Verbal instructions were given by the conductor saying " Sing the second phrase loudly" and "Sing the second phrase softly."

Figure 2

Experimental Condition

Musical Example:	Verbal	Gestural	Choral	Written
Example 1			soft	
Example 2				soft
Example 3			loud	
Example 4	soft			
Example 5				
Example 6		soft		
Example 7		loud		
Example 8				
Example 9				loud
Example 10	loud			

Written instructions were printed in the music directly above the first note of the second phrase of music using the markings "f (loud)" and "p (soft)." The definitions of the dynamic markings were provided in parentheses to account for any participants unfamiliar with the terms and abbreviations for "forte" and "piano." On the examples with the gestural condition, the conductor conducted the second phrase with a larger gesture for loud, and a smaller gesture for soft. The choral condition was achieved by mechanically manipulating the volume of the audio

tape up 15 decibels for loud, and down 15 decibels for soft. The 10 musical examples were randomly ordered.

The stimulus tape began with a two-minute introduction. Each musical example was 20 seconds long, followed by 5 seconds of transition and announcing time. Thus the stimulus tape lasted approximately 6 minutes, 18 seconds.

Participants (N=37) were tested individually in a small practice room. The room was private and relatively sound-proof. Each singer sat 3 feet away from the 13" television screen. This distance replicated the size of the conductor's torso as it would be perceived from a seated position in a choral rehearsal room. The television was also positioned just below eye level to account for the tiered structure of many rehearsal rooms, including the rooms in which these singers normally rehearsed.

Participants were selected randomly from choral classes at two high schools. Their regular choral director taught them the musical example by rote until all participants were comfortable with the melody and rhythm of the song. Participants were told nothing further about the content of the study.

Each participant viewed the conductor on the television screen, heard the choir through headphones, and was given a three-ring binder in which each musical example was printed on separate 8 1/2" by 11" sheets of paper. The video tape began with a welcome and introduction to the procedures of the experiment, and included two practice examples. Participants were instructed to listen to the first practice example and sing along with the second. The tape was then stopped to answer any specific questions. During this time, the researcher answered question s and indicated where phrases one and two began on the music sheet, informed the singers that each example would be announced before it began, and prepared them for the quick speed of the example progression.

The participants' singing responses were recorded onto an audio tape using a cordless microphone tied around each participant's neck. The microphone was positioned approximately 6 inches away from the participant's chin. The headphones had foam ear pads so that the singer was able to hear the audio sound and the sound of his/her voice simultaneously. Participants were also video taped so that an evaluation of eye contact with the

conductor could be measured. Following the testing session, each participant completed the questionnaire shown in Figure 3. A musicianship rating from 1 (low) to 4 (high) was assessed for each participant by his/her choral director.

Figure 3

Questionnaire

1. Name _____

2. How many years of ensemble experience have you had in school (elementary, junior high & high school combined)?

   Chorus_____

   Band_____

   Orchestra_____

3. Here are some ways of giving singers information about dynamic changes in music. Rank order this list from best (1) to worst (4).

   _____ verbal instruction from the conductor

   _____ a change in the size of the conductor's pattern

   _____ written instructions on the music

   _____ follow what the other singers do

Evaluating Data

The audio tape of the singers' performance responses were evaluated by three judges using a Continuous Response Digital Interface (CRDI). The CRDI dial was connected to a computer which receives voltage fluctuations from the movements of the dial. These fluctuations were transformed into a digital rating ranging from 1 to 255 depending on the location of the dial on the continuum. Therefore, ratings between 1 and 128 constituted soft singing, and ratings between 129 and 255 represented loud singing. The computer calculated a rating once per second for each of the three judges.

All three judges had past or current experience in working with adolescent voices. They were told that they would hear a series of musical examples sung by high school singers. They were to evaluate the loudness and softness of each example by moving a dial to the right for loud and to the left for soft. The dial was to be moved proportionately to the degree of loudness or softness perceived by the judge. The judges were to assume that the first phrase of each example was that singer's medium volume to account for the variety in voice sizes. After each example, the dial was returned to the upright position (medium volume) to begin the next example.

Results

The CRDI computer program calculated the percentage of time that the dial was positioned in the soft or loud sections of the continuum. A mean percentage score was established by averaging the percentages of the judges for each phrase of each musical example. Since dynamic instruction was only given on phrase two of the musical examples, if the percentage of time the dial was in the appropriate section (soft or loud) increased on the second phrase, a correct response was made.

The correct and incorrect responses of the participants for the four instructional stimuli (verbal, written, gestural, and choral) were gathered and a chi-square test was applied. A significant difference was found between the four instructional stimuli,

$X2\ (3, N=296) = 35.984, p<.001$, therefore rejecting null

hypothesis #1. A post hoc two by two Yates corrected chi-square test was used to compare each of the four modes to the others. Results yielded significant differences between all of the modes of instruction except gestural and choral, and gestural and written (Table 1).

Table 1

Post-hoc Two by Two Chi Square Analysis of the Four Instructional Stimuli.

	X2	df	n	p
Choral & Written	4.598	1	148	.03*
Choral & Verbal	30.478	1	148	.00*
Choral & Gestural	.029	1	148	.87
Written & Verbal	13.026	1	148	.00*
Written & Gestural	3.278	1	148	.07
Verbal & Gestural	27.530	1	148	.00*

* $p < .05$

The frequency distribution of the correct and incorrect responses of all participant is shown in Table 2. Question 3 on the participant questionnaire (Figure 3) asked participants to rank order the four instructional stimuli used in the study according to their effectiveness in communicating dynamic changes to singers. The rankings were converted into ratings by assigning 1 point for stimuli ranked fourth, 2 points for stimuli

ranked third, 3 points for stimuli ranked second, and 4 points for stimuli ranked first. The ratings of the four instructional stimuli by the participants are also shown in Table 2. It is interesting to note that the rank order of the four stimuli according to correct responses corresponds exactly with the participant ratings.

Table 2

Frequency Distribution of Correct and Incorrect Participant Responses and Participants' Ratings Comparing the Four Instructional Stimuli.

Stimulus	Correct Responses	Incorrect Responses	Participants' Ratings
Verbal	73	1	115
Written	58	16	103
Gestural	47	27	81
Choral	45	29	73

The researcher was interested in finding out if participants responded differently to soft versus loud instructional stimuli. The correct soft responses and the correct loud responses were compared across the four instructional stimuli utilizing a chi-square test. No significant differences were found, $X2$ (3, n=222) = 1.926, $p>.05$, thus null hypothesis #2 was accepted.

The participants were divided into two groups based on data collected in question 2 of the participant questionnaire (Figure 3). Group 1 (n=19) consisted of the less experienced singers (less than 6 years of ensemble experience) and Group 2 (n=18) contained the more experienced singers (6 or more years of ensemble experience.) The correct and incorrect responses of the two groups were compared using a chi-square test and no

significant difference was found. As a result, null hypothesis #3 was accepted.

Discussion

It appears from this study that verbal instruction is superior to written, gestural, and choral influences in communicating dynamic changes to singers. Verbal instruction elicited significantly more correct responses to dynamic instruction than the other three instructional stimuli. This finding contradicts past research suggesting that music students profit more from rehearsals in which there are more performance activities than verbal. The seriousness of the testing situation could have influenced the results of the present study. Although attempts were made to replicate a normal choral setting, fellow choir members, the more relaxed atmosphere of a familiar situation and conductor, and other factors may affect how effective verbal instruction can be.

The fact that the participants were referring to music during the testing period could have been a confounding factor as well. The visual attention of the singer was divided between the music sheets and the video of the conductor conducting. In many cases, the eye contact with the conductor was less than 5 seconds per 20-second example. The mean overall eye contact score combining all the musical examples among all 37 participants was 4.6 seconds. This could have accounted for the lack or response to the gestural stimuli.

Familiarity with the tune varied among the participants. A folk tune was chosen for the musical example because it would be somewhat familiar, but not become monotonous after several repetitions. With that in mind, this tune was a good choice since some participants knew it, some recognized it, and some did not know it at all. However, if the tune were memorized by the participants, perhaps the responses to the gestural stimuli would be different. This would, of course, eliminate the written stimuli since there would be no need for music sheets. It would be interesting to replicate this study in this fashion to see if the same hierarchy of effectiveness occurs between the remaining three stimuli (verbal, gestural, and choral).

Volume controls for the choral stimulus were made by mechanically adjusting the volume equidistantly above and below the normal level. However, when the video tape was played on the playback equipment, the speaker in the television decompressed the sound so that the dynamic changes were more difficult to detect. One would either need to acquire more sophisticated playback equipment or adjust the levels to further extremes to produce better results in this area. By readjusting the levels softer and louder, however, the sound may become distorted and distract the participant.

Participants' opinions regarding which of the instructional stimuli were most effective were closely related to the ones preferred in their performance responses. When the four instructional stimuli are placed in order of highest to lowest frequency of correct responses, the order is identical to the highest to lowest rank ordering accumulated from the combined questionnaire responses. This suggests that singers, even at the high school level, are quite perceptive of what techniques are most effective in the choral rehearsal. It may also imply a personal preference by the singer of a particular mode of instruction.

Some participants found the conductor difficult to watch because of the lack of involvement. Though the conductor exhibited a pleasant facial expression and cued breaths, there was no contrasting facial expression, no expression in the beat pattern, and no use of left hand. These controls were intentional in order to isolate one measurable aspect of the conductor's appearance, that being the size of the right hand pattern.

The musicianship ratings provided by the high school conductors matched closely with the participants' experience level. Singers with more experience tended to receive higher musicianship ratings. In fact, of the 18 participants in the more experienced group, 15 were also rated high on musicianship. Therefore, no comparison between high and low musicianship groups was made in this study.

Future research in this area could focus on a memorized performance by the participants, as was previously mentioned. It may also prove interesting to compare instrumentalists to singers, or conducting students to non conducting students. Perhaps singers who have had special training in conducting would be

more observant of gestural stimuli. A pretest evaluating participants' learning styles may also provide more insight into how and why musicians respond to instructional stimuli as they do.

References

Brittin, R.V. (1993). Discrimination of aural and visual tempo modulation. Bulletin for Council of Research in Music Education, 116, 23-32.

Codding, P.A. (1987). The effects of visual versus verbal instruction on beginning guitar students' tuning accuracy. In C.K. Madsen & C. A. Prickett (Eds.). Applications of research in music behavior (pp. 272-284). Tuscaloosa, AL: The University of Alabama Press.

Davidson, J.W. (1993). Visual perception of performance manner in the movements of solo musicians. Psychology of Music, 21, 103-113.

Dickey, M. R. (1991). A comparison of verbal instruction and nonverbal teacher-student modeling in instrumental ensembles. Journal of Research in Music Education, 39, 132-142.

Fredrickson, W. E. (1993). An exploratory study of band musicians' eye-contact and performance as influenced by loss of visual and/or aural stimuli (Doctoral dissertation, The Florida State University, 1992). Dissertation Abstracts International, A 53/07, 2151.

Grechesky, R. N. (1986). An analysis of nonverbal and verbal conducting behaviors and their relationship to expressive musical performance (Doctoral dissertation, University of Wisconsin-Madison, 1985). Dissertation Abstracts International, A 46/10, 2956.

Hair, H. I. (1987). Children's responses to music stimuli: Verbal/nonverbal, aural/visual modes. In C. K. Madsen & C. A. Prickett (Eds.), Applications of research in music behavior (pp. 59070). Tuscaloosa, AL: The University of Alabama Press.

Spradling, R. L. (1985). The effect of timeout from performance on attentiveness and attitude of university band students. Journal of Research in Music Education, 32, 123-137.

Wis, R. M. (1993). Gesture and body movement as physical metaphor to facilitate learning and to enhance musical experience in the choral rehearsal (Doctoral dissertation, Northwestern University, 1993). Dissertation Abstracts International, A 54/05.

Yarbrough, C., & Price, H. E. (1981). Prediction of performer attentiveness based on rehearsal activity and teacher behavior. Journal of Research in Music Education, 29, 209-217.

ADOLESCENT ATTITUDES TOWARD SINGING

Bonnie Kay Chaney
University of Missouri-Kansas City

Researchers investigating attitudes of students toward music have attempted to identify general causal factors and to find suitable measurement devices to assess attitudes. This study attempted to discover the roots of junior high students' attitudes toward singing. A total of 339 seventh and eight graders were asked to fill out a survey designed by the researcher to assess students' feelings about singing and reasons for their attitudes. Four areas of focus were targeted: gender, grade level, background, and peer involvement.

Surveys were distributed within the first week of school in order to minimize current teacher influence. With the exception of one art class, the students taking the survey all were enrolled in music classes.

Results reflected a significant difference in attitudes about singing in a group and in general attitudes about singing as a function of gender with females indicating higher scores in both categories. The grade level variable was significant only with regard to singing in a group. Students from an active musical home environment, those who sang in a church, and those playing an instrument reported more positive attitudes toward singing, but these activities may be correlates of a generalized positive music attitude rather than causal factors in developing positive attitudes about singing. Previous school experiences and present peer influence also were significant.

AN EVALUATION OF COMPOSITIONS FOR MIXED-CHAMBER WINDS UTILIZING SIX TO NINE PLAYERS: BASED ON ACTON OSTLING'S STUDY, "AN EVALUATION OF COMPOSITIONS FOR WIND BAND ACCORDING TO SPECIFIC CRITERIA OF SERIOUS ARTISTIC MERIT"

Kenneth G. Honas
University of Missouri-Kansas City

This study is based on the 1978 dissertation of Acton Eric Ostling, Jr., which primarily deals with the evaluation of wind music literature for ten players or more. Though the present study focuses on a different body of wind literature, wind chamber music for six to nine performers, both studies are concerned with the identification of compositions that could be considered works of serious artistic merit or high quality.

A select list of 1,587 compositions for mixed-chamber winds was catalogued by the present researcher from a variety of sources, including wind literature books, publisher catalogs, magazine articles, dissertations, unpublished lists, and works suggested by colleagues and evaluators. Through a process, national in scope, 341 college music faculty members were invited to nominate potential evaluators to participate in the study. From the nominations, and at the discretion of the investigator, twenty evaluators were selected to participate. The twenty evaluators selected represent some of the most active conductors, performers, and coaches associated with wind chamber music today.

Ostling created a list of ten criteria to serve as a guide or reference in determining serious artistic merit or quality of a composition. These criteria were developed from writings pertaining to musical aesthetics and music criticism, and address the subjects of craftsmanship, consistency in musical tendencies, form, and other areas within a particular composition.

The evaluators completed a survey that utilized a summated rating scale with five levels of judgment for determining the degree to which each of the 1,587 compositions met the criteria of serious artistic merit or high quality. From the total numbers of points received for each work, a mean score,

standard deviation, and percentage of maximum possible points were calculated. The number of evaluators familiar with a composition, as well as a predetermined minimum mean score, determined the criteria by which a work would be considered a composition of high quality. Eighteen evaluators returned their surveys, and a total of 1,587 works, composed prior to 1995, were rated by each evaluator. At the conclusion of the study, 288 compositions were found to meet the predetermined criteria of high quality.

AN INVESTIGATION OF THE RELATIONSHIP BETWEEN TEACHING MODALITY, STUDENT LEARNING MODALITY, AND METER RECOGNITION AT THE FOURTH-GRADE LEVEL

Malinda J. McCasland
University of Missouri-Kansas City

The purpose of this study was to determine if there were differences in students' meter recognition abilities as a function of teaching modality and student learning modality. Sixty-eight fourth-grade students were assessed for learning modality strengths (aural, visual, kinesthetic, and combinations thereof) by use of the Learning Style Inventory (Dunn, Dunn, & Price, 1989). Following modality strength evaluation, a meter recognition pretest was administered to three intact classes to determine group equivalency and eliminate from the study those who already possessed meter recognition competency. Classes then were each assigned to an aural, aural/visual, or aural/visual/kinesthetic teaching presentation format administered by the researcher during two regular music periods. All three groups received the same amount of teaching and listening time. A three-group pretest/posttest design was implemented.

The first posttest was administered immediately following the treatment to test for initial comprehension (Posttest I). Subjects received an additional posttest two weeks following treatment to assess meter recognition retention (Posttest II). No significant differences were found in the comparison of Posttest I (F [2, 57] = .71, $p > .05$) or Posttest II scores (F [2, 57] = 1.05, p = .36) between the three groups. Comparison of Posttest I scores from students whose learning strengths matched teacher presentation versus Posttest I scores from students whose strengths did not match teacher presentation also yielded no significant difference (t [58] = .06, p = .96). Dependent t - tests were implemented to compare pretest scores and Posttest I as well as Posttest II scores for the three groups. Results revealed significant gains in achievement from pretest to Posttest I scores for both the aural/visual and aural/visual/kinesthetic groups. No significant difference in scores from pretest and Posttest I was

found for the aural presentation group. The aural/visual/kinesthetic presentation class was the only group to exhibit significantly higher scores when comparing Posttest II results to pretest scores.

Group means seemed to indicate that students who are taught through the aural modality alone do not initially comprehend or retain information as well as those students who received the additional visual and kinesthetic teaching modality during their meter lesson, though the results were not significantly different at the .05 level. Students may benefit somewhat in both comprehension and retention if movement activities are incorporated when introducing new concepts such as meter recognition, regardless of student's learning modality strength.

TEACHERS' OPINIONS REGARDING THE USE AND EFFECTIVENESS OF ELEMENTARY MUSIC SERIES BOOKS IN MISSOURI PUBLIC SCHOOLS

Norma D. Mc Clellan
University of Missouri-Kansas City

Textbooks have received criticism in recent years, resulting in the abandonment of texts in some school systems and disciplines. The philosophy behind textbook elimination stems from proponents of mastery learning and classroom strategies designed to address individual learning styles. Proponents suggest the multiple intelligence of the student may be addressed more adequately without the restrictions of texts. Music series books are part of the elimination controversy. Few studies have researched the inaccuracies, biases and restrictive learning associated specifically with music texts. This study sought to discover music teachers' opinions regarding the importance of retaining music series books and the ramifications of music text elimination.

The use and effectiveness of elementary series books assessed by elementary general music teachers served as the focus of a survey mailed to a random sample (n=289) of K-6 music teachers (N=1089)). One hundred twelve teachers (n=112) responded to the survey and eleven of that number reported they did not use series books.

Teachers who did use series books (n=101) indicated a preference to continue the use of series books. Favorable aspects of the series books included: listening materials, music literacy materials, multicultural resources, and song selections. Some grade level texts, specifically, those for second, third and fourth grades, were perceived to contain more useful, beneficial materials than others. Respondents believed their series books were compatible with both mastery learning theory and school system curriculum guidelines.

Problem solving and critical thinking skills were inadequately addressed by series books according to forty-six percent of respondents (n=47) while fifty percent (n=51) suggested books contained an adequate amount of problem solving tasks. Teacher felt that students generally like series

books and would object to eliminating them. Teachers reported more than sixty percent of teaching materials come from basal series texts and ninety percent of respondents suggested lesson planning time would be increased with the elimination of series books.

Economic implications of music textbook retention or elimination and resource alternatives are discussed indicating a need for additional research. Further research is also suggested regarding the effectiveness of series in music learning as well as the effectiveness of alternative approaches.

ASPECTS OF CHORAL ENSEMBLE: DEFINITIONS AND APPLICATIONS OF SELECTED OUTSTANDING UNIVERSITY CHORAL CONDUCTORS

Rager Harrell Moore II
University of Missouri-Kansas City

The purpose of this study was to find where technical and expressive musical components are applied in the creation of choral ensemble within the rehearsal process. The investigation sought definitions and applications of these components by various authoritative sources and active conductors. It was thought that this type of research could provide a base of knowledge for choral conductors at all levels. The components researched included tempo, phrasing, enunciation, articulation, dynamics, blend, balance, timbre, breathing, pitch, rhythm, text, harmony, and melody.

Telephone interviews were conducted with the following outstanding college/university choral conductors: Anton Armstrong, Peter Bagley, Dennis Cox, Janet Galvan, John Haberlen, William D. Hall, William Hatcher, Gregory Lyne, Fritz Mountford, Donald Neuen, Charles K. Smith, Axel Theimer, Lynn Whitten, and Leonard VanCamp. Selection criteria included: (a) Appearance as a conductor and/or clinician at a divisional or national convention of the American Choral Directors Association, and (b) Those elected by their peers to office(s) in the national organization of the ACDA.

The results of the interviews and the research of the sources studied indicated that the ultimate goal of creating ensemble is to be expressive. It was evident, however, during preliminary research that there was a dichotomy between the technical and expressive and it was hoped that the dichotomy might be explained. The research indicates that in creating choral ensemble a variety of processes may be employed but that it is the simple idea of communicating those ideas successfully that is the overriding factor in creating successful choral ensemble.

The information in this study can serve as a source of pragmatic information to be used by other choral conductors in communicating with their choirs. It may also be used to stimulate

discussion among professional organizations and publishers resulting in further research and discussion concerning the communication of the technical and expressive ideas in the choral rehearsal.

THE DEVELOPMENT OF A VALID AND RELIABLE INSTRUMENT TO GRADE THE DIFFICULTY OF VOCAL SOLO REPERTOIRE

Janotto Ralston
University of Missouri-Columbia

The purpose of this study is to design a valid and reliable instrument, the Ralston Repertoire Difficulty Index (RRDI), to measure the difficulty of solo vocal repertoire. Another important aspect of this instrument is its ability to be used by all voice teachers, regardless of their level of experience in teaching in private voice studios. The instrument also was examined for its ability to discriminate among songs by categorizing repertoire into different difficulty levels.

Seven criteria were selected and defined to represent the technical characteristics that contribute to the difficulty of vocal solo repertoire. A measurement instrument incorporating these characteristics were designed to evaluate each characteristic individually.

A pilot study was used to test the completeness and clarity of the defined characteristics as well as to establish validity and preliminary reliability. The RRDI was then completed by 34 faculty members, chosen randomly from individuals listed in the 1994-95 College Music Society (CMS) Directory. Each subject's primary instructional responsibility was teaching voice.

The study found that each of the seven criteria of the RRDI was significantly related to an overall rating established by Boytim. The results of both the pilot and the main study indicated high validity and reliability. Analyses also revealed that the RRDI discriminated across difficulty levels and was used similarly by the more experienced and lesser experienced teachers.

It was concluded that the instrument developed and tested in this study provides voice teachers of all experience levels with a valid and reliable rating system with which to grade the difficulty of vocal repertoire.

A COMPARISON OF VOCAL TECHNIQUES, TIMBRES, AND RANGES CONSIDERED AESTHETICALLY PLEASING IN WESTERN AND NON-WESTERN CULTURES

Jennifer Lynn Rauscher
Central Missouri State University

This study compared the desired techniques, timbres and ranges of the western schools of singing - the English, French, German, and Italian schools - with those of six non-western cultures, Bulgaria, China, Korea, Bali, Cambodia, and the Baka people of Southeast Cameroon. The research was conducted by comparing sound recordings of vocal music from these individual cultures with the conventional techniques, timbres and ranges of western music. The differences were noted and described.

All six non-western cultures were found to have their own distinct sounds, all of which differ from western music. Performer of western music strive for vibrato and a free, open tone. They are taught that glottal stops, constriction of the throat, and straining for notes injure the voice. Western singers train to disguise their break for a smooth, legato line throughout all registers. In comparison, none of the non-western cultures uses a true vibrato. Instead they sing straight tones, employing shakes and rapid repetitions of notes. All of these cultures employ glottal stops and a constricted, nasal sound. All six cultures integrate the break of the voice into their music, jumping from lower to upper registers as in yodeling.

Almost everything taught in the western schools of singing is contradicted in non-western vocal music, but what holds true is the intrinsic value of music to all people. This is illustrated in "the basic unity of mankind as exhibited in music...and the infinite variety of musical phenomena found in the world," (Nettl, 1980,p.2).

THE EFFECT OF PARENT PARTICIPATION IN A SCHOOL-SPONSORED CHORAL MUSIC PERFORMING GROUP ON SECOND-AND THIRD-GRADE STUDENTS' ATTITUDES TOWARD SELECTED MUSIC ACTIVITIES

Jo Anne Taylor
University of Missouri-Kansas City

Research in effective schools, as well as research in music education, has indicated a strong relationship between parental involvement and student achievement. Studies regarding music attitudes have primarily focused on correlations between attitudes and other factors such as aptitude, achievement, gender, age, and home musical environment. Little research has taken an experimental approach, seeking to find the causes of attitude formation. Studies exploring the possibility of a causal relationship between parental involvement and musical attitude development have been reported rarely, if at all.

The purpose of this study was to measure attitudes toward music activities over a twelve-week period among students whose parents did or did not participate in a Parent Choir. Parents of second and third grade students were invited to participate in a Parent Choir, rehearsing once a week for a month, and performing on the Second and Third Grade Spring Concert.

Student attitudes were measured before Parent Choir rehearsals began, immediately after the performance, and again following an eight-week latency period. Students whose parents did not participate in the Parent Choir (n = 83) showed no significant attitude change over the course of the study, but students whose parents did not participate in the Parent Choir (n = 14) demonstrated a significant drop in attitude scores over the twelve-week period ($p < .05$). Further examination of this group's scores showed that the significant drop occurred primarily in the areas of singing and consuming music (i.e., listening to recorded music, attending live performances, etc.).

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Martin Bergee, Editor
Missouri Journal of Research in Music Education
Department of Music
138 Fine Arts Building
University of Missouri-Columbia
Columbia, MO 65201

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