

The Perceived Effectiveness of Nonverbal, Co-Verbal, and Verbal String Ensemble Instruction: Student, Teacher, and Observer Views

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Abstract:

The purpose of this study was to determine how students, teachers, and outside observers perceive teaching effectiveness within a university-level string ensemble rehearsal setting. Students, teachers, and observers reflected on six rehearsal segments that used primarily nonverbal, co-verbal, or verbal instruction as outlined by Bob Culver in the Master Teacher Profile. Overall, participants viewed the verbal teaching episodes as being most effective, and expressed a preference for several elements associated with the verbal instructional mode. Five common elements of effective rehearsals identified by participants were Specific Instructions and Feedback, Delivery Skills and Eye Contact, Audible and Focused Co-Verbal Instruction Prompts, Conducting Effectiveness, and Ensemble Progress. Effectiveness perceptions were colored by participants' sense of each teacher's comfort with the different instructional modes as well as the elements of rehearsal teaching they personally valued.

Keywords: co-verbal instruction | effective teaching | nonverbal instruction | verbal instruction

Article:

Teaching effectiveness is a topic that has been studied extensively by music education researchers (e.g., Butler, 2001; Goolsby, 1999; Hamann, Baker, McAllister, & Bauer, 2000; Hamann, Lineburgh, & Paul, 1998; Juchniewicz, 2010; K. Madsen & Cassidy, 2005). The complexity of teaching effectiveness, however, makes it difficult to define, assess, or analyze. Teachers bring a variety of styles and strengths to the classroom such that different instructional approaches may be considered equally effective depending on the population of students being taught and the classroom setting. There is some evidence, for example, that beginning band and orchestra teachers use different instructional strategies (MacLeod, 2010), and cooperating

teachers value different skills depending on the settings in which they teach (MacLeod & Walter, 2011).

One source recommended by the American String Teachers Association for string teacher preparation is the *Master Teacher Profile* written by Bob Culver (1989). In the *Master Teacher Profile*, the traits of expert orchestra teachers were described and specific recommendations were made regarding effective teaching in beginning, intermediate, and advanced string orchestras (Culver, 1989). The recommendations found in the *Master Teacher Profile* have influenced rehearsal pedagogy and teacher preparation for preservice and inservice orchestra teachers throughout the country (American String Teachers Association, n.d.; Hopkins, 2015). In his text, Culver conjectured that master teachers in orchestra settings used nonverbal and co-verbal instructions more frequently than verbal instruction, and that nonverbal and co-verbal instructional modes were more effective methods for orchestra teaching. He defined the three modes of instruction as follows: Nonverbal instruction included modeling using instruments, voice, gesture, proxy model, or electronic media. Co-verbal instruction was described as offering limited verbiage alongside the various types of modeling. Verbal instruction was defined as descriptive and Culver believed that it was the least effective of the three instructional modes (p. 21).

There are numerous studies of nonverbal communication outside of teaching contexts (e.g., Knapp & Hall, 2014; Mehrabian, 1981; Remland, 2000). According to one researcher (Mehrabian, 1981), nearly 93% of communication dealing with feelings and attitudes has been attributed to nonverbal behaviors, with only 7% attributed to the content of the message. Body language, eye contact, facial expressions, proximity, touch, and vocal inflection are all aspects of nonverbal communication (Knapp & Hall, 2014) that have also been identified as important elements in effective teacher delivery (Hamann, et al., 2000; Hamann & Gillespie, 2012). Research specific to nonverbal instruction in the music classroom encompasses topics related to perceptions of effectiveness (Johnson, Darrow, & Eason, 2008; Silvey, 2013; VanWeelden, 2002), teacher intensity (C. K. Madsen, Standley, & Cassidy, 1989; Yarbrough, 1975), conducting (Byo & Austin, 1994; Worthy, 2006), and modeling (Dickey, 1991; Sang, 1998). Investigations of co-verbal instruction are fewer in number. A similar type of instruction, referred to as “hustles,” was adopted from an analysis of coach John Wooden’s teaching practices as the basketball coach for UCLA (Gallimore & Tharp, 2004; Tharp & Gallimore, 1976). Tharp and Gallimore (1976) defined hustles as “verbal statements to activate or intensify previously instructed behavior” (p. 75). Coach Wooden would prompt players verbally immediately prior to the execution of a previously learned skill. In this way, the hustle served as a reminder to the player while they were engaged in the action. The use of co-verbal instructions delivered during active music participation has been observed in choral (Dunn, 1997) and string settings (Culver, 1989; Blanton, Dillon, & MacLeod, 2015; MacLeod, 2010). In a comparison of experienced band and orchestra teachers, MacLeod (2010) found that orchestra teachers used more co-verbal instruction, modeling, and pedagogical touch than did band teachers. Culver (1989) created the *Master Teacher Profile* based on his own observations of expert string teachers delivering instruction simultaneous to music performance, videos of which are included along with the text. While co-verbal instruction has been observed in these settings, its effectiveness has not been investigated.

Investigations related to verbal instruction in the music classroom are numerous. Researchers have found that experienced teachers used less verbal instruction compared to novice teachers (Goolsby, 1999; Wagner & Strul, 1979), students were more off-task during periods of teacher talk (Nápoles, 2007; Witt, 1986; Yarbrough & Price, 1981), and students preferred rehearsals with less teacher talk and more opportunities to perform (Nápoles, 2007; Spradling, 1985). Successful middle and high school band directors used verbal instruction for 32% to 42% of instructional time (Goolsby, 1999; Pontious, 1982), while successful choral conductors spent between 35% and 40% of their rehearsal time talking (Caldwell, 1980; Thurman, 1977). Worthy and Thompson (2009) found that rates of verbal instruction were higher (64%) for expert teachers of beginning band. The authors hypothesized that beginning students may require additional verbal instruction because of their performance level.

Based on the related literature, effective teachers spend 32% to 45% of rehearsal time using verbal instruction, suggesting that reduced teacher talk is desirable in rehearsal settings. Culver (1989) further suggested that master string teachers spend only 15% of instructional time using verbal instruction. Few researchers have examined the use of co-verbal instruction in string settings. Furthermore, limiting teacher talk to 15% of instructional time has not been investigated.

Directly related to the present study are two studies by researchers who investigated perceptions of rehearsal effectiveness relative to one's role in the rehearsal (teacher, student, or observer; Nápoles, 2017; Whitaker, 2011). Whitaker (2011) found that band directors and their students perceived teaching effectiveness differently: Band directors rated episodes containing more teacher talk highest while students rated these episodes lowest. Nápoles (2017) explored perceptions of students, preservice teachers, and outside observers on the effectiveness of choral rehearsals with limited verbal instruction. The ensemble members preferred limited verbal instruction, while the outside observers noticed a lack of specific instructions and feedback. In this study, I describe student, teacher, and outside observer perceptions of teaching effectiveness across the three modes of instruction as outlined by Culver (1989): nonverbal, co-verbal, and verbal. Specific research questions were (a) How do participants perceive the relative effectiveness of these three modes of instruction? (b) Are perceptions of teaching similar among those observing, delivering, or receiving instruction?

Method

A descriptive approach was adopted whereby narrative data specific to instructional modes and perceived string ensemble teaching effectiveness could be elicited. Participants responded to rehearsal segments that used primarily nonverbal, co-verbal, or verbal instruction. Data from a variety of sources were collected, including open-ended responses from students and open-ended reflections and interviews with teachers and outside observers. An application for institutional review board (IRB) approval was submitted for this study. The university IRB committee reviewed the proposal and “determined that this submission does not constitute human subjects research as defined under federal regulations [45 CFR 46.102 (d or f)] and does not require IRB approval.”

Participants

Study participants were undergraduate students ($n = 23$) enrolled in a university string ensemble, two ensemble teachers, and four outside observers. The university string ensemble members were freshman through senior music ($n = 12$) and nonmusic majors ($n = 11$) with prior performing experience ranging from 1 to 18 years. The ensemble was a nonaudition group that rehearsed twice weekly and performed two concerts during the fall semester.

The teachers, Eric and Sarah (pseudonyms used to protect confidentiality) each had 3 years of public school orchestra teaching experience prior returning to graduate school. Under the supervision of a university professor, they were directing the university string ensemble as part of their graduate assistantships. Eric was enrolled as a graduate student in the conducting degree program, and Sarah was enrolled in the masters in music education degree program.

The outside observers were purposely selected for their varied backgrounds, extensive experience rehearsing orchestras (greater than 15 years in all cases), and records of professional achievement (e.g., all-state conducting engagements, prestigious adjudication invitations, and teaching awards). Among the outside observers were a university orchestra conductor (18 years of teaching experience), a university music teacher educator (20 years of teaching experience), and two public school orchestra teachers (28 and 31 years of teaching experience). All observers had prior experience teaching strings in the public schools.

Three Modes of Instruction

To investigate perceptions of effectiveness for varied instructional modes, each teacher was asked to conduct three 3-minute rehearsal segments, with each segment emphasizing the nonverbal, co-verbal, or verbal instructional mode. The teachers were provided with the definitions and strategies for each mode as outlined in the *Master Teacher Profile*, and were familiar with the text from prior coursework taken with the researcher. Nonverbal rehearsals included nonverbal instruction (conducting and facial expressions); verbal instructions were permitted only to inform the ensemble of where to begin in the music. Co-verbal rehearsals included both nonverbal and co-verbal instructions. The teachers were permitted to tell the students where to begin; all other verbal instructions occurred simultaneous with ensemble performance. The verbal instructional mode included nonverbal and verbal instructions. The teachers were encouraged to “be as effective as possible” regardless of the mode of instruction. These six rehearsal segments were video recorded for subsequent viewing and analysis.

To verify that the three modes of instruction were executed as intended, I measured the duration of verbal and co-verbal instruction in each rehearsal. Similar to Nápoles and Vazquez-Ramos (2013), verbal instruction was operationally defined as any verbalization to the orchestra and included directions, feedback, and answering student questions. Modeling, silence, and student performance were not included as verbal instruction. Co-verbal instruction was measured separately and occurred during all instances when instruction was delivered simultaneous to student performance. The nonverbal rehearsal segments contained 5% to 12% verbal instruction, co-verbal segments contained 12% to 15% verbal instruction and 18% to 20% co-verbal instruction, and the verbal segments included 30% to 40% verbal instruction. These proportions reflect the degree of instructional emphasis that researchers would consider valid for representing distinct instructional modes.

Data Collection

Student Participants

Following each rehearsal segment, student participants were given 5 minutes to reflect in writing to four prompts: What was your experience with this portion of the rehearsal and its overall effectiveness? Did the ensemble improve? Did you enjoy this portion of rehearsal? Why did you enjoy or not enjoy this portion of rehearsal? To ensure that student behaviors, reflections, and opinions would not be influenced by preconceived biases about the different instructional modes, no details on the three modes of instruction were shared with them.

Teacher Participants

Videos of the six rehearsal segments were presented to the teachers via a shared drive. The teachers were asked to view the rehearsals that they conducted and write reflections on their comfort and perceived effectiveness during each rehearsal segment. Follow-up interviews were conducted with the teachers to clarify their responses. The teachers were asked the following: Which rehearsal did you feel was most effective, and why? During which rehearsal did you feel most comfortable? Share any other observations that you had about the rehearsal process.

Outside Observers

The four outside observers were provided with video recordings of the six rehearsal segments via a shared drive and were given the following instructions:

Watch the videos and reflect on the effectiveness of each rehearsal. Write your observations as you watch each video. Once you have watched all six videos, identify the rehearsal that was the most and least effective for each teacher. Why did you think it was the most or least effective? Share any additional thoughts that you have about effective rehearsals, or things that you noticed in these videos. Contact me prior to watching the videos so that we may schedule an interview immediately following your viewing.

The video recordings were presented in the shared drive in the following order: Sarah, nonverbal; Sarah, co-verbal; Sarah, verbal; Eric, verbal; Eric, co-verbal; Eric, nonverbal. After viewing the videos and submitting their written responses, the researcher interviewed the outside observers. Interviews were recorded using Audacity 2.06 (<https://sourceforge.net/projects/audacity/files/audacity/2.0.6/>) and later transcribed. The interviews were purposefully open-ended to encourage the outside observers to share their perspectives and honest feedback on the effectiveness of each rehearsal excerpt. The following questions guided the discussions: “What observations did you have about the rehearsal excerpts in general? Which rehearsal excerpt did you feel was the most effective? Why? Which rehearsal was the least effective and why?” Interviews ranged between 20 and 40 minutes in length.

Data Analysis

Written reflections from the students, teachers, and outside observers were analyzed for content and coded manually by the researcher using an open coding process (Saldaña, 2016). Data were

initially precoded, highlighting salient quotes and circling recurring ideas expressed by the participants. Preliminary codes were determined collaboratively by the researcher and an outside auditor to enhance trustworthiness, resolving any differences in interpretations. Using the preliminary codes, the data were analyzed using a “splitter” approach, wherein the written reflections were analyzed line by line. Recurrent patterns were then categorized to identify emergent themes related to effective teaching.

The transcripts from the outside observers’ interviews and teachers’ interviews were analyzed using the same open coding process. Throughout this data analysis, the recurrent themes from the participants’ written reflections were compared to their interview responses. The outside observers’ interviews served to clarify their written responses, and in many cases the observers elaborated on their views of effective rehearsals. Personal value systems began to emerge, and these themes were organized into a hierarchy based on frequency of occurrence for each individual (see the online Supplemental Table S1). The outside observers were provided with the hierarchical list of effective rehearsal traits via e-mail and given the opportunity to revise or change the order as it related to their personal views of effective rehearsals.

The students’ written reflections were reviewed an additional time to determine which rehearsals were deemed most effective. Using structural coding (Saldaña, 2016), frequency counts were tabulated for each mode of instruction based on students’ response to the question, “Which rehearsal did you feel was the most effective?” The open coding process outlined previously was used to determine themes on why the students felt one rehearsal segment was more effective than another.

Member checking was used to enhance trustworthiness (Lincoln & Guba, 1985). Both the teachers and the outside observers were provided with the opportunity to review the completed manuscript and suggest any changes that would more accurately represent their views. Eric, one of the teachers, chose to revise one of his quotes to more accurately reflect his values on the effectiveness and importance of nonverbal instruction.

Results

Through the data analysis process, five common themes related to teaching effectiveness emerged: Specific Instructions and Feedback, Delivery Skills and Eye Contact, Audible and Focused Co-Verbal Instruction Prompts, Conducting Effectiveness, and Ensemble Progress. Overall, student participants identified the verbal rehearsal segments as the most effective (Eric, $n = 14$, 61%; Sarah $n = 13$, 57%), followed by co-verbal ($n = 5$, 22% for Eric; $n = 4$, 17% for Sarah). Nine student participants (39%) indicated that both co-verbal and verbal rehearsal segments were effective. One student identified the nonverbal rehearsal segments as effective. The teachers and outside observers perceived the effectiveness of each instructional mode differently. Their opinions seemed to be influenced by their value systems and the individual strengths of the teacher. The outside observers were asked to identify the most effective rehearsal for each teacher. Sarah’s verbal rehearsal segment was unanimously selected as her most effective; the outside observers thought that she seemed more engaging and comfortable during this instructional mode. Two of the outside observers selected Eric’s nonverbal rehearsal segment as his most effective, and two selected his verbal rehearsal segment as most effective.

Five Common Elements of Effective Teaching

Specific Instructions and Feedback

Providing specific instructions and feedback was a common theme discussed by the participants. Students used specific instructions, feedback, or lack of feedback to describe the effectiveness of each rehearsal segment. A lack of feedback affected the students' feelings of success. Some students reported feeling frustrated during the nonverbal rehearsals because, ". . . we got absolutely no feedback. We can't tell what we are doing well versus wrong. We don't know what we need to fix to improve." Another student shared, "This type of rehearsal is boring and frustrating." Students reflected, "We didn't learn anything," and "I didn't like this portion of the rehearsal [nonverbal] because we were getting no feedback at all."

Many students indicated a preference for the verbal rehearsals because, "She actually told us what she wanted from us and gave us advice on how to do it." "I enjoyed this rehearsal because he engaged verbally with the ensemble and expressed what changes he wanted clearly." Individual students valued receiving specific instruction that helped the ensemble improve. "I liked it (the verbal rehearsal) better because we knew how to fix problems and get better." Setting high standards, having clear expectations, and following through with accurate feedback were identified as important elements of effective string ensemble teaching by the outside observers. One outside observer described a moment as particularly effective explaining, "She [Sarah] provided expectations regarding bow control, and gave appropriate feedback to the students who did not understand the concept. She also provided specific praise." Another outside observer reflected on specific verbal instruction that occurred between performance trials. "I liked the instruction between playing. The musicians had a clearer idea of the goals." Similarly, the outside observers felt that rehearsal segments without specific feedback were less effective. "Overall teaching effectiveness was hampered by lack of clarity in instruction/feedback at times."

The outside observers demonstrated sensitivity to approval error, or instances when the teacher gave inaccurate positive feedback or generalized statements of "good." One observer said, "When approval is given, it should be contingent on the students' performance rather than a blanket statement of good." He counted the instances of approval error that occurred in each of the rehearsal segments in his written reflection. Another observer also indicated examples in each rehearsal segment that contained "noncontingent approval."

Eye Contact and Delivery skills

Eye contact and delivery skills were discussed by all three groups of participants. One student shared that during her verbal rehearsal, "Sarah looked at us more." About the same rehearsal segment another student wrote, "She was very engaged and interested in what we were doing, so I was fully engaged too!" Students noted that Eric's delivery, however, was more commanding during the nonverbal rehearsal segment. "He didn't talk much, but he showed us what to do through strong and clear body language."

The four outside observers also discussed the teachers' eye contact with the ensemble, making

observations about body language and facial expressions. Increased eye contact was associated with more effective teaching, and less eye contact was noted in rehearsals that the outside observers felt were less effective. Similar to the students' observations, an outside observer noted, "Sarah's conducting and eye contact were more engaging in her verbal rehearsal, so I felt this was her strongest rehearsal." Sam agreed, "I felt like her eye contact was better, much brighter eyes." Conversely, the outside observers noted that Eric demonstrated more eye contact and facial expressions during his nonverbal rehearsal.

Differences in the amount of eye contact and delivery between the two teachers may partially explain why the outside observers did not agree that one mode of instruction was more effective than another. Elements such as eye contact and delivery were viewed as more important than instructional mode. Furthermore, eye contact and delivery varied between each teacher and the instructional mode with which they were most comfortable.

Co-Verbal Instruction

Many students reported that they preferred the co-verbal rehearsal segments to the nonverbal rehearsal segments, indicating that they liked receiving feedback. Thirteen of the students, however, reported that co-verbal instruction was "distracting," "difficult to hear," "annoying," and "confusing." One ensemble member reflected, "The talking was distracting when it was done in the middle of us playing, but sometimes it worked. Like when we were going into the *poco animato*." During this point in the rehearsal, Eric's co-verbal feedback was timed in such a way that it occurred during a moment in the music when the students were able to hear the instruction and the instruction functioned as prompt prior to making the tempo change. Similarly, the outside observers had mixed responses to the effectiveness of the co-verbal rehearsals. Co-verbal instructions were described as ineffective when the ensemble could not hear the instructions. An outside observer shared, "Exclusively talking over the music was not effective. However, I noticed that well-timed, short directions, that occurred in preparation to a musical event, were effective." Verbal statements that functioned as prompts (Tharp & Gallimore, 1976) were deemed more effective by three of the outside observers.

Conducting Effectiveness

The effectiveness of the nonverbal rehearsal segments seemed largely dependent on the effectiveness of the teachers' conducting and delivery skills. Students who enjoyed the nonverbal rehearsals reflected on the teachers' conducting. "I liked the no talking in this case because he was "over conducting" and I understood what he wanted. While directing the first violins, he over exaggerated and it worked." Other students noted that the conducting was "way more expressive than normal, but way less effective because the students weren't watching." When discussing the most effective rehearsals, the outside observers were specific about why they selected a rehearsal as more effective. Eric's nonverbal rehearsal was more effective because, "While specific verbal feedback was not given, effectiveness of conducting seemed to make the group more musical and expressive," said one observer. Another observer preferred Eric's verbal rehearsal because, "[This] video demonstrated the most improvement of the ensemble, provided the most practice on the concepts he was addressing, and he maintained a high level of engagement, good eye contact, and the group responded well to his conducting."

Comments related to conducting encompassed gesture, body language, delivery skills, eye contact, and subsequent engagement of the students. The idea that the individual strengths of each teacher affected rehearsal effectiveness was present throughout the outside observers' reflections. Conducting was important and impactful but only when executed effectively.

Ensemble Progress

Outside observers, teachers, and students frequently referenced ensemble progress when evaluating rehearsal effectiveness. Many of the students attributed their enjoyment during a rehearsal segment to the progress or overall sound of the ensemble. “[I] really enjoyed [this rehearsal] because the ensemble sounded good.” “I enjoyed it because I felt that the direction we received enhanced our sound as an ensemble.” “I enjoyed this [rehearsal] because I felt like she was listening to us and really made an effort to make us sound good.”

The outside observers discussed ensemble progress in relation to what the teacher was doing in a specific moment. For instance, one observer commented, “His conducting was better here and had a positive impact on the ensemble.” Responding to another rehearsal an observer said, “The ensemble demonstrated the most improvement in this clip. There was good eye contact and the group responded to his conducting.”

Sarah, in particular, focused on ensemble progress during her reflection. She identified her co-verbal rehearsal as the most effective “because I felt they made the most progress in that one.” She believed that the nonverbal rehearsal was her least effective because the students made less progress. About the verbal rehearsal, Sarah shared, “Verbal was fine too, but I did not feel that they got better as quickly as the co-verbal.”

Additional Observations

Individual Strengths

In addition to the five emergent themes, many of the participants reflected on the individual strengths of each teacher as contributing to overall perceptions of effectiveness. Participants expressed that the teacher's personality and comfort level affected rehearsal effectiveness, making it difficult to generalize about verbal and nonverbal instruction outside the context of an individual teacher. “Nonverbal instruction and effective conducting can be very powerful, but are dependent on the individual teacher's strength in that area,” noted an observer.

The teachers were asked to reflect on their comfort with and effectiveness in each instructional mode. Sarah reflected, “Nonverbal was probably the hardest one because it was something that I never do—trying to rehearse without speaking at all.” The students also observed that she was more engaging and comfortable during the co-verbal and verbal rehearsal segments. “She was calm and not so tense like the first model. She was able to show more personality.” “The verbal rehearsal was more effective—but it was mostly because she looked and felt way more comfortable and was more characteristic of how I know her as a teacher.”

Eric felt that his verbal rehearsal was the most effective: “I felt that I could express verbally and

visually what I wanted, instead of just one or the other.” During the nonverbal rehearsal, Eric expressed that he felt comfortable “but somewhat restricted during the rehearsal.” He also acknowledged that “the nonverbal rehearsal forces the conductor to be physically descriptive to the player and convey aural image through the use of the body” and is a useful skill for teachers and conductors.

Varying Philosophies

During the interviews with the observers, it seemed that the outside observers’ philosophies, or value systems about effective teaching, influenced their impressions of rehearsal effectiveness (see the online Supplemental Table S1). For example, the university orchestra conductor’s written evaluations focused on gesture, eye contact, and the impact that the rehearsal was having on the sound of the ensemble. In her interview, the university conductor immediately shared, “My value system is so gesture focused that I thought the study was about gesture in rehearsal, so I focused on that aspect of the videos.”

One of the public school orchestra directors shared that he deeply valued pedagogy. His written evaluations of the teachers focused primarily on ensemble progress, the exclusive use of conducting compared to inclusion of pedagogical information—teaching the students “how” to play, and a particular sensitivity to the use of approval error. During the interview, he confirmed that he valued ensemble progress, pedagogical instruction, reinforcement of conceptual goals, and high levels of student engagement.

The other public school orchestra director believed that he evaluated the rehearsals primarily based on clarity of instruction (verbal or nonverbal), eye contact, and pacing of instruction. His written and interview responses revealed that he valued rehearsals with clear goals. “I think that the most effective rehearsals involved instruction when the students were not playing [referring to the verbal instruction videos]. The students simply had a clearer vision of the goals of the rehearsal.”

The university music teacher educator evaluated the teachers largely based on delivery skills (with specific attention to eye contact). As a teacher educator at the university level, he was acutely aware of how delivery affected perceptions of lesson effectiveness and discussed the importance of delivery at length. He also focused on the specificity of feedback, effectiveness of conducting, and the relative effectiveness or ineffectiveness of the use of co-verbal instruction.

Discussion

The purpose of this study was to describe student, teacher, and outside observer perceptions of effective teaching across three modes of instruction: nonverbal, co-verbal, and verbal. Five common elements of effective rehearsals were identified by the participants in this study: Specific Instructions and Feedback, Delivery Skills and Eye Contact, Audible and Focused Co-Verbal Instruction Prompts, Conducting Effectiveness, and Ensemble Progress. Additional factors related to teaching effectiveness included the strengths and comfort of individual teachers, as well as the personal value systems of those observing instruction.

Participants shared that they preferred the nonverbal rehearsal segments because they contained clearer goals, specific instruction and accurate feedback. Researchers previously found that students preferred rehearsals with reduced teacher talk (Nápoles, 2007, 2017; Spradling, 1985; Whitaker, 2011); however, the students in this study valued rehearsal segments that contained verbal instruction because they felt the ensemble was able to make more progress. It is important to note that the verbal rehearsal segments in this study contained 30% to 40% verbal instruction, within the recommended ranges found in previous studies (Caldwell, 1980; Goolsby, 1999; Pontious, 1982; Thurman, 1977). Higher percentages of verbal instruction may have produced different results, and further research is needed to clarify this finding.

Consistent with the present study, researchers have found that specific instruction and feedback is critical to effective rehearsals (Dunn, 1997; Nápoles, 2017). Dunn (1997) found that the participants in his study preferred teaching episodes that contained feedback to teaching episodes without feedback. Similarly, the outside observers in Nápoles' (2017) study expressed concern that rehearsals with limited verbal instruction did not provide enough specificity and feedback to be effective. If students feel they are not making progress, are unaware of the rehearsal goals, or feel they are not receiving feedback, additional verbal instruction may be needed. Further research investigating Culver's (1989) assertion that master teachers use less than 15% verbal instruction is warranted. It is possible that there is such a thing as too little teacher talk.

Numerous researchers have found that delivery skills are important for effective music instruction (Hamann et al., 2000; Hamann & Gillespie, 2012; Johnson et al., 2008; Silvey, 2013). Similarly, the findings I have presented in the present study reinforce the need for inservice and preservice teachers to develop delivery skills. Study participants specifically referred to delivery skills such as eye contact and facial expressions when describing effective instruction. The nonverbal instructional mode was considered effective only in moments when the conducting and nonverbal communication of the teacher were clear. Conducting effectiveness was contingent on the competence and comfort of the teacher with nonverbal communication. The participants noted that the individual teacher's comfort in a given instructional mode influenced their effectiveness. At the time of this study, Eric was pursuing a conducting degree and Sarah was enrolled in music education. Eric's nonverbal gestures were described as clear and expressive. Participants described Sarah's verbal rehearsal segment as "more animated" with "brighter eyes." The teachers' strengths, perhaps reflecting their current degree status and career aspirations, influenced participants' perception of how effective they were in each instructional mode.

The use of co-verbal instruction received mixed responses from the participants. Culver (1989) defined co-verbal instruction as strategies that "employ modeling and other devices while offering limited verbiage to support the response" (p. 21). Co-verbal instruction in this study occurred simultaneous to student performance and may not have been executed as intended by Culver. When employing co-verbal instruction, directives should remain short and function as a prompt. Talking continuously over student performance was reported as ineffective and even frustrating for the students in this study. In order for co-verbal instruction to be effective, students must be able to hear and apply the information that the teacher is sharing. If the student's attention is focused on performing in that moment, he or she may be unable to concentrate on the directives given, thereby making instruction less effective. Researchers may

consider further exploring the three modes of instruction as outlined by Bob Culver (1989). If master orchestra teachers use predominantly nonverbal and co-verbal instruction, then preservice and inservice teachers may benefit from using these modes of instruction as well.

Personal value systems seemed to influence the outside observers' responses (Whitaker, 2011). The four outside observers in this study each identified with a core teaching value. These values appeared to relate to the individual observers' profession. One public school orchestra teacher reflected on clear goals, the other on pedagogy; the university orchestra conductor discussed conducting, and the teacher educator focused on delivery skills. These values reflect in part the values of the profession to which the observer belonged. Teacher educators and evaluators should consider their personal values and biases when evaluating instruction.

There are a number of study limitations that should be considered. Rehearsal segments were only 3 minutes in length, so findings may not generalize to full-length rehearsals. The use of varied instructional modes would likely function differently over longer periods of time. The researcher set the parameters for instructional delivery rather than allowing teachers to emphasize their most effective mode. Alternative results may have been found had more teachers been included, or the study conducted in a more natural setting. Additionally, the investigation took place with only one ensemble in which half of the students were music majors and the other half nonmajors. The perceptions of the student participants in this study may be specific to their personal experiences within this university ensemble. Furthermore, student participants were offered only 5 minutes to reflect and may have provided additional insight had they been interviewed. Finally, had participants been explicitly informed that the study was designed to compare the three modes of instruction, their observations may have changed.

More research is needed to determine why contrasting instructional modes elicit unique perceptions and reactions. Effective teaching is complex, and impressions of teaching effectiveness seem to be influenced by one's role (whether one is delivering, receiving, or observing instruction), so it is important to consider all perspectives when evaluating teaching. Along with developing both verbal and nonverbal delivery skills, establishing clear goals and providing specific and accurate feedback are essential to students' feelings of success.

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Supplemental Material

Supplemental Table S1 is available in the online version of the article.

References

- American String Teachers Association. (n.d.). Robert Culver. Retrieved from http://www.astaweb.com/Public/Conferences/Robert_Culver.aspx
- Blanton, C., Dillon, M, MacLeod, R. B. (2015). Tradition bearers as educators: A multi-case study of the teaching behaviors and beliefs of three old-time musicians. *String Research Journal*, 5, 55–72.
- Butler, A. (2001). Preservice music teachers' conceptions of teaching effectiveness, microteaching experiences, and teaching performance. *Journal of Research in Music Education*, 49, 258–272.
- Byo, J. L., Austin, K. R. (1994). Comparison of expert and novice conductors: An approach to the analysis of nonverbal behaviors. *Journal of Band Research*, 50(1), 11–34.
- Caldwell, W. M. (1980). A time analysis of selected musical elements and leadership behaviors of successful high school choral conductors (Doctoral dissertation, Florida State University). *Dissertation Abstracts International*, 41(3A), 976.
- Culver, B. (1989). The master teacher profile: Elements of delivery at work in the classroom. University of Wisconsin–Madison, Division of University Outreach, Department of Continuing Education in the Arts.
- 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. doi:10.2307/3344693
- Dunn, D. E. (1997). Effect of rehearsal hierarchy and reinforcement on attention, achievement, and attitude of selected choirs. *Journal of Research in Music Education*, 45, 547–567. doi:10.2307/3345422
- Gallimore, R., Tharp, R. (2004). What a coach can teach a teacher, 1975-2004: Reflections and reanalysis of John Wooden's teaching practices. *The Sport Psychologist*, 18, 119–137. doi:10.1123/tsp.18.2.119
- Goolsby, T. W. (1999). A comparison of expert and novice music teachers' preparing identical band compositions: An operational replication. *Journal of Research in Music Education*, 47, 174–187. doi:10.2307/3345722
- Hamann, D. L., Baker, D. S., McAllister, P. A., Bauer, W. I. (2000). Factors affecting university music students' perceptions of lesson quality and teaching effectiveness. *Journal of Research in Music Education*, 48, 102–113. doi:10.2307/3345569
- Hamann, D. L., Gillespie, R. A. (2012). *Strategies for teaching strings: Building a successful string and orchestra program* (3rd ed.). New York, NY: Oxford University Press.

- Hamann, D. L., Lineburgh, N., Paul, S. (1998). Teaching effectiveness and social skill development. *Journal of Research in Music Education*, 46, 87–101.
- Hopkins, M. (2015). String pedagogy notebook. Retrieved from <http://stringtechnique.com/>
- Johnson, C., Darrow, A., Eason, B. J. (2008). Novice and skilled music teachers' nonverbal behaviors and their relationship to perceived effectiveness and rapport. *Bulletin of the Council for Research in Music Education*, 178, 73–83.
- Juchniewicz, J. (2010). The influence of social intelligence on effective music teaching. *Journal of Research in Music Education*, 58, 276–293. doi:10.1177/0022429410378368
- Knapp, M. L., Hall, J. A. (2014). *Nonverbal communication in human interaction*. Boston, MA: Cengage Learning.
- Lincoln, Y. S., Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- MacLeod, R. B. (2010). A comparison of instructional strategies used by experienced band and orchestra teachers when teaching a first year class a new line of music. *Bulletin of the Council for Research in Music Education*, 185, 49–62.
- MacLeod, R. B., Walter, J. S. (2011). A descriptive study of cooperating teachers' perceptions regarding student teacher preparation. *Bulletin of the Council for Research in Music Education*, 190, 21–24. doi:10.5406/190.0021
- Madsen, C. K., Standley, J. M., Cassidy, J. W. (1989). Demonstration and recognition of high and low contrasts in teacher intensity. *Journal of Research in Music Education*, 37, 85–92.
- Madsen, K., Cassidy, J. W. (2005). The effect of focus of attention and teaching experience on perceptions of teaching effectiveness and student learning. *Journal of Research in Music Education*, 53, 222–233. doi:10.1177/002242940505300304
- Mehrabian, A. (1981). *Silent messages: Implicit communication of emotions and attitudes* (2nd ed.). Belmont, CA: Wadsworth.
- Nápoles, J. (2017). Teacher talk and perceived teacher effectiveness: An exploratory study. *Update: Applications of Research in Music Education*, 35(3), 5–10.
- Nápoles, J. (2007). The effect of duration of teacher talk on the attitude, attentiveness, and performance achievement of high school choral students. *Research Perspectives in Music Education*, 11, 22–29.
- Nápoles, J., Vazquez-Ramos, A. M. (2013). Perceptions of time spent in teacher talk: A comparison among self-estimates, peer estimates, and actual time. *Journal of Research in Music Education*, 60, 452–461. doi:10.1177/0022429412463246

- Pontious, M. F. (1982). A profile of rehearsal techniques and interaction of selected band conductors. Available from ProQuest Dissertation and Theses database. (UMI No. 8302966)
- Remland, M. (2000). *Non-verbal communication in everyday life*. Boston, MA: Houghton Mifflin.
- Sang, R. C. (1998). Conductor communication in the ensemble rehearsal: The relative effects of verbal communication, visual communication, and modeling on performance improvement of high school bands. *Bulletin of the Council for Research in Music Education*, 136, 68–76.
- Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). Thousand Oaks, CA: Sage.
- Silvey, B. A. (2013). The role of conductor facial expression in students' evaluation of ensemble expressivity. *Journal of Research in Music education*, 60, 419–439 doi:10.1177/0022429412462580
- Spradling, R. L. (1985). The effect of timeout from performance on attentiveness and attitude of university band students. *Journal of Research in Music Education*, 33, 123–37. doi:10.2307/3344732
- Tharp, R. G., Gallimore, R. (1976). What a coach can teach a teacher. *Psychology Today*, 9(8), 74–78.
- Thurman, V. L. (1977). A frequency and time description of selected rehearsal behaviors used by five choral directors. Retrieved from ProQuest. (UMI No. 7726765)
- VanWeelden, K. (2002). Relationships between perceptions of conducting effectiveness and ensemble performance. *Journal of Research in Music Education*, 50, 165–176. doi:10.2307/3345820
- Wagner, M. J., Strul, E. P. (1979). Comparisons of beginning versus experienced elementary music educators in the use of teaching time. *Journal of Research in Music Education*, 27, 113–125. doi:10.2307/3344897
- Whitaker, J. A. (2011). High school band students' and directors' perceptions of verbal and nonverbal teaching behaviors. *Journal of Research in Music Education*, 59, 290–309. doi:10.1177/0022429411414910.
- Witt, A. C. (1986). Use of class time and student attentiveness in secondary instrumental music rehearsals. *Journal of Research in Music Education*, 34, 34–42.
- Worthy, M. D. (2006). Observations of three expert wind conductors in college rehearsals. *Bulletin of the Council for Research in Music Education*, 168, 51–61.

Worthy, M. D., Thompson, B. L. (2009). Observation and analysis of expert teaching in beginning band. *Bulletin of the Council for Research in Music Education*, 180, 29–41.

Yarbrough, C. (1975). Effect of magnitude of conductor behavior on students in selected mixed choruses. *Journal of Research in Music Education*, 23, 134–146.
doi:10.2307/3345286

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.
doi:10.2307/3344994