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# Missouri Journal of Research in Music Education

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# From the Editor

Thank you, loyal subscribers and readers, for staying with us as the pandemic wreaked havoc on our publication schedule. We were already a little late with our 2019 issue, and then everything went haywire. This double issue is our first step at getting caught up, and the next issue will be dated 2020-2021, expected to be ready by spring 2022. We plan to publish the 2022 issue by the end of 2022 and thus we will be back on track.

Thank you, Editorial Committee members, for your hard work. We have a small but mighty squad of volunteers who bring this journal to fruition. Departing Editor Brian Silvey and Immediate Past Editor Daniel Hellman each served 2 years as Associate Editor followed by 4-year terms as Editor. Each has graciously agreed to remain a member of the Editorial Committee. They are joined by the excellent group of Editorial Committee members, some of whom are past editors who have worked on this journal for many years, including Charles Robison, Joseph Parisi, Carol McDowell, and Jocelyn Prendergast, and more recent additions, Rachel Hahn, Jackie Lordo, and Aaron Wacker.

Thank you, MMEA, for your ongoing support of, and patience with, this endeavor. We are proud to represent Missouri with a publication that is distributed nation-wide and to several international libraries.

Thank you, Dr. Sally Hook, Editor of *Missouri School Music*, for permitting us to reprint selected "Research to Practice" columns. The inclusion of these jargon-free articles is a new addition to this journal, with the hope that the research-based pedagogical ideas they provide may reach a wider audience.

Thank you, Editorial Committee, for the opportunity to serve my second go-around as Editor of this journal (my first was 30 years ago). I am delighted to help fulfill our mission of disseminating research "devoted to the needs and interests of the school and college music teachers of Missouri and the nation."

Wendy L. Sims, Editor

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Please note: Several of these articles were completed before the 7th edition of the *Publication Manual of the American Psychological Association* was published, and we elected not to ask the authors to make changes to their reference list formats.

# FEATURE ARTICLES

*Missouri Journal of Research in Music Education*, No. 56-57, 2019-2020, 5-21


# Impact of Length and Frequency of Teaching Episodes on Preservice Instrumental Music Teachers' Rehearsal Skills

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*The purpose of this study was to determine the impact of rehearsal length and frequency on preservice instrumental music teachers' rehearsal skills. Specifically, we examined how varied rehearsal structures impacted (a) the development of specific rehearsal behaviors of preservice instrumental music teachers, and (b) preservice music teachers' perceptions of their own development as rehearsal technicians. Instrumental music education students (N = 17) enrolled in a music methods course at a large Southwestern university were divided into two peer ensembles. Students in the Greater Frequency Group (GFG, n = 9) taught more frequent rehearsals of shorter duration, while students in the Longer Duration Group (LDG, n = 8) taught fewer, longer rehearsals. First and last rehearsals were video recorded for analysis of participants' teaching behaviors. Participants also completed a researcher-designed, reflective questionnaire. Significant correlations (Spearman's rho) were found between various observed (researchers) and perceived (participants) rehearsal behaviors. Participants from both experimental groups reported improvements in providing clear and concise instructions, pacing, and delivery of instrument-specific feedback. Implications for music teacher education include affording students both more frequent and longer duration teaching episodes throughout their undergraduate music teacher preparation courses.*

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Music teacher educators (MTEs) are charged with helping to develop future ensemble directors' expert teaching/rehearsal behaviors. Effective rehearsal strategies have been explored in both choral (Napoles, 2006) and instrumental settings (Montemayor & Moss, 2009; Worthy, 2003, 2005, 2006; Worthy & Thompson, 2009). Research findings have revealed that elements such as verbal instruction, feedback, modeling, and gesture contribute to rehearsal effectiveness (Bergee, 1992; Goolsby, 1996, 1997; Napoles, 2017; Teachout, 1997; Worthy, 2005). Duke (1999) and Price and Byo (2002) have compiled extensive reviews detailing research findings that highlight the "teachability" of effective

rehearsal skills. Given these findings, it seems imperative that MTEs focus their attention on honing such skills, concepts, and pedagogical content knowledge throughout the music teacher preparation curriculum.

The concept of "teacher talk" by ensemble directors has been investigated in various music teacher education settings, with research findings indicating that "less verbal instruction and more performance time are associated with more effective [instruction]" (Goolsby, 1997, p. 24). Many researchers have focused their observations on "successful" or "outstanding" conductors from both instrumental (Buell, 1990; Grechesky, 1985; Nelson, 1973; Pontious, 1982; Sherill, 1986; Singletary, 2016; Worthy, 2003) and choral (Caldwell, 1980; Napoles, 2017; Thurman, 1977) settings, reporting that these conductors used between 35–45% of their rehearsal time for verbal communication (e.g., instruction, feedback, off-task verbalizations). Goolsby (1996, 1997, 1999) expanded the concept of verbalization by comparing expert conductors with novice teachers. He found that novice band directors spent more time engaged in verbal instruction than their more experienced counterparts (1996, 1999), while student teachers talked the most (1996). Experience appears to play a role in the frequency and duration of conductor verbalizations.

In addition to the amount of verbalization conductors engage in while on the podium, researchers have investigated the content (e.g., directives, information, positive and negative feedback, questioning) of their verbalizations (Goolsby, 1997; Worthy, 2003, 2006; Worthy & Thompson, 2009) along with other instructional behaviors (e.g., gesture, eye contact, modeling). Additional findings from Goolsby's (1997) study revealed that expert teachers stopped the ensemble more frequently than did novice or student teachers, oftentimes addressing several performance variables each time. Verbal directives were the most frequent category of conductor verbalizations by participants in three different studies, with rhythmic accuracy (Worthy, 2003), articulation (Worthy, 2006), and pitch accuracy (Worthy & Thompson, 2009) representing the most frequently-addressed music-specific concepts. Despite previous investigations that focused on student, novice, and experienced teachers, the most effective means for fostering preservice music educators' rehearsal growth warrants further examination.

Instructors of instrumental music methods courses routinely employ a variety of activities to refine preservice teachers' instructional/rehearsal skills. Oftentimes, MTEs utilize authentic context learning (ACL) experiences (Haston & Russell, 2012; Paul et al., 2001) (i.e., peer teaching episodes, field experience) to give students "real-life" practice while on the podium. The self-analysis of such ACL experiences by preservice teachers may be effective in improving conducting skills (Yarbrough, 1987) and various rehearsal techniques (Baughman & Baumgartner, 2018) (i.e., instruction and feedback, pacing, error detection). Worthy (2005) and Lethco (1999) both investigated preservice teachers' self-analysis of rehearsals, where participants used computer software to track frequency and duration of behaviors such as teacher talk time, teacher

modeling, and student performance. Participants' average time spent talking/modeling decreased across four, 10-minute teaching episodes. More recently, Powell (2016) found that preservice teachers focused their comments on error detection and specific feedback when using videos to analyze peer- and field-based teaching episodes. Given the promising findings from extant research, further investigation of preservice teachers' perceptions of ACL experiences - specifically in a peer-ensemble class setting (Butler, 2001; Lane, 2010; Lane & Talbert, 2015; Paul et al., 2001; Silvey & Major, 2014) - seems warranted.

Despite the wide range of research involving instrumental music teachers rehearsal techniques, it remains unclear how various structures (i.e., length and frequency) of experiences impact the development of individual teaching behaviors. Therefore, the purpose of this study was to determine the impact of rehearsal length and frequency on preservice instrumental music teachers' rehearsal skills. In examining two groups - students rehearsing shorter, more frequent teaching episodes versus those who rehearse longer episodes, less frequently - we posed the following research questions: (1) How does rehearsal length or frequency of teaching episodes impact specific teaching behaviors (e.g., feedback, instruction, pacing) of preservice instrumental music teachers? (2) How do preservice music teachers perceive the impact of rehearsal length or frequency of authentic teaching episodes on their own development as rehearsal technicians?

## Method

### Participants

Participants ($N$ = 17) were a convenience sample of junior, instrumental music education students at a large Southwestern university who were enrolled in a music education methods course. We - a music education professor and two doctoral teaching assistants - taught this course together, while also serving as researchers for this study. Participants' prior conducting/rehearsing experience included one semester of basic conducting, a secondary-level instrumental music education methods course, and various instrument techniques classes in which they were required to rehearse their peers. Lesson planning, sequencing, feedback, and other components of teaching were included in the curricula of these courses. Students also had completed approximately 25 hours of field experience in area public schools prior to their participation. These previous field experiences afforded students multiple opportunities to observe and apply concepts discussed in class with students in a real-world setting. These authentic experiences at middle and high schools included observations, private lessons, small group teaching, and occasional large ensemble rehearsals. All participants read and signed consent forms approved by the Institutional Review Board prior to their participation.

## Literature Selection

Students were randomly assigned one of 17 different compositions to arrange for in-class/peer ensemble rehearsals. Each of the compositions represented Grade 2 to 3 (out of six) difficulty in either the *Teaching Music Through Performance in Band* series (GIA Publications, 2017) or the individual publisher's website. Students were instructed to arrange 1 to 1.5 minutes of their assigned composition for in-class rehearsals. Because ensemble members would be performing on secondary instruments, participants were asked to simplify their arrangements at a Grade 1 or 1.5 difficulty level. We examined participants' completed arrangements to determine any potential difficulties that appeared beyond a Grade 1.5 level (e.g., range issues, rhythmic complexity). Specific criteria for determining grade level were based on guidelines available from common concert band music publishers, available on numerous publishing websites. If adjustments were deemed necessary, the students were asked to attend a one-on-one meeting with one of the instructors to discuss possible edits to the arrangement. Students submitted any revisions prior to beginning rehearsals, which were reviewed and approved by the same instructor. Although no formal arranging course was included in the degree curriculum, students had completed four semesters of music theory and were currently enrolled in their fifth and final theory course. Students previously had analyzed secondary and middle-school level band literature as components of music education methods courses, as well as a review of basic arranging techniques (e.g., instrument ranges, scoring/voicing, grade level expectations) by a prominent band composer/arranger who served on the university faculty.

## Rehearsal Structure

**Rationale.** The impetus for this study came from observation and experiences teaching similar lab-based rehearsal classes in years prior. The primary author taught this course for three years, and similar courses before that, reflecting on ways to maximize students' "real world" teaching opportunities. Upon our own reflection on the structure of the class, and reviewing multiple students' reflective writings over that time, we questioned whether different rehearsal frequencies and/or lengths would impact the students' development of various conducting and teaching behaviors. Thus, we designed the following rehearsal sequence in an attempt to gather empirical evidence.

**Planning.** Prior to leading rehearsals, students created a long-range plan that detailed (a) the concepts and skills to be taught across the rehearsal sequence and (b) sections of the music that would be taught in each individual rehearsal. The course design included a unit focused on developing students' abilities to plan for instruction in the context of a large ensemble rehearsal. Readings and application activities were selected to facilitate students' planning of sequential rehearsal frames (Duke, 2016) within the time constraints of a given rehearsal. Students then designed a rehearsal plan for each rehearsal episode, utilizing a

template provided by the music education department that included fundamental elements of lesson planning (e.g., objectives, learning goals, assessments, music education standards, procedures) that were addressed in previous courses, as well as this class. Students were provided a detailed rehearsal schedule, including length of each rehearsal and the days they would teach over the course of the laboratory experience. Rehearsal plans were submitted to the university's online course portal one class period prior to the student's scheduled rehearsal. One of the three researchers (all with experience teaching and assessing formal lesson plans for undergraduate music education students) provided feedback on the students' plans prior to their rehearsal episode.

**Teaching Episodes**. Rehearsals took place during regularly-scheduled meetings of the music education methods course. Students were split into two ensembles of balanced instrumentation and assigned to a secondary instrument outside their major instrument family on which they had some previous experience (e.g., instrument techniques class). Ensembles rehearsed simultaneously in two separate rooms to provide preservice teachers with as much rehearsal time as possible. Each participant taught their arrangement for a total of 74–75 minutes over the course of six weeks, which included two, 10-minute rehearsals - one at the beginning and one at the end of the rehearsal sequence. Students in the Greater Frequency Group (GFG, $n = 9$) taught 5, 11-minute lessons between the first and last rehearsals for a total of seven rehearsals. Participants in the Longer Duration Group (LDG, $n = 8$) taught 3, 18-minute lessons. We selected the frequency and duration of the two rehearsal configurations based on course scheduling and the length of class meeting times, as well as the number of students enrolled. Students were provided a schedule specific to their assigned group prior to beginning the rehearsal sequence.

For each rehearsal, one of the researchers observed, served as time keeper, and took notes while students taught - a regular practice for this and other music education methods and conducting courses in which the students were previously enrolled. Feedback was provided to students using Google Docs with comments linked to timestamps in their videos. Students were expected to consider their own observations from watching their video, as well as instructor feedback when writing post-rehearsal reflections. Student rehearsals were video recorded using a *Zoom Q2HD* video recorder, which allowed for files to be saved in .mov format for subsequent analysis.

**Post-Rehearsal Analysis & Reflection.** Students completed a two-part formal analysis after each rehearsal episode. The first portion utilized the *Scribe 4.2* software application (Duke & Stammen, 2011), which allowed students to track the frequency and duration of specific teaching behaviors. We created an observation template for video analysis that included teaching behaviors of expert conductors/teachers as described by previous music education researchers and pedagogues (Goolsby, 1997; Montemayor & Moss, 2009; Morrison et al., 2004; Worthy, 2005), and informed by our own experiences teaching instrumental rehearsal techniques. Students analyzed the duration of rehearsal time spent in teacher talk compared to student performance, as well as frequencies of

(a) instrument- and music concept-specific feedback vs. unspecific feedback; (b) use of left hand gesture; and (c) vocal, instrumental, and visual modeling. Following the *Scribe* analysis, students completed a 1-page, double-spaced, written reflection on their rehearsal, in which they were instructed to (a) address their perceived effectiveness in the rehearsal, (b) reference the *Scribe* data (e.g., frequencies, percentages), and (c) pose two questions generated from watching their rehearsal video.

## Reflective Questionnaire

Following the 6-week rehearsal sequence, participants were asked to complete a researcher-designed questionnaire regarding their (a) planning/ preparation for rehearsal, (b) classroom instruction, and (c) reflective practice on teaching. Individual prompts were written to reflect the same teaching behaviors the students focused on during the teaching experience (as cited previously), including those tracked through the aforementioned *Scribe* analyses. Responding to 11 Likert-type prompts, participants were asked to rate their perceived level of growth on a 4-point scale anchored from 4 (*a lot*) to 1 (*not at all*). Three free-response prompts were included to gather additional data regarding participants' perceptions of the duration and frequency of their rehearsal experience, as well as comments on the structure of the overall process. See Table 1 for a complete list of Likert-type prompts.

**Table 1.** Mean Scores and Standard Deviations for Preservice Music Education Students' Self-Reported Perceived Level of Growth by Group

| Item | GFG | | LDG | | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t* (14) | *p* |
| Modeling | 2.43 | (0.79) | 3.22 | (0.67) | -2.19 | 0.05 |
| Effectiveness of conducting gesture | 2.00 | (0.82) | 2.78 | (0.92) | -1.70 | 0.11 |
| Writing rehearsal / lesson plans | 3.71 | (0.49) | 3.44 | (0.53) | 0.26 | 0.31 |
| Providing clear and concise instructions | 3.14 | (0.38) | 3.44 | (0.73) | -0.99 | 0.34 |
| Transfer and application of concepts | 3.43 | (0.54) | 3.22 | (0.67) | 0.67 | 0.52 |
| Overall knowledge of instrument-specific pedagogy | 3.57 | (0.78) | 3.33 | (0.71) | 0.64 | 0.54 |
| Pacing of instruction | 3.71 | (0.49) | 3.78 | (0.67) | -0.21 | 0.84 |
| Providing music concept-specific feedback | 3.29 | (0.49) | 3.22 | (0.67) | 0.21 | 0.84 |
| Ratio of teacher talk to student action | 3.29 | (0.49) | 3.22 | (0.83) | 0.18 | 0.86 |
| Score study | 2.71 | (1.11) | 2.67 | (0.87) | 0.10 | 0.93 |
| Providing instrument-specific feedback | 3.43 | (0.98) | 3.44 | (0.73) | -0.04 | 0.97 |

*Note:* Means are based on a 4-point, Likert-type scale anchored from 4 (*a lot*) to 1 (*not at all*).

## Data Analysis

**Teaching Behaviors.** We analyzed participants' teaching behaviors in a manner similar to that found in previous music teaching and conducting research (Goolsby, 1997; Morrison et al., 2004; Silvey et al., 2017). Using the *Scribe 4.2* software application, we tracked both timed (calculated in seconds) and untimed (calculated in frequencies) behaviors from participants' first and last rehearsal recordings (total of 34 videos). We employed a similar observation protocol of teaching behaviors used by the students in their post-rehearsal reflections, but with more detailed definitions (Saldaña, 2016) to ensure inter-rater reliability. See Table 2 for a complete list of behavior codes and operational definitions.

**Table 2.** Observational Behavior Codes and Definitions.

| |
|---|
| **Verbal Performance Instruction (VPI) –** general or specific instruction(s) that are directed to the student(s); may refer to musical expression or technical aspects of playing the instrument |
| **Nonverbal Performance Instruction (NPI)** – any non-expressive gesture (e.g., head nod, hand gestures, pointing up or down) to indicate change in a technical performance behavior (e.g., change partial, improve intonation, play the next note of a scale) |
| **No Instruction/Procedure (NIP)** – teacher stops and restarts without providing any verbal instruction or comment other than where the ensemble should begin (e.g., "start at measure 3"); may follow verbal feedback, but lacks any instructional information |
| **Repetition/Drill Instruction (RDI)** – use of a single word or succinct instructional phrase only; never in combination with other verbal instruction; always in isolation (e.g., "again," "one more time," "do it again") |
| **Specific Verbal Feedback (SVF)** – specific, verbal evaluations of one or more preceding performance trials that reference a particular musical or technical performance behavior (e.g., "great tone," "intonation was better," "slide is moving too slowly") |
| **Unspecific Verbal Feedback (UVF)** – general, verbal evaluations of one or more preceding performance trials (e.g., "yeah," "good," "nice," "ok," etc.) |
| **Nonverbal Feedback (NVF)** – visual gesture to indicate positive or negative performance (e.g., thumbs up, "okay" gesture, shaking head in approval/disapproval) |
| **Left Hand Expressive Gesture (LHG)** – any musically expressive gesture in the left hand, independent of beat pattern that represents a musical concept(s) (e.g. cues, dynamics, phrasing, etc.) |
| **Instrumental Modeling (INM)** – teacher demonstrates an approximation of the performance using one or more instruments (e.g., piano, clarinet) |
| **Vocal Modeling (VOM)** – teacher demonstrates an approximation of the performance using his/her own voice (e.g., singing a stylistic motive, aural demonstration of accurate pitches); may be paired with visual model |
| **Visual Modeling (VIM)** – teacher physically demonstrates some musical or technical aspect of the performance (e.g., showing shape of a phrase with arm motion, mimicking drum stick height); may be paired with vocal model |

To establish reliability of the measurement criteria, each researcher began by independently viewing the same rehearsal video and assigning codes to observed behaviors. We then watched the video collectively to discuss all code assignments and resolve any discrepancies (e.g., "Was that an instance of no instruction, or repetition?"). The primary author continued by coding five additional videos (for a total of 18%). Once completed, the two graduate student researchers independently coded the same five videos by (a) tracking the timed behaviors, and (b) by assigning behavior codes (frequency counts) to a list of "time stamps" provided by the primary author. For timed behaviors, the average per-participant total discrepancy across the six videos was 15.5 seconds, or 2.54% of the total rehearsal time. Thus, we agreed on participants' timed activities 97.46% of the time. We then calculated the sum of agreements and disagreements (Cohen, 1988) for untimed behaviors (i.e., frequency counts), with an average per-participant discrepancy of 0.77. With no single video analysis lower than 0.73 reliability, and each value being greater than 0.70 (Cohen, 1988), we deemed this level of agreement acceptable. The primary author then divided the remaining 28 videos among all three researchers for analysis.

**Reflective Questionnaire.** For all Likert-type responses, we used descriptive statistics (e.g., frequencies, percentages, means, and standard deviations) to summarize the collected data. Free-response questions were analyzed using Creswell & Poth's (2018) three-part procedure for qualitative analysis: assigning codes, combining codes into themes, and displaying the data. As recommended by Saldana (2016), two researchers independently coded all 46 responses to the three free-response items and, when interpretive discrepancies occurred, engaged in collaborative discussion of conceptual meaning to reach a group consensus.

## Results

### Observed Behaviors

We used independent-samples *t*-tests to determine observed differences in rehearsal behaviors between participants in the Longer Duration Group (LDG) and the Greater Frequency Group (GFG). Change scores were computed from the difference between the pretest and posttest for each observed behavior. The conservative Bonferroni correction was used to attempt to control for the increased chance of Type I error that results from multiple comparisons. No statistically significant differences were found between the GFG and LDG groups' change scores. See Table 3 for the means and standard deviations for each item, as well as the results of the independent-samples *t*-tests.

**Table 3.** Means and Standard Deviations for Pretest, Posttest, and Change of Scores Observed Behaviors for GFG and LDG

| Item | Pretest | | Posttest | | Change Score | | | |
|---|---|---|---|---|---|---|---|---|
| | % | (SD) | % | (SD) | % | (SD) | *t* (15) | *p* |
| **Verbal performance instruction** | | | | | | | **1.18** | **.26** |
| GFG | 6.00 | (3.85) | 9.63 | (4.37) | 3.63 | (4.69) | | |
| LDG | 10.22 | (2.54) | 11.33 | (4.50) | 1.11 | (4.08) | | |
| **Nonverbal performance instruction** | | | | | | | **1.27** | **.22** |
| GFG | 0.88 | (1.46) | 0.63 | (0.52) | -0.25 | (1.49) | | |
| LDG | 0.56 | (0.73) | 1.44 | (2.46) | 0.89 | (2.20) | | |
| **No instruction / procedure** | | | | | | | **-1.23** | **.24** |
| GFG | 11.75 | (4.71) | 11.00 | (3.74) | -0.75 | (5.73) | | |
| LDG | 10.11 | (6.83) | 6.00 | (4.97) | -4.11 | (5.18) | | |
| **Repetition / drill instruction** | | | | | | | **.047** | **.96** |
| GFG | 1.38 | (1.41) | 2.25 | (2.49) | 0.88 | (3.00) | | |
| LDG | 2.11 | (1.90) | 2.89 | (5.01) | 0.78 | (5.09) | | |
| **Student performance (%)** | | | | | | | **-.113** | **.91** |
| GFG | 46.45 | (8.03) | 45.30 | (5.43) | -1.15 | (4.12) | | |
| LDG | 48.31 | (6.55) | 47.50 | (4.67) | -0.81 | (7.41) | | |
| **Teacher talk (%)** | | | | | | | **-.113** | **.91** |
| GFG | 53.14 | (8.07) | 52.47 | (4.58) | -1.15 | (4.12) | | |
| LDG | 51.06 | (6.47) | 52.07 | (4.60) | 0.81 | (7.41) | | |
| **Specific verbal feedback** | | | | | | | **.412** | **.69** |
| GFG | 5.88 | (4.29) | 8.50 | (3.85) | 2.63 | (3.07) | | |
| LDG | 9.22 | (4.66) | 11.11 | (4.01) | 1.89 | (4.14) | | |
| **Unspecific verbal feedback** | | | | | | | **.027** | **.98** |
| GFG | 6.38 | (3.58) | 4.75 | (2.76) | -1.63 | (1.85) | | |
| LDG | 6.33 | (2.65) | 4.67 | (2.69) | -1.67 | (4.06) | | |
| **Nonverbal feedback** | | | | | | | **.098** | **.92** |
| GFG | 0.38 | (0.52) | 0.88 | (1.13) | 0.50 | (1.41) | | |
| LDG | 0.33 | (0.50) | 0.78 | (0.83) | 0.44 | (0.88) | | |
| **Left-hand gesture** | | | | | | | **-1.67** | **.95** |
| GFG | 3.50 | (5.73) | 5.75 | (4.20) | 2.24 | (3.06) | | |
| LDG | 4.56 | (5.57) | 10.00 | (6.34) | 5.44 | (4.59) | | |
| **Vocal Modeling** | | | | | | | **.067** | **.95** |
| GFG | 3.25 | (2.55) | 2.25 | (2.49) | -1.00 | (3.59) | | |
| LDG | 3.00 | (3.28) | 1.89 | (1.45) | -1.11 | (3.22) | | |
| **Instrumental Modeling** | | | | | | | **2.18** | **.05** |
| GFG | 0.38 | (0.74) | 1.13 | (1.13) | 0.75 | (1.04) | | |
| LDG | 0.11 | (0.33) | 0.11 | (0.33) | 0.00 | (0.00) | | |
| **Visual Modeling** | | | | | | | **-.489** | **.63** |
| GFG | 0.88 | (1.13) | 1.00 | (1.20) | 0.75 | (1.04) | | |
| LDG | 0.78 | (1.09) | 1.22 | (1.20) | 0.44 | (1.24) | | |

*Note*: Items are frequency counts, except for Student performance and Teacher talk which are percentages of time.

## Participant Perceptions

Preservice music education students ($N = 16$; one participant did not complete the questionnaire) responded to the researcher-designed questionnaire about the rehearsal process, as well as the perceived impact of their assigned condition on teaching behavior development. We again conducted independent samples *t*-tests on Likert-type response data to determine possible group differences (LDG and GFG) in regard to self-reported growth. An alpha level of .005 was considered the threshold for statistical significance (i.e., alpha level of .05/11 comparisons). No statistically significant differences were found between groups' self-reported growth. See Table 1 for the results of the independent-samples t-tests.

We computed a Spearman's rho (to address assumption of normality among variables) to uncover any correlations between preservice teachers' perceived growth and actual observed behaviors. Across groups, we found statistically significant correlations between six variable combinations: "left-hand gesture" and "effectiveness of gesture," $r = .64$, $p = .007$; "student performance time" and "ratio of teacher talk to student performance," $r = .61$, $p = .012$; "vocal modeling" and "modeling," $r = .59$, $p = .018$; "repetition/drill" and "clear/concise instruction," $r = -.52$, $p = .036$; "student performance time" and "pacing," $r = .52$, $p = .040$; and "no performance or instruction" and "effectiveness of gesture," $r = .51$, $p = .045$. With the exception of the "repetition/drill" and "clear/concise instruction," all correlations were positive.

Analysis of participants' free-response survey items revealed three themes regarding the duration and frequency of teaching episodes: (a) authentic context learning (ACL), (b) planning and preparation, and (c) feedback and instruction. Students described benefits and limitations associated with both settings. While many participants from the LDG explicitly stated that longer teaching episodes created a more realistic setting, those from the GFG commented on the level of "student" retention afforded by more frequent episodes. Participants in the LDG commented on the value of substantial time for more thoughtful rehearsal planning and preparation as a result of less frequent teaching episodes. One student wrote that this "allowed me to dedicate more time to developing plans for each individual episode rather than feeling rushed." In contrast, many in the GFG experienced a benefit from the need for clear and precise planning - "I was able to seriously think about fixing a list of concepts down in such a short time, so it forces me to think how to teach more effectively." Students also mentioned the impact of duration and frequency on their abilities to provide specific feedback, maintain rehearsal pacing, and complete rehearsal frames. A participant in the LDG described the value of both longer and shorter episodes, suggesting that early, shorter rehearsals provided a foundation from which they could experiment and refine instructional procedures during longer episodes. Participants generally perceived value in both instructional settings, recognizing the perceived impact on their own teaching and planning practices.

## Discussion

The purpose of this study was to determine the impact of rehearsal length and frequency on preservice instrumental music teachers' rehearsal skills. Regardless of the structure of teaching episodes (i.e., longer duration or greater frequency), students perceived moderate to extreme growth (per anchors in survey responses) in their (a) delivery of clear and concise instructions, (b) rehearsal pacing, and (c) use of instrument-specific feedback. Such growth aligns with one of the primary objectives for the course (i.e., to develop the skills and ability to provide specific, pedagogical instruction and feedback) as well as the fundamental concepts of effective rehearsals (Goolsby, 1997; Price & Byo, 2002; Worthy, 2003, 2006; Worthy & Thompson, 2009). Based on our results, it seems that ACL experiences (regardless of duration and frequency), in combination with guided reflection, played an important role in the development of these preservice teachers' rehearsal skills.

### Teacher Talk Time

Those in the greater frequency group reduced their percentage of teacher talk time from pretest to posttest (-1.15%, *SD* = 4.12), whereas the longer duration group increased their percentage of teacher talk (0.81%, *SD* = 7.41). Student comments suggested that this may have been a result of the need to provide more concise instruction and feedback: "The shorter rehearsal time did help me improve drastically on giving quick, specific feedback and increasing the overall pace of my lesson;" "it forced me to have a clear plan of action and to make the instruction as clear and concise as possible." This awareness may have also been enhanced by the requirement for students to track and discuss their talk time as part of their reflective practice following each teaching episode. Similar to Goolsby's (1996) findings regarding student teachers, the ratio of teacher talk time to student performance time in the final teaching episode was approximately 50/50 for all students in the GFG. Given that student and novice conductors spend more time engaged in verbal instruction than those with more experience (Goolsby, 1996, 1997, 1999), and that expert teachers tend to stop more frequently by addressing multiple performance variables (Goolsby, 1997), it seems plausible that shorter, more frequent teaching episodes could yield improvement in the ratio of talk time to performance for preservice teachers.

### Verbal Instruction and Feedback

Participants from both settings displayed the largest increase across the rehearsal sequence in verbal performance instruction (VPI) and specific verbal feedback (SVF). However, those with shorter, more frequent teaching episodes demonstrated a greater increase in each observed behavior (VPI, *M* = 3.63, *SD* = 4.69; SVF, *M* = 2.63, *SD* = 3.07). The impact of experiencing shorter rehearsals on individuals' ability to provide specific feedback was also noticed by the participants: "The shorter rehearsal time did help me improve drastically on giving quick, specific feedback and increasing the overall pace of my lesson."

Participants also acknowledged the potential impact of experiencing teaching episodes of various durations: "Having experienced shorter episodes earlier… I think the variety allowed me the flexibility to try different rehearsal procedures and really nail down my teaching frames within a longer plan." It seems that while shorter episodes may challenge preservice teachers to develop strategies for providing more concise and precise verbal communication, extended rehearsals may allow them more freedom for experimentation to refine their use of that communication in the context of the rehearsal frame.

**Left-Hand Gesture**

Longer teaching episodes appeared to elicit greater use of participants' conducting gesture when compared to those in the GFG. Specifically, the mean number of left hand gestures among students in the LDG more than doubled from pretest to posttest (4.56 versus 10.00, respectively). This difference may have been a result of less verbalization and more, longer conducting episodes (i.e., more run-throughs, repetitions) within each rehearsal which would account for more performance time. Participants also recognized their growth in left hand gestures, as shown by comparing survey data from the LDG ($M$ = 2.78, $SD$ = 0.92) to the GFG ($M$ = 2.00, $SD$ = 0.82). This growth may be attributed to the longer amount of time in each podium experience, giving students the opportunity to "settle into" rehearsal and experiment with various gestures; numerous participants mentioned the "real world" experience of teaching in longer, 18-minute episodes. Extant research on conducting gesture appears focused on observational data, with expressive or effective gestures being used more regularly by expert conductors than novices (Bergee, 2005; Byo & Austin, 1994). Since expert conductors possess more podium experience than their novice counterparts, it seems plausible that increased time and opportunity in front of an ensemble might positively impact gestural growth. Future researchers might investigate potential impact of podium time and reflection on preservice music teachers' gestural development.

**Reflective Practice**

Although overall comparisons of observed behaviors between the two groups were not statistically significant, we did find mostly strong, positive correlations between our observed behaviors and preservice teachers' perceptions. In other words, it appears that students from this study recognized the same growth (or lack thereof) in specific behaviors on the podium as we observed. This correlation illuminates the importance of reflective practice (Dewey 1933/1991; Stegman, 2007; West, 2012) - specifically, "reflection-on-action" (Schön, 1987) - and perhaps carefully guided reflection (Chaffin & Manfredo, 2010) that focuses novices' attention on specific behaviors (Powell, 2016) during the early stages of developing rehearsal techniques. As instructors, we feel this was extremely effective in guiding the students to recognize their own development. In our experience, awareness and growth of specific behaviors seem to be more "real" for the students when they recognize it themselves. In addition, the fact that these

preservice teachers recognized similar instructional and gestural behaviors as we did serves as a form of "confirmatory analysis" in our goal toward developing self-reflective practitioners. Other instructors of similar conducting and peer/lab rehearsal-based courses might consider a range of reflective activities that begin with specific prompts (e.g., "Evaluate your use of the left hand to show dynamics") and culminate in more open-ended formats (e.g., "Describe your rehearsal effectiveness"). Such an approach might help MTEs track and guide students' growth in various areas of conducting and rehearsing, while simultaneously moving them along a developmental trajectory toward more student- and impact-oriented reflection (Fuller & Bown, 1975).

**Authentic-Context Learning Experiences**

The setting of this research study (peer ensemble) accurately reflected what is labeled an authentic-context learning (ACL) experience - "an environment that resembles actual professional practice" (Paul et al., 2001, pp. 136–137). Students recognized many advantages and challenges of the varied designs (i.e., greater frequency vs. longer duration) in their open-ended survey responses. It is interesting to note that, while numerous participants referenced the LDG configuration as more reflective of "a real-life rehearsal" (one participant's survey response), none mentioned the need to quickly reflect and re-plan for the next rehearsal - a concept reflective of the day-to-day activities of fulltime teaching. Because both rehearsal configurations elicited participants' growth (observed and perceived) of various rehearsal behaviors (e.g., gesture in LDG, verbal instruction and feedback in GFG), we suggest instructors of courses that include conducting and/or rehearsal components utilize a mix of frequency and duration when designing teaching episodes. Future researchers might investigate any potential impact of progressively longer and/or more frequent teaching episodes on the development of preservice teachers' rehearsal skills. Furthermore, examining the impact of varied rehearsal structures on student music achievement seems beneficial to the design of undergraduate coursework in instrumental music education.

**Limitations & Conclusion**

Participants in this study represented a small convenience sample of preservice instrumental music teachers from one institution, impacting our ability to detect any significant differences between the groups. Future researchers might replicate this study with more participants (e.g., students of similar experience/preparation from multiple institutions) to determine any causal relationship between frequency or duration and rehearsal behavior development. Length and frequency of teaching episodes were dictated by the course configuration - a 50-minute Tuesday meeting time and a 100-minute Thursday class. This scheduling issue resulted in some students teaching during back-to-back classes (GFG) or having over one week in between teaching episodes (LDG). Future researchers might consider replicating frequency versus duration in a setting that allows for similar time between teaching episodes to control for the

reflection phenomenon. Students were either afforded three (LDG) or five (GFG) teaching episodes between pre- (initial) and post-test (final) rehearsals.

Though we noticed trends in our comparative analysis, future investigations that give preservice teachers more rehearsals between data collection points also may impact growth of individual rehearsal behaviors. Additionally, longer rehearsal "units" that span beyond our 6-week configuration may highlight impactful longitudinal growth. Because participants in this study recognized and demonstrated many positive impacts of both longer duration and greater frequency of teaching episodes, further research on the most effective setting in which to develop rehearsal skills in preservice instrumental music teachers is needed.

Instrumental MTEs should consider many teaching strategies when designing course curricula, in an effort to provide preservice educators with multiple opportunities to practice and reflect on gestural and instructional rehearsal behaviors. Results from this study indicate positive benefits of both longer rehearsal episodes, as well as shorter, more frequent episodes. In an attempt to prepare preservice teachers for a wide range of "real world" scenarios, it is important that MTEs afford students reflective, authentic teaching experiences. Our students demonstrated an ability to reflect on various conducting and teaching behaviors to improve their rehearsal skills. MTEs should consider carefully guided reflective activities when engaged in lab-based rehearsal settings in the instrumental music education classroom.

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# Effects of Practice Using Non-Mirrored Reflection on Music Therapy Students' Affect During Group Leadership Skills

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*The purpose of this investigation was to ascertain the potential effectiveness and practicality of the use of a true, non-mirrored reflection to provide future music therapists with real-time, and possibly more accurate, visual feedback regarding facial affect than provided by a traditional mirror. Participants (N = 21) were students enrolled in an intact introduction to music therapy course at a large, comprehensive public university in the eastern portion of the United States. Results showed that self-perception for this particular population was consistent with those of their peers, which differs from what might be expected based on earlier investigations. More investigation is needed to determine if and how much this type of non-mirrored feedback provides meaningful and lasting perceptual changes. These data may facilitate further investigations into self-awareness and affect training within the context of preservice music therapy and education programs. Additional investigations into the sequenced use of varied visual feedback sources and protocols is recommended.*

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Being able to observe and interpret another person's verbal and nonverbal behaviors is vital for a practitioner whose success as a teacher or therapist depends upon developing an environment in which the clients/students feel a certain level of trust with those in a position of authority. Self-awareness plays an important role in how a person chooses to present herself and, by extension, how she is perceived, received, and/or accepted. This set of skills must be developed to establish appropriate and effective working relationships with students or clients. Perception of the world around us develops over time.

Development of awareness, self and otherwise, is constructed via life experiences, feedback, and reflection. Experiences that occur more frequently generally lead to a solidification of said perception. Zajonc (1968, 2001) addressed the concept of repeated perceptual experiences via his Mere Exposure Theory. At its essence, his theory suggests "that mere repeated exposure of the individual to a stimulus object enhances his attitude toward it" (1968, p. 1). Exposure simply means a condition which just makes the given stimulus accessible to the individual's perception. Whether this exposure is in the form of appropriate or inappropriate modeling, it appears that while recognition may

certainly occur, that does not necessarily mean learning is taking place. How a person is perceived is related to how one chooses to present herself, which requires a certain level of self-awareness for accurate and meaningful self-evaluation.

The first interaction between two human beings or between a person and a group can be a consequential point in the continuum of that relationship. Though cliché, the old *Head & Shoulders* shampoo admonition that "you never get a second chance to make a first impression" can be accurate from a visual standpoint. An extant branch of research in teacher/student(s) rapport focuses on nonverbal communication. However, these initial perceptions are not limited to visual input. These myriad interactions can function as the gateway to effective communication or not (e.g., rapport). Rapport develops and evolves relative to all modes of communication input. Johnson, Darrow, and Eason (2008) found an interesting possibility when investigating if relationships exist between skilled music teachers' nonverbal behaviors and their perceived effectiveness and rapport. Quantitative data indicated a strong relationship between rapport and effectiveness (.85) and qualitative analysis results suggested that the evaluators appeared to make "no distinction between rapport and effectiveness when reporting their impressions of the observed teachers" (p. 81). This could mean that it may be difficult to separate "effectiveness" and "rapport" as independent variables. These results further support the findings of Ambady and Rosenthal (1993) who suggested the importance of a basic understanding of the role of affective behaviors as they relate to the process of teaching and learning within the teacher/therapist training paradigm.

**Social Awareness**

It is important that music teacher/therapist instructors identify social attributes to not only teach specific behaviors but also model and modify behaviors to specific contexts. Juchniewicz (2010) investigated the area of social intelligence and suggested that it is important to provide preservice opportunities for the development of these social skills within teacher education programs. Much like the work of Hamann et al. (2000) who found that a person's ability to appropriately engage others in social discourse, termed *social control*, appeared to be related to teaching effectiveness. They also addressed the necessity for developing emotional sensitivity, or the ability to receive and interpret nonverbal communication. Purposeful development of these skills will only lead to effective teaching if the preservice student can demonstrate the ability to effectively and accurately decode nonverbal communication of others and to encode and engage in successful, appropriate interactions (Hamann et al., 1998). The ability to both model and observe/reinforce these social skills are critical to the ability of a therapist or teacher to connect and develop an appropriate and effective relationship.

## Nonverbal Communication

Self-awareness of both verbal and nonverbal communication is a trait that differentiates effective therapists and teachers from those who are not. It is important that awareness is present, but also consequential that one is purposeful about what is being presented nonverbally. Johnson, Darrow, and Eason (2008) concurred, writing that good teachers and novice teachers express themselves differently in both visual and verbal presentation. To provide some possible perspective on the consequential nature of these skills, Ambady and Rosenthal (1993) measured the student impressions after viewing two-second and ten-second video clips of inservice teachers with whom they had no prior interactions. The authors suggested that viewing these brief durations of nonverbal behaviors accurately predicted ratings of the same teachers by those who had frequent interactions with them (e.g., students in their courses, supervisors) suggesting the invaluable information nonverbal cues can provide in the evaluative process. Nonverbal information can play a substantial role in the perception of a teacher or therapist and may show the importance of self-awareness training in preservice therapists and educators, especially as it pertains to purposeful nonverbal communication. Facial expression is generally accepted as the most important aspect of nonverbal communication (Harper, Wiens, & Matarazzo, 1978; Malandro & Baker, 1983).

In music, there is much research into nonverbal behaviors focused on conductor behaviors and their relative effectiveness and expressivity. Anecdotally, many conducting texts focus on the more "macro" or gross motor aspects of conducting—body placement and gesture—prior to focusing on the "micro" of fine motor skills such as facial expressions. This foundational approach is supported by such researchers as Price and Byo (2002), among others. However, there still exists a large body of investigative endeavors centered around one area of the body – the face. There seems to be agreement that effective and expressive conductors tend to demonstrate frequent and sustained eye contact, utilize expressive gestures, and exhibit varied facial expressions (Johnson, Fredrickson, Achey, & Gentry, 2003; VanWeelden, 2002). Investigators have found that the use and frequency of expressive facial expressions often differentiates novice from expert conductors (Byo & Austin, 1994; Goolsby, 1999; Silvey, 2013; Wollner, 2008; Yarbrough, 1975). This nonverbal communication paradigm, be it gestural or facial, includes behaviors that need to be context specific and purposeful.

In any setting where communication is occurring, either purposeful or incidental, context matters. Awareness of what is intentionally being communicated, as well as a willingness to ascertain what might be unintentionally communicated, is a skill set that can impact the effectiveness of a music therapist or educator. As with differentiating between and among conductor effectiveness, there are numerous investigations into variables related to music therapist effectiveness.

In an interesting study addressing nonverbal communication, Jones and Cevasco (2007) compared nonverbal behaviors of music therapy students and professional music therapists and found that professional music therapists tended to begin with neutral facial affect, frequently changed expressions, and related facial expressions purposefully to song text. Student Music Therapist's (SMT) default affect was a smile with fewer facial affect changes that showed "self-directed expressions following a mistake" (p. 23). This is an effective example of context specificity. In a music education context, those in teacher education are not likely to argue with the assertion that effective teaching can be described as "sustained control of the student-teacher interaction evidenced by efficient, accurate presentation and correction of the subject matter with enthusiastic affect and effective pacing" (Madsen & Geringer, 1989, p. 90). However, in the music therapy context, an enthusiastic affect may not be warranted or appropriate, for this reason, awareness of facial affect can be consequential when working with a client. Madsen and Clark (2017) suggest the importance of developing purposeful use and control of facial affect as a therapist's facial expression is important or effective interaction.

**Self-Awareness**

The awareness of how others see you can play an important role in developing self-perception. This awareness is not limited to physical appearance, but includes myriad forms of communication including verbal-spoken, verbal-written (e.g., text, email), and nonverbal communication (e.g., facial affect, body language, eye contact). Further, self-awareness is not only being aware of what we look like or how we sound, but how others perceived those signals.

Perhaps the most common tool for self-awareness feedback is the mirror. As previously discussed, the Mere Exposure Theory (Mita, Dermer, & Knight, 1977; Zajonc, 1968, 2001) was a new approach to this paradigm illuminating the idea that we have been "taught" over many years that a mirror provides a clear and accurate visual representation of how others see us. Mita, Dermer, and Knight (1977) had participants observe photos of themselves and found they preferred a mirrored image while their loved ones preferred the image that was non-mirrored or a more "natural" image. The TrueMirror© - or non-reversing mirror – which was patented in the late 19th century in England and only recently put into any sort of mass production, provides an accurate, non-reversed image in an immediate, "live" setting. To date, most *true* visual representations of a person have been archival (e.g., still photos, video recordings). These differing perspectives may provide a false perspective to the individual who receives visual input that is in opposition to that input provided to others.

In a real-time setting, however, our facial expressions are generally reactive and those responses have been practiced and refined in myriad situations throughout most of our lives. Simply becoming aware of these behaviors can be challenging especially in any sort of "natural" setting. Altering responses that have become instantaneous reactions may be in opposition to what has become

second-nature and can prove challenging. Developing a non-response or "flat affect" may be one of the most difficult responses to develop. To address the development of a flat affect as a skill, Madsen and Clark (2017) conducted a study that demonstrated that the use of the True Mirror© device focused on developing a purposeful facial affect. Participants were asked to complete a narrative task in which they described three past experiences: high magnitude approval, high magnitude disapproval, and high negative magnitude. While working in dyads, each participant practiced demonstrating a flat affect while the other read their various high magnitude narratives. Results indicated an increase in both the speed and accuracy of the desired facial responses.

Authors of teacher education literature have emphasized the need to read nonverbal cues and to provide clear nonverbal cues (through gestures, eye contact, proximity, and facial affect) that are clear, consistent, and contextually appropriate (e.g., Hamann, Baker, McAllister, & Bauer, 2000; Hamann, Lineburgh, & Paul, 1998; Johnson, Darrow & Eason, 2008; Silvey, 2013). In a novel music therapy or education setting, it is important for the clinician/educator to be self-aware and prepared to show consistent and purposeful affect. Therefore, it seems logical to investigate if pre-service music therapists and educators are provided with sufficient strategies and meaningful skill development experiences allowing for practice and refinement of their own nonverbal behaviors. Further, are these experiences reinforced with effective and accurate self-reflection procedures or solely via external feedback (e.g., teacher feedback, peer evaluations) and self-evaluations based on memory (e.g., self-evaluations or reviewing archival materials)? The purpose of this investigation was to determine the potential effectiveness and practicality of using a *true*, non-mirrored reflection in an attempt to provide real-time, and possibly more accurate, feedback by actually seeing what the client(s) or student(s) see.

## Method

Participants ($N = 21$) were students enrolled in an intact introduction to music therapy course at a large, comprehensive public university in the eastern portion of the United States. The instructor was a tenured Associate Professor of Music Therapy and Board Certified Music Therapist. The study was granted IRB approval via expedited review. All class members were instructed to prepare for a Group Leadership Skills (GLS) assignment where the task was to "teach participants to sing an unfamiliar song." The assignment specifications were gently adapted from the text used in the course (Standley & Jones, 2007). The assignment instructions included a detailed task analysis with a step-by-step approach to an additive teaching methodology (e.g., chaining). The assignment included a three-step "Preparation" section – the final two steps both indicated that students should "practice" different aspects of the task. The implementation of the task was provided with a 13-step task analysis with justifications and/or explanations of most steps. The primary objectives of the task were to "teach quickly and efficiently while maintaining a high level of interest and

musical accuracy." Participants were encouraged to prepare for this teaching episode by practicing independently using varied, self-selected practice efforts (e.g., practice "several times," practice in front of a mirror, practice using video recording software/handheld device).

This GLS represented the second of two of these leadership tasks for the course. The first GLS was to lead a familiar song unaccompanied. Though the GLS task may have had some novelty relative to the first completed GLS task, the procedure was not new to the participants. Both GLS experiences were evaluated with a rubric provided by the instructor that outlined expected behaviors, which included eye contact with the group, steady tempo, song choice, presence – or not – of distracting mannerisms, engaging and pleasant affect, and overall preparation and delivery. No time barrier was implemented; however, all episodes were less than four minutes in length.

Immediately prior to each student's GLS presentation, they left the classroom and went into a nearby alcove and practiced using a laptop computer and *QuickTime* software (see endnote). This was used because it provides a *true* perspective of the person rather than a mirror image thus providing immediate, real-time visual and audio feedback with no discernable delay. Practice time with the software was recorded for each student by a proctor. No specific time barrier was given for the practice time with *QuickTime*. The recorded practice time for the participants ranged from well under a minute (0:26) to just over five minutes (5:18).

GLS presentations were assessed via instructor-created Self-Evaluation and Peer Evaluation forms. The Self-Evaluation form asked participants for the title of the unfamiliar song, to self-report the number of times they practiced their song presentation, and the total number of minutes practiced. Participants were to rate themselves on a 10-point Likert-type scale for Facial Affect (1 = flat affect; 10 = engaging & pleasant) and their use of Eye Contact (1 = minimal or no eye contact; 5 = some eye contact, limited number of people; 10 = frequent eye contact with all members of the class). They were asked to complete a free response question pertaining to their impression of practicing with *QuickTime*, which provided a non-mirror visual representation. The students who participated in the GLS experience completed a similar Peer Evaluation form. They were asked to indicate the title of the unfamiliar song and rate their peer on a 10-point Likert-type scale for Facial Affect (1 = flat affect; 10 = engaging & pleasant) and their use of Eye Contact (1 = minimal or no eye contact; 5 = some eye contact, limited number of people; 10 = continuous eye contact with all members of the class). After each presentation, the presenter completed the Self-Evaluation form and the students present for the assignment completed the Peer Evaluation form.

## Results

### Quantitative Analysis

Participants ($N$ = 21) were tasked with teaching an unfamiliar song. After their teaching episode, they completed a Self-Evaluation form and they were evaluated by their peers via a form measuring both facial affect and eye contact. The self-report data on practice frequency and the total amount of time (in minutes) for preparatory practice yielded a large range of responses ($M$ = 42.48; $SD$ = 27.08). Each participant also practiced with a laptop using the non-reversed image provided by the *QuickTime* software. Timings for these were acquired by a proctor. These data also yielded a wide range of responses ($M$ = 166.00; $SD$ = 80.22). (See Table 1).

**Table 1.**.Descriptive Statistics of Dependent Measures

| Measures | *N* | *M* | *SD* |
|---|---|---|---|
| Self-Evaluation - Affect | 21 | 8.10 | 1.30 |
| Self-Evaluation - Eye Contact | 21 | 8.43 | 1.43 |
| Peer Evaluation - Affect | 21 | 8.45 | 1.45 |
| Peer Evaluation Eye Contact | 21 | 8.35 | 1.54 |
| Practice Frequency | 20 | 6.80 | 6.35 |
| Total Practice Time (minutes) | 21 | 42.48 | 27.08 |
| QuickTime Practice (seconds) | 20 | 166.00 | 80.22 |

Due to the increase likelihood of Type 1 error that comes with multiple pairwise comparisons, we used Bonferroni corrections on our data. There were no statistically significant differences between groups for Affect measures (Self-Evaluation & Peer Evaluation scores), ($t(20) = -1.67$, $p = 0.11$, $d = 0.25$), or for Eye Contact measures (Self-Evaluation & Peer Evaluation scores), ($t(20) = .286$, $p = 0.78$, $d = 0.05$).

A Pearson correlation was used to determine if any relationships existed between the dependent measures of Affect (self and peer evaluation), Eye Contact (self and peer evaluation), practice frequency, total practice time, and *QuickTime* practice. As displayed in Table 2, six significant relationships were found. Data indicated significant moderately strong, positive correlations between the two self-evaluation measures (Affect, Eye Contact), between peer evaluation measures (Affect, Eye Contact), between Self-Evaluation (Affect) and Peer Evaluation (Affect), and between Self-Evaluation (Affect) and Peer Evaluation (Eye Contact). Additionally, moderate positive correlations were found between Self-Evaluation (Eye Contact) and Peer Evaluation (Affect), and between Peer Evaluation (Eye Contact) and *QuickTime* Practice. The remaining non-significant relationships were generally quite weak with the notable exception of a moderately weak negative correlation between Practice Time and Peer Evaluation (Affect). See Table 2 for a complete correlational matrix.

**Table 2.**.Correlations Between Dependent Measures

| Measures | 1. Affect (Self) | 2. Eye Contact (Self) | 3. Affect (Peer) | 4. Eye Contact (Peer) | 5. QT Practice (sec) | 6. Practice Frequency | 7. Practice Time (min) |
|---|---|---|---|---|---|---|---|
| 1. Affect (Self) | ↓↓ | | | | | | |
| 2. Eye Contact (Self) | .674* | ↓↓ | | | | | |
| 3. Affect (Peer) | .656** | .460* | ↓↓ | | | | |
| 4. Eye Contact (Peer) | .558** | .431 | .682** | ↓↓ | | | |
| 5. QuickTime Practice (sec) | .192 | .109 | .215 | .522* | ↓↓ | | |
| 6. Practice Frequency | .251 | .295 | .236 | .272 | .422 | ↓↓ | |
| 7. Practice Time (min) | -.230 | -.123 | -.426 | -.140 | .111 | .324 | ↓↓ |

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

## Qualitative Analysis

The primary qualitative data for this study was a free-response question pertaining to participants' impression of practicing with the non-mirrored visual feedback provided by the *QuickTime* software. While it is not possible to know for certain, it appeared as if none of the participants had previously engaged in any sort of non-mirrored practice, indicating this was a novel experience for them.

All participant responses were typed verbatim into a spreadsheet by the lead author. Both researchers read each response independently and analyzed and coded each comment developing a unique system for categorizing each (Patton, 2002). To triangulate results, the researchers negotiated a single group of categories. All comments were again independently reviewed and assigned a category. Any categorization discrepancies were discussed until 100% agreement was reached for all comments. A total of 36 responses was collected and analyzed. Two primary themes were revealed. The most frequently indicated ($n$ = 16) was that of "changed/helpful perspective" and the second most notable theme was "awkward/uncomfortable" ($n$ = 8). One participant wrote: "It was more discomforting than the actual project." One participant only practiced with the software for 26 seconds. It is important to note, however, that six of the eight participants who indicated discomfort or awkwardness with the experience also indicated that the non-mirrored reflection practice provided a meaningful perspective. Comments from three participants may help to illustrate this:

Participant A: *"I looked awkward. The mirror made me see what I thought was engaging facials and smiles did not always translate out."*

Participant B: *"I think it was different/awkward practicing in front of the mirror, but if it was something I started to do more, I think it would be more helpful than practicing in a regular mirror."*

Participant C: *"The mirror practice made me feel uncomfortable looking at myself and helped me adjust my energy for the real thing."*

The remaining responses included self-assessment ($n$ = 3), usefulness as a practice tool ($n$ = 2), immediate feedback ($n$ = 1), calming ($n$ = 1), confidence ($n$ = 1), and fun ($n$ = 1).

## Discussion

The purpose of this study was to implement a novel approach to preparing preservice music therapists and educators by using a software tool (*QuickTime*) to see if it can provide a more accurate perspective of the affect displayed. More investigation is needed to ascertain *if* and *how much* this type of non-mirrored feedback makes meaningful and lasting perceptual changes in the preparation of music therapists and teachers. The data from this study does provide some interesting insight into how this population perceived itself relative to the perception of their peers.

It was interesting how similar self-evaluation and peer evaluations were for both Affect (self $M$ = 8.10, $SD$ 1.30; peer $M$ = 8.45, $SD$ 1.45) and Eye Contact (self $M$ = 8.43, $SD$ 1.43; peer $M$ = 8.35, $SD$ 1.54) as these data appear to stand in opposition to extant research suggesting that self-evaluation is generally more favorable than external evaluation (Dunning, Meyerowitz, & Hozberg, 1989). It is possible that it may be difficult for the person actively involved in the activity to effectively differentiate "affect" and "eye contact." Perhaps this is an area for further investigation. Additionally, the data indicated consistent ratings between both self-evaluations and peer evaluations, which is also different than one might expect based on existing music evaluation research indicating that while external evaluations tend to be consistent across various groups, self-evaluation accuracy tends to be more widely varied (Bergee, 1993; Bergee & Cecconi-Roberts, 2002). While this smaller sample size is a limitation to the generalizability of these data beyond this limited population, it does provide an additional perspective that contrasts previous findings. These data also provide a basis for some opportunities for further research into such areas as classroom/program climate, teacher/therapist training protocols, self-awareness, and possibly concurrent task complexity.

There is ample evidence that we tend to see ourselves differently and, in some cases, prefer different images of ourselves than those experienced by others. Perhaps with a more longitudinal approach to these therapist/teacher training protocols, more stable and meaningful data can be acquired. Johnson, Darrow, and Eason (2008) found that their adjudicators did not seem to differentiate

between "rapport" and "effective teaching." From a self-awareness perspective, it is possible that mere exposure to our own image and behaviors has lulled us into a false sense of self such that the *self* that we have experienced for all our lives and not necessarily the *self* as seen by the outside world (Mita, Marshall & Knight, 1977). This is particularly important in the development of preservice music therapists and educators. These approaches to therapist/teacher training could also be a meaningful component of self-awareness that could directly affect the accuracy of social-awareness (Juchniewicz, 2010).

## Limitations

In addition to sample size, another potential limitation to this study was the length of time that the participants practiced with the *QuickTime* software. Future endeavors in this area may need to develop purposeful and sequenced series of activities that include the use of this software either within individual practice or as part of one-on-one preparation between the student and the instructor. Also, seeing if these activities show any sort of long-term change in self-perception as well as purposeful affective presentations and reactions/non-reactions. One could argue that the use of *QuickTime* software is an additional limitation. While this software is ubiquitous with Mac Operating Systems (OS), it may not be as readily available on other platforms.

## Conclusions

It is important to note that these data are somewhat in contrast to previously established expectations. Much of the existing data on self-evaluation in music settings occurred during investigations when current college-age students were at a very young age, if not before they were born. Perhaps one should consider the potential for generational differences (e.g., Gen X, Gen Y, Millennials) as such acts as "taking a selfie" has become a common occurrence at this time in history, which was not a capability either readily available or as immediate as it is currently.

Whether the apparent change of perspective displayed in these data is sustainable, it is too early to tell. One could investigate the frequency of instances necessary to solidify these behaviors. Perhaps a protocol with regular practice and specific tasks or target areas in conjunction with archival video review could help preservice music therapists and educators internalize these concepts and become more purposeful in their nonverbal expressions such that they can transfer affective *reactions* to purposeful affective *responses.* A determination if this approach is effective for the development of these skills requires substantially more investigation. These data may provide a meaningful early foray into self-awareness and affect training research. Additional investigations into the sequenced use of varied visual feedback sources (i.e., live, mirrored, non-mirrored, archival) within purposeful practice protocol could be fruitful in

numerous areas such as the development of group leadership skills, counseling skills, music therapy, and music conducting.

Endnote 1: Much like the TrueMirror, *QuickTime* provides a live visual representation of the person. This is most obvious when the observer raises a hand and the hand on the opposite side of the screen moves rather than the "same" hand in a mirrored reflection.

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# "The Students Were Excited to Play": The Role of Improvisation Warm-Ups in 6th Grade Brass Class

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*This qualitative action research study involved the role of group improvisation in a beginning sixth grade brass class. The first six notes of the Bb major school were used for improvisation activities and mostly focused on call and response activities. The second author kept a teaching journal to record teaching reflections, improvements or changes to the lessons, and other thoughts related to the investigation. The first author conducted a short semi-structured teacher interview with the second author to discuss successes and limitations of the improvisation lessons. The study took place over an eight-week period beginning in mid-January and ending in March 2020. Data from the teacher journal and interview were analyzed using a three-cycle coding process. Four themes emerged: (a) student enthusiasm, (b) musical playing, (c) fundamentals of playing, and (d) transfer. Implications include the potential benefits of including improvisation activities into the warm-ups for beginning band students.*

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## Introduction

Practicing music teachers and music education researchers often experience a disconnect when it comes to research interests and activities. Typically, when education research is completed in K-12 settings, it is driven by the researcher and not by the classroom teacher (Johnson, 2012). Higher education researchers often have time built in their schedules to complete comprehensive research projects, whereas K-12 music teachers generally do not. Partnerships between these groups can be valuable to assist teachers with investigating their own instruction and practices. Conway and Borst (2001) encouraged such collaboration because "practicing music teachers… can benefit from the results" (p. 3) of such studies. These investigations often fall into the paradigm of *action research*, the process of a teacher studying their real classroom situation to understand and improve the quality of instruction (Johnson, 2012; Kemmis et al., 2013).

Not until 2019 when the National Association for Music Education (NAfME) called for collaborative action research proposals for the Biennial Music Research and Teacher Education Conference were such projects emphasized at the national level in music education research (Tuttle, 2019). That call for proposals marked the genesis for this project. After the initial posting, the first author (a university

professor) reached out to collaborate with the second author (a middle school music teacher). In a process of open dialogue, we discussed possible teaching situations to investigate. From this conversation, the second author identified the implementation of improvisation exercises with his middle school band class as an area of interest, and that became the topic for this study.

We were curious about incorporating more opportunities into the classroom for students to create music on their own, fulfilling the National Core Arts Standard of Creating (NCCAS, 2014). We especially were interested in ways to promote music creation in ensembles, without restructuring the class period. Group improvisation seemed to be a possible solution that would allow for creative music making while fitting into the existing performance-based class structure. K-12 teachers have reported student anxiety as a deterrent to teaching improvisation to their students (Schopp, 2006; Whitcomb, 2013). In our experience, this seemed particularly true within high school level jazz ensembles. We wondered if beginning students, who have less of a preconceived idea of what band class and improvisation are, would be more open to and enthusiastic about improvisation.

Teachers' interest in implementing improvisation in beginning band classes has been evident for many years. For example, the National Standards for Music included improvising as part of Standard Three (MENC, 1994). In the 2014 National Core Arts Standards, seven of the eleven anchor standards included improvisation in multiple sub-standards (NCCAS, 2014). Scholars also agree that including improvisation is an essential skill that all music teachers should know (Ahn, 2018; Azzara & Grunow, 2006; Gagne, 2014). Still, beginning band teachers have often failed to embrace or implement improvisation in their classroom, perhaps due to perceptions of low self-efficacy when it comes to teaching improvisation (Davison, 2010; Owen, 2006; Snyder, 2003). The authors believe that research into improvisation in the beginning band classroom may provide valuable information that could lead teachers to reconsider the frequency with which they introduce and refine this important skill in their classrooms.

## Literature Review

Music improvisation happens when an individual composes in real time while making "content-oriented musical decisions" at the time of performance (Gagne, 2014, p. 17). While most often associated with jazz, improvisation is an important part of classical music training and can possibly enhance the creative music making process (Rusinkie, 2008; Stringham, 2010). Given the National Core Arts Standards' emphasis on creating, improvisation is included as an essential part of a well-rounded music education. The Model Cornerstone Assessment Template (2014) suggests that students improvise and create melodies, rhythms, or harmonic accompaniments (p. 4). For younger musicians, this may be accomplished by using free-form improvisation—that is, improvisation without rules—because "little or no knowledge of music theory, musical styles, or performance techniques are required" (Cahn, 2005, p. 28). For example, in a

beginning band class, this can be completed by having the students play four Bb quarter notes and then allowing students to improvise four beats on notes they have already learned.

Group-improvisation is the act of musical improvisation completed in a large ensemble setting where all or most of the musicians participate collectively. There is some evidence that group-improvisation can help improve students' musicianship (Montano, 1983; Silverman, 1962). Wilson (1971), for instance, investigated how group improvisation influenced high school musicians. He divided the musicians into two groups; the experimental group took part in one group improvisation session per week, while the control group received an extra rehearsal of their normal performance pieces. He concluded that group improvisation exercises improved aural discrimination of melodic and rhythmic elements and sight-reading ability.

Researchers have sought to understand the significance of improvisation on the musical development of students (Azzara, 1992, 1993; Stringham, 2010). Stringham (2010) completed a mixed methods study to describe music achievement and personal perspectives of high school students who learned improvisation and composition in their wind ensemble. He found preliminary evidence that suggested teaching improvisation and composition was meaningful and met musical objectives of the ensembles. More specifically to beginning band classes, Azzara (1992, 1993) investigated the effects of improvisational study with fifth-grade instrumental students. He found that improvisational exercises in the experimental group led to overall improvement in music achievement. Considering the results of these studies, it becomes clearer that improvisation might have a positive effect on instrumental students' musical development and enjoyment.

There is evidence to support the claim that improvisation can increase student classroom enjoyment (Ahn, 2018) and that student enjoyment may lead to better creative thought and transfer of content (Osterloh & Frey, 2000). Likewise, student enjoyment is positively associated with learning performance in classrooms (Hendrickson, 2019; Nemanich et al., 2009) and is an integral part of classroom motivation, as it is necessary for effective learning (Cybinski & Selvanathan, 2005; Peterson & Madsen, 2010). Such effective learning can lead to successful transfer of understanding. Unfortunately, minimal research on transfer exists in music education (Strand, 2005; Woodford, 1994), however it is logical to consider that the aforementioned research on enjoyment and transfer may apply to improvisation in music classrooms.

Understanding what improvisational exercises work in the classroom will allow teachers to successfully implement these components in their ensembles. In his dissertation investigating improvisation in the beginning band curriculum, Gagne (2014) found six primary applications for beginning improvisation instruction: (1) free improvisational exercises, (2) single pitch improvisational exercises, (3) call and response activities, (4) pentatonic improvisation exercises, (5) chord-scale improvisation instruction, and (6) blues-form exercises. Ahn (2018) replicated the exercises from Gagne (2014) with three different

middle school band teachers by providing detailed improvisation exercises for their bands. After interviews with these teachers, he concluded that these lessons were "appropriately designed for middle school students to practice improvisation" (p. 73). Both researchers recommend incorporating these exercises with all middle school band classes.

The purpose of this collaborative qualitative action research study involved the role of group improvisation in a beginning sixth grade brass class. Over an eight-week period, all students participated in improvisation exercises during the regular warm-up period. These exercises were adopted from Ahn (2018) and Gagne (2014). Our research question was, *How will group improvisation instruction in a beginning brass class contribute to students' musical development?* To answer this question, we gathered data through teacher journaling and post-investigation teacher interview (Johnson, 2012).

## Method

The second author, the teacher of the sixth-grade brass class, was both researcher and participant (McIntyre, 2007). The research was conducted in a suburban K-8 school situated in a lower socioeconomic status neighborhood in Missouri. The school is a federally designated Title 1 school, and 18.1% of the student population is identified as English Language Learners, with 30% of those identified as "Becoming Proficient." There are two band directors at the school, one teaching choir and concert band at this building, the other teaching band in three buildings in the district. The directors split the band classes with one director, the co-author of this study, primarily teaching $6^{th}$-$8^{th}$ grade brass while the other teaches woodwind and percussion. There were 110 students enrolled in the band program, 35 in eighth grade, 33 in seventh grade, and 42 in sixth grade during the time of the study. This investigation was completed during the sixth-grade brass class.

### Implementation of Improvisation Exercises

This sixth-grade brass class met for 50 minutes in the afternoon five days per week and there were 19 students enrolled in the class. The warm-up period took place over 15 minutes at the start of class. The warm-up included long tones, lip slurs, and tetra-scale exercises. The focus of the warm-up period was tone production, posture, and technique. Improvisation exercises were added to the end of the warm-up period after the other exercises were completed. See Appendix A for improvisation warm-up activities.

The study took place over an eight-week period beginning in mid-January and ending in March 2020. All improvisation activities used the first six notes of the Bb major scale. During weeks one and two of the improvisation unit, students focused on call and response activities. During week three, students continued these exercises and were asked to identify emotional themes for the melodies they created and play with differing emotional intent. In week four, students were also

asked to create melodies without first writing them down. During weeks five and six, students were gradually weaned from writing melodies to creating improvisation and performing exercises simultaneously. In week seven, students were asked to improvise a short melody to represent a character (e.g., giant, fairy). Finally, in week eight, small student groups were asked to choose an emotion, perform a short melody based on their choice, and have the other students guess what emotion they were portraying.

## Participants

*Brass Students*

All of the students enrolled in a beginning brass class taught by the second author served as participants. There were 19 students in this class. The students were 11 to 13 years old, 4 female and 15 male. The class demographics were 15.8% Caucasian, 15.8% African American, and 68.4% Hispanic. The percent of students identified as English Language Learners in the class was 21.5%.

The study was approved by the Institutional Review Boards at both authors' institutions and the school's principal agreed for their school to participate. All students completed assent forms and parents completed consent forms as well. Each student was informed of the reason for the study, the processes involved, and their participation responsibilities.

*Teacher*

As the teacher of the brass class, the second author was an integral part of the study group. In his fourth year of teaching, he had classroom experience teaching band, choir, and general music from pre-K to 12th grade in both the public and private sector and had recently graduated with a Master of Music Education degree. He implemented all portions of the lessons and was the only adult interacting with the students during the warm-up periods. He kept systematic records throughout the study (Patton, 1999) which will be described in the section that follows.

## Data Sources

A variety of IRB-approved procedures were used to collect data about the experience of improvisation during the warm-up exercises. The teacher (second author) kept a freewriting reflective journal to record thoughts on teaching, improvements or changes to the lessons, and other feelings related to the investigation (Johnson, 2012). This journal was written in *Google Docs* so that both authors had access to it. While journaling, the second author attempted to not only keep a detailed account of the components of each lesson, but also to note student behavior. Student statements of excitement, confusion, or other indications of what the students were thinking are some examples of behavior noted in the journal. In addition, he attempted to reflect upon his own teaching by

discussing how well students were progressing in their understanding of improvisation and in their creative choices.

His teacher journal entries completed over the eight-week experimental period served as narratives used for the analysis. Both authors reviewed the entries, looking for patterns and recurring themes. Most frequently, the benefits from these improvisation exercises were related to student enthusiasm, musical playing, fundamentals of playing, and transfer. These categories accounted for nearly all of the situations detailed in the journal entries and the teacher interview. With the themes in place, we returned to the journal entries and selected the accounts that most exemplified the four thematic categories.

The university researcher (first author) conducted a short semi-structured interview with the teacher. Interview protocols were adapted from Johnson's (2012) book on action research methods. Questions gave the teacher the opportunity to describe his experiences with the improvisation techniques, how successful the techniques were, and what he would change or do differently in the future. The interview was completed in a single one-on-one session after the experimental phase was completed. The interview took place using the video conference program *Zoom*, was recorded, and transcribed.

### Data Collection and Analysis

The contributions of the improvisation exercises were explored qualitatively, guided by a complete participant framework (Tracy, 2019). Data from the teaching journal and teacher interview were analyzed using a three-cycle coding process (Saldaña, 2015). We used an *in vivo* coding format during the first cycle to preserve as much of the original context as possible (e.g., higher level of thinking). The second author served as the reliability observer for the coding. Any disagreements regarding the data were resolved through discussion until consensus was achieved (Denzin & Lincoln, 2005). In the second cycle, the first author grouped similar codes into categories using a pattern-coding process (Saldaña, 2015). For example, "higher level of thinking" and "higher level of musical thinking" were grouped together. In the third cycle, we used code weaving to integrate key words and phrases to start and form a narrative (Patel, 2014).

## Results

After we finished the code weaving, four narratives emerged: (a) student enthusiasm, (b) musical playing, (c) fundamentals of playing, and (d) transfer. We organized the reflection narratives based on the nature of the interaction.

### Narrative 1: Student Enthusiasm

*Student enthusiasm* was in reference to learning about and performing improvisational exercises during their warm-ups. Comments coded into this

category related to excitement to volunteer, joy of playing, and confidence in performing the improvisation exercises.

Throughout the improvisation exercises, one thing remained constant - the students were excited to learn about improvisation. An excerpt from the teaching journal, kept by the second author, describes this:

> I called on volunteers to pick which should go in each circle. We then played it as a class on the first note of their Bb tetra scale. Students were very excited to volunteer and got into discussions about why they wanted certain rhythms, why it would sound better. These are exactly the discussions I wanted the students to have with these exercises! (teacher journal, week 5, day 3).

Although this quote was from early in the investigation, the excitement of the students seemed to remain. In both the teaching journal and the interview, the teacher repeatedly discussed student enthusiasm. To us, this illustrates an important reason why improvisation activities are valuable in beginning instrument courses. When students enjoy their classroom, they may be more likely to grasp concepts and make transfers.

**Narrative 2: Musical Playing**

We used the theme *musical playing* to refer to specific comments about students' musical understanding and performance development during the improvisational activities. Creativity, musical decisions, and musical development were all codes that contributed to this theme.

This theme answers the question "*How will group improvisation instruction in a beginning brass class contribute to students' musical development?"* most directly. During the planning portion of this study, the teacher wanted to teach more than the music; he wanted to improve the students' creativity. The students seemed to be engaged happily in this endeavor. Here is an excerpt that highlights the concept:

> The students are also making much more musical decisions on their own with how to convey the emotions. I feel like breaking down into discussions of the musical elements really helped the students wrap their minds around the intangible concept of emotion into sound. (teacher journal, week 7, day 1)

The previous statement is an example of how the exercises helped students understand the more advanced concepts of musical playing, even at an early age.

In our interview, the teacher suggested that one of the largest barriers was the students' ability to play the instrument. Regardless, he found success with narrowing the activities by restricting students to a single note for their

improvisation but allowing them to create their own rhythm, so the students were able to become successful with specific objectives. He reported that:

> The students had MUCH more success in conveying emotions when they did this [using a single note while students were able to choose the rhythm] and were much more creative with their rhythms as well. Eliminating one component for them to think about helped free up some of their minds to think about the higher-level musical things rather than concentrating on what notes to play. (teacher journal, week 8, day 2)

Finding success with the creativity concepts while simplifying the number of performance skills required at this level led us to believe that beginning students are capable of these higher-order activities, especially when they do not have to think carefully about their motor skills. The teacher found that because of the lack of muscle memory in the fundamentals of playing their instrument, such as fingerings and tone production, students' focus often shifted to these aspects of the activity rather than the improvisation. When elements were removed, simplifying the physical aspect of playing, students were able to engage in higher-level creative thinking, supporting the idea that students do not need mastery of their instrument prior to participating in creative music making.

This idea of being creative and performing more musically was addressed directly during the interview:

> One [reason] was to just expose students at an earlier age to improvisation, to bring a little more creativity into the band room. So, because a lot of times I feel like directors are telling students how they should play things and the students are just doing them and that's not really a creative process. (teacher interview)

Perhaps the teacher focus on creativity and musicality was more evident in the interview than the journal due to its reflective nature, or the fact that it was conducted after the experiment had concluded; regardless, this sentiment reflects the teacher's perception that a change was needed in the classroom in order to truly achieve the goal of teaching students to be creative.

In the following quotation, the second author explained why he wanted to explore these improvisation exercises, based on the belief that these creative activities develop musicianship, and thus contribute to musical creativity:

> I think it's important because creativity seems to kind of be the basis of what we are trying to teach and what we tout that we're teaching. We say we teach kids to be creative, but we, I feel like I am currently not doing that. I'm teaching, I'm concentrating on teaching kids how to play the concert music. I'm not teaching kids how to respond to that music and making musical decisions. And if the student isn't able to make their own independent musical decisions, then I'm not making a musician. I'm just

> having someone do what I'm telling. So that creative decision-making part is what helps make independent musicians. (teacher interview)

These narratives were consistent with previous scholars' expressed desire in using teaching strategies that also develop students' improvisation skills and improve young musicians' musical playing in the classroom (Ahn, 2018; Azzara, 2006).

**Narrative 3: Fundamentals of Playing**

Narratives in both the teacher journal and teacher interview highlighted different concerns with student ability level, specifically in *fundamentals of playing* brass instruments. Comments coded into this category related to basic note accuracy, sound production, and pitch accuracy.

Students struggled with performing the improvisation activities because they were beginning brass players. Even though they understood the concepts, they couldn't always perform the improvisation exercises. The following is a personal narrative account from the second author's teaching journal:

> As this is a brass class, many of my students have trouble with pitch accuracy and consistency. Because of this, I feel they are often much more focused on that rather than on the improvisation and emotion. I wonder if this was done with woodwind students of the same level if we would see anything different because this element would be removed? (teacher journal, week 8, day 2)

This reflection was echoed in our conversation during the teacher interview. In this narrative, the second author speculated further when discussing the difficulties of the exercises chosen:

> I'm not sure if that was a lack of explaining on my part. Just kind of the overarching goal of what these exercises and activities are for or if it had to do with the fact that my students were concentrating so hard on just getting right pitches and the fundamentals because they hadn't developed those skills yet. (teacher interview)

These exercises had been chosen based on previous middle school band research (Ahn, 2018; Gagne 2014). Perhaps implementing these activities with a more advanced middle school ensemble would have resulted in more improvement.

Despite the hardships the students had with the fundamentals of playing, there were still some successes. With some revisions and modifications to the exercises, students were able to understand the process. As the second author explained, by week 6 of the study:

> All the students began getting more accurate with how they would produce the proper emotion, even those that were struggling last week. By spending more time with the students, breaking down how they were going to make their sounds before starting each pattern they seem to be grasping the concepts more. (teacher journal, week 6, day 3)

Although the teacher did his best to follow the exercises of Ahn (2018) and Gagne (2014), revisions and modifications are a natural part of teaching and action research. He believed that these modifications helped improve the students' experience.

**Narrative 4: Transfer**

We used the theme *transfer* to refer to the students' ability to connect the learned improvisational skills to other musical activities. The codes that contributed to this theme included conscious choices, transfer, and musical understanding.

Although guided instruction was needed, students started making transfers from the improvisation lessons to their method book's music. Towards the end of the unit, students were demonstrating improvisation methods with their other classroom music. The following statement from the teacher journal is representative of this finding:

> They were also making transfers as one student began improvising over a line out of the book later that day, which was very exciting! He said that he just wanted to play something because he thought it would sound cool and was proud that he made it up on the spot. We also had a discussion about the appropriate time for improvisation, but I was very excited to see the students attempting it in other areas. (teacher journal, week 4, day 3)

Even though we were not looking at the topic of transfer directly, this was an exciting discovery for us:

> They appeared to be thinking about what they were doing. I noticed later on some transfers that my students made into the bookwork that we were doing, you know the curriculum, because I taught, we would talk about, you know, one of the lines was the Surprise Symphony. And so, I said, okay, why did they have this piano and then a forte all of a sudden, and they, someone said, "Oh, is it because the loud is like a surprise?" And I was like, "yes, exactly." And they were like, "Oh, it was just like what we were talking about this morning or you know, things like that. (teacher interview)

Despite the difficulties in the subject matter and the modifications to the exercises, it was exciting to observe the students transfer the musical concepts from the improvisation exercises to their classroom music.

## Discussion

Although there were some playing challenges in the use of group improvisation during warm-ups, there appeared to be some benefits to students' learning in four distinct ways: (a) student enthusiasm, (b) musical playing, (c) fundamentals of playing, and (d) transfer. The findings on musical playing and fundamentals of playing were similar to those of Wilson (1971), who found that group improvisation exercises contributed to overall growth of students' musicianship. In some ways, the most exciting finding was student enthusiasm. As Hendrickson (2019) indicated, student engagement and enjoyment could bolster overall learning. There was evidence that this happened during the course of this study - specifically in regard to musical transfer.

We adopted improvisational exercises outlined by Ahn (2018) and Gagne (2014) to see if these exercises would have any effects on the musical development of beginning brass students. The teacher made the decision to modify some of these exercises based on student confusion. These modifications seemed to help students understand more advanced musical ideas. Even so, we believe that these modifications still followed the intent of the exercises used in the aforementioned middle school band studies. Certainly, these modifications were helpful in the students' understanding, enthusiasm, and ultimately their success with the lesson objectives. We also believe it is important to remain flexible as following a particular model too rigidly could negatively affect the emergent nature that is the trademark of action research.

We believe this study helps further the discussion on using improvisation in middle school band classes. As Gagne (2014) suggested, additional studies should observe the benefits, or lack thereof, of including improvisational exercises in beginning music ensembles. In this current study, we found that our data on improvisational exercises is consistent with the notion that improvisation increases student enthusiasm, by connecting warm-ups with class exercises and increasing classroom participation.

### Limitations

This study was completed in the Spring 2020 semester and several forces beyond our control limited the scope of this study. For example, the teacher had to miss nearly a week's worth of classes due to a death in the family. Furthermore, as the experimental phases started in January of a particularly harsh winter, several snow days occurred during the first 8-week period. Therefore, we gained IRB approval to extend our investigation to the full 16 weeks of the semester. Shortly thereafter, however, the COVID-19 pandemic caused the school to switch to remote learning for the remainder of the semester. Unfortunately, the music

classes were greatly disrupted by the change and our planned exercises were not easily transferred to the new online format. Thus, we decided to end the investigation earlier than anticipated. Originally, we sought to gather students' perceptions through written self-reflections; however, due to the reduced timeframe, we were not able to gain sufficient student feedback to analyze. Although we believe the teacher journal and interview provided an interesting analysis, it would have been valuable to have student feedback to compare with the teacher's observations.

**Implications for Teachers**

Improvisation experience is typically confined to jazz ensemble courses and much of the literature regarding improvisation focuses solely on the jazz idiom. A majority of band students do not participate in these ensembles, especially at the beginning level, resulting in most band students never engaging in improvisation. Implementing improvisation beyond the jazz setting allows teachers of young instrumental students to expand beyond the teaching of concert repertoire to the teaching of creative music making, a goal many have for their programs. In addition, if students are introduced to improvisation several years into their music education, they may be hesitant and uncomfortable with the process. More research into incorporating improvisation into beginning level concert band classes should be conducted to explore all possible benefits, including increased enthusiasm for improvisation, and added opportunities for musical decision making.

While this study focused on a sixth grade beginning brass class, our findings could be used in a variety of instrumental settings. For example, these exercises can easily be adapted to beginning string classes. Instead of using the Bb tetrachord, a string instructor could use the D tetrachord. Likewise, a teacher of a beginning flute class could have their students play only the head joint while improvising on simple rhythms patterns. These types of explorations are important when students are learning how to be creative. As Volz (2005) suggested, exploration activities that guide students to find usual uses, reflect on their creation, and change their perspective can help develop more creative thinkers and musicians.

This study gives valuable insight into the application, practices, and benefits to incorporating improvisation into the warm-up time in middle school brass classes. Despite the limitations outlined earlier, the results of our current study are consistent with the theory that improvisation instruction may improve student enthusiasm, musical understanding, and transfer of knowledge. Based on our findings, we suggest that adding improvisation activities in warm-ups could improve students' musical comprehension, and that would be an important topic for future research. Consequently, the authors support adding creative improvisation activities to beginning band curricula because of the perceived benefits to student outcomes.

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**Appendix A**
List of Improvisation Warmup Activities

Call and response:

1. Echo teacher rhythmic patterns on a single note
2. Student become the "teacher", echo each other's patterns
3. Echo teacher patterns using two notes
4. Students echo each other
5. Echo teacher patterns using three notes
6. Etc.

Twenty circles:

1. Students were given a sheet of paper that had 20 blank circles on it, four across and 5 down. They were instructed to fill each of the circles with something in 60 seconds but given no more instructions. We then discussed how people came up with different solutions, some used the circle as a drawing, some drew inside the circle, some wrote their name or other words, etc.
2. Following this, students were given a blank sheet with 20 circles and told to fill each circle with a note from the tetra scale, creating their own melody, and were asked to play them for the class.
3. Next class students each wrote their own lines, then got in groups of four to decide how to put their lines together to make a 16 note melody, all quarter notes.
4. As a class, students then filled out a 20 circles activity on the board as a class, this time using quarter notes, eighth notes, and quarter rests.

Group improvisation:

1. First time they improvised on the spot. Used the first four notes of the Bb major scale, any note they wanted, four quarter notes, all at the same time.
2. Expanded the length of the improvisation, added the rhythms used in the twenty circles activities, and prompted discussions on how changes in rhythm/dynamics/style could affect the emotion of the improvisation.
    a. Students also experimented with emotions using a prewritten rhythm, but improvising the melody using the first for notes of the Bb major scale while they played.
        i. We made a game out of it sometimes, where students would come up with an emotion and improvise for the class and the class would have to guess what emotion they were thinking of.
3. Group free improvisation: The parameters were that they could use any notes or rhythms they wanted that we had covered in class, but the class had to be trying to work together to communicate a picture or emotion. Students picked the emotion, then we improvised together.

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# An Analysis of Drill Teaching Methods Utilized by Marching Band Directors in the Mid-American Athletic Conference

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*The purpose of this study was to examine teaching methods used by collegiate marching band directors at schools within the Mid-American Conference (MAC). We surveyed 12 MAC marching band directors to gather information about what methods they used to teach drill to their college marching bands, where they acquired these methods, and which methods they included when teaching their marching band techniques courses. Our findings indicate that directors spent approximately 18 hours teaching a single college marching band show, distributed drill charts to their students primarily online in PDF format or through digital formats, including Ultimate DrillBook or DrillBook Next, and reported teaching procedures in which students used a variety of methods during the learning process. These processes varied among directors and included marching to counts, marching while vocalizing, standing and playing, and then playing and marching when first learning a set of drill. For the eight marching band directors who taught a marching band techniques course, four reported that students were afforded the opportunity to teach drill as part of the course. Implications for high school and college marching band directors and marching band techniques course instructors are discussed.*

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Courses in marching band methods and techniques are commonly found in the music curriculum at colleges and universities around the United States (NASM, 2020). During their undergraduate coursework, over 70% of surveyed high school marching band directors had the opportunity to participate in a course that included concepts and methodologies to be used with their marching bands (Legette, 1988; Williamson, 2009). These courses are sometimes a curricular requirement, but often are offered as elective courses for students who specifically wish to learn more about marching band pedagogy (Tracz, 1987). Marching band technique course instructors—who are often college marching band directors themselves—focus on a variety of topics related to effectively planning, teaching, and administering a marching band program. Consistent with all methods courses, the specific content of the marching band techniques course is left to the discretion of the institution (NASM, 2020).

Although marching band techniques courses exist within college instrumental music education curricula, there is limited research examining undergraduate music education students' preparation to lead marching bands. Most investigators have focused on a relatively broad view of what experiences and methods courses undergraduate students were provided during their coursework. For example, a survey of high school band directors by Caldwell (1976) determined that marching band techniques courses were not generally offered, and that participants supported the inclusion of a marching band methods course at the undergraduate level. Similarly, Tracz (1987) surveyed high school band directors and they indicated that they did not feel adequately prepared by their undergraduate music education programs regarding marching band organization and rehearsal techniques.

While this early research on the topic described the lack of preparation as felt by high school band directors, later research would describe the benefits of marching band methods courses as felt by high school directors. Legette (1988) found that undergraduate courses in marching band techniques had a positive impact and contributed to the success of beginning high school band directors. Techniques for charting drill (i.e., the process in which formations and movement are taught to the student) and show-design ideas are two concepts that were helpful for those enrolled in an undergraduate marching band techniques course (Ammann, 1989). A similar, state-specific investigation elucidated the importance of marching band techniques courses, indicating that respondents believed that marching band techniques courses should be a required component of instrumental music education curricula (Williamson, 2009). Findings from this body of research indicate the importance of and desire for the inclusion of marching band techniques courses in undergraduate instrumental music education curricula.

Although the benefits of such courses have been well established, much less is known about how marching band directors allocate rehearsal time teaching marching band drill to their students. How marching band directors teach drill formations and movements likely has an important effect on rehearsal efficiency, attainment of rehearsal objectives, and performance execution. Due to a lack of any previous empirical investigations involving this topic, textbooks on marching and drill techniques serve as the fundamental resource for learning about the pedagogy of drill teaching methods.

As marching band programs flourished and became common in high schools throughout the United States in the early twentieth century (Garty, 2003), University of Illinois Marching Band Director Mark Hindsley developed a textbook to assist high school band directors. This text covered a variety of topics, such as marching formations, commands, training programs, marching fundamentals, and other specialized concepts such as exercises, conditions of the field, and discipline (Hindsley, 1932). As marching band programs developed further, styles evolved and trends changed, and new books on instruction included similar topics that were updated for modernized styles and techniques (Binion, 1973; Butts, 1974; Gall, 1974; Hjelmervik & Berg, 1953; Marcouiller, 1958).

More recent marching band textbooks include *The System* (Smith, 2019) and *The Dynamic Marching Band* (Markworth, 2017). Marching band textbooks have often been used as required textbooks for marching band techniques courses at colleges and universities throughout the United States (Williamson, 2009).

One of the common topics covered within these marching band techniques method books is the process of teaching new drill formations and maneuvers (i.e., movements) to band members. These processes are not mutually exclusive and may be used by a marching band director in a variety of combinations. For example, it is important that each individual have a copy of the drill chart formation to visualize the construction of small and large units of maneuvers so they can learn segments of drill (Binion, 1973). A trend among authors of method books is to indicate that drill instruction be completed without music until formations are learned and executed at an acceptable level of success (Gall, 1974; Hindsley, 1932; Janzen, 1985). The pairing of music recordings along with learning drill is also recommended before musicians attempt to march drill while playing their instruments (Gall, 1974; Janzen, 1985; Smith, 2019). Furthermore, Smith (2019) wrote that "Drill rehearsals should be alternated with music rehearsals, putting emphasis on the perfection and memorization (if possible) of the music" (p. 106). Procedures for adding and combining drill segments are a key component to the successful teaching of new formations or maneuvers and should be used consistently by the director for best results.

Although many of these textbooks include anecdotal information from marching band directors and the textbook authors concerning many aspects of marching band instruction (Gall, 1974; Markworth, 2017; Smith, 2019), they do not include empirical findings regarding how drill instruction is best taught. Understanding the techniques and methods used by university marching band directors to teach drill could be helpful for secondary school directors who teach marching band because using similar techniques may increase efficiency in their rehearsals. In addition, knowing how collegiate directors gained their marching band drill teaching experience and how they use instructional strategies for teaching could prove beneficial for other university faculty who instruct undergraduate and graduate marching band techniques courses.

The purpose of this study was to examine teaching methods used by collegiate marching band directors at schools within the Mid-American Conference (MAC). Given that the primary author is a marching band staff member of a school in the MAC, we sought to acquire information about comparable institutions regarding how marching band teaching methods are utilized at each respective school. We posed the following research questions: (1) What methods do directors use to teach drill to their college marching band? (2) Where did the directors acquire these methods? (3) What methods, if any, do these collegiate marching band directors use during the marching band techniques course?

## Method

College marching band directors in the Mid-American Conference (MAC) were targeted for participation in this study. The first author consulted the MAC website (www.getsomemaction.com) to confirm that schools belonged to the conference during the 2020-2021 academic year. Schools were included only if they participated in the conference in the sport of football, where marching band activities take place. This search yielded 12 institutions. Using this information, we searched each institutional website to obtain email addresses for the individual listed as the director of marching or athletic bands. A total of 11 email addresses were obtained, with one additional web-based interface used to contact one athletic band director, resulting in 12 potential respondents.

### Survey Instrument

We used the web-based *Qualtrics* platform to create and disseminate the survey instrument. The questionnaire was divided into six sections: (1) time spent teaching drill (three items), (2) teaching drill segments (three items), (3) drill distribution (two items), (4) open response questions about rehearsal schedule and teaching methods (three items), (5) marching band techniques/methods (three items), and (6) demographics (seven items). Within each section, respondents were asked several types of questions (e.g., yes or no, open response) designed to elicit basic descriptive data about the processes they used to teach drill to students in their college marching bands. These questions were developed based on (a) the primary author's own experiences as a college marching band director, (b) observations of other directors' drill teaching strategies, and (c) information found in various marching band techniques textbooks.

To assess content validity, four collegiate marching band directors from a different athletic conference piloted the study and provided feedback on the questionnaire's content, clarity, ease of use, and approximate completion time. Based on this feedback, questions were added and revised within each of the survey's six section (e.g., inclusion of weekly rehearsal schedule, clarity of open response questions). Pilot participants reported that the survey took approximately 10 minutes to complete. After revision, the final survey contained 21 items.

An email message inviting all 12 MAC athletic band directors that contained the purpose of the study, Institutional Review Board information, and instructions for completion was sent. After two weeks of data collection, we sent a follow-up electronic notification designed to encourage full participation. Online collection continued for another two weeks after the reminder message was sent. All 12 individuals who held the title of Director of Athletic Bands completed the survey, which resulted in a 100% response rate.

## Respondents

Respondents ($N$ = 12; 10 males; 1 female; 1 did not report) had an average age of 43.58 ($SD$ = 9.51), with an average of 13.83 years ($SD$ = 8.50) of collegiate teaching experience, which ranged from 1 to 27 years. The respondents averaged 10.42 years ($SD$ = 5.02) of marching band participation, including experiences performing in high school marching band, collegiate marching band, and Drum Corps International. The student population of participating universities ranged from 16,000 to 32,000 students, with an average population of 20,333 students ($SD$ = 4811.60). As indicated by the directors, the size of their marching bands averaged 214 participants ($SD$ = 54.77) and ranged from 120 to 300 members. Of the twelve MAC marching bands, 8 directors (66.0%) identified their style of marching band as "contemporary," whereas 2 directors (17.0%) identified their style as "traditional/show" and 2 (17.0%) as "other/combination."

# Results

## Time Spent Teaching Drill

The first three sections of the survey included eight questions designed to answer the first research question, "What methods do directors use to teach drill to their college marching band?" Questions 1-3 related to the amount of time respondents spent routinely preparing and teaching marching band drill. In response to Question 1, "How many hours do you typically spend preparing an entire marching band show/performance?" respondents indicated an average of 17.66 hours ($SD$ = 9.59), with a minimum of 5 hours and a maximum of 40 hours. Question 2 asked, "How many hours do you typically spend teaching drill (i.e., first attempts that are focused on learning positions) for a single marching band selection (song)?" Respondents reported the time spent teaching drill ranged between 1 to 45 hours, with an average of 8.38 hours ($SD$ = 9.86) teaching new drill to a single song selection.

For Question 3, directors were asked to categorize their average rehearsals by percentage of time spent in four specific instructional areas. Respondents indicated, on average, spending the most rehearsal time on "Drill/Visual Rehearsal" ($M$ = 43.83%, $SD$ = 11.04), followed by "Music Rehearsal" ($M$ = 36.25%, $SD$ = 7.71) and "Ensemble Warm Up and Tuning" ($M$ = 11.17%, SD = 5.31). Directors indicated spending the least amount of rehearsal time on "Marching Fundamentals" ($M$ = 8.75%, $SD$ = 5.82).

## Drill Segments

Survey questions 4 through 6 gathered information about the average number of drill segments that the respondents were teaching routinely. Responses to Question 4, "How many sets of drill are typically included in a single marching band selection?," indicated that, on average, the number of sets (formations) in respondents' drill ranged from 2 to 30, with an average of 11.46 sets of drill ($SD$ = 8.54) per music selection.

Responses to Question 5, "When teaching drill, how many repetitions of a segment of drill (i.e., set to set) are typically completed before moving on to the next segment?," indicated that respondents completed a minimum of 0 repetitions and a maximum of 15 repetitions before moving on to the next segment, with an average of 4.08 (*SD* = 3.17) repetitions. In response to Question 6, "How many counts typically produce a segment of drill (i.e., set to set) for your marching band?," all respondents but one (92%) indicated that their average drill segment length was 16 counts. The sole remaining respondent indicated an average segment length of 8 counts.

**Drill Distribution**

The third section of the survey was designed to determine what method(s) respondents used to disseminate drill to their students. Responses to Question 7, "How do you distribute drill to your students?," indicated that ten respondents (83%) distributed PDFs digitally, seven (58%) used paper distribution, and five (42%) distributed drill through a mobile device application such as *Ultimate DrillBook* or *DrillBook Next*. Participants could choose all the responses that applied for Question 7, and eight respondents (66%) used some combination of these methods to distribute drill to their students.

In response to Question 8, "Do your students have access to a visual representation of the drill (i.e., animation from drill software or animation utilizing a mobile or tablet application) before the first rehearsal?," respondents indicated that they did offer animation to their students by indicating "Sometimes" (*n* = 7, 58%), "Yes" (*n* = 4, 33%), or "No" (*n* = 1; 8%).

**Open Response Questions About Marching Band Teaching Methods**

We collected open-response data from respondents regarding their rehearsal schedules, the process they utilized for teaching marching band drill in their programs, and the sources of their marching band pedagogy. Question 9, "Please detail your typical weekly rehearsal schedule," was designed to capture the types of rehearsal schedules that directors used within the conference. On average, respondents indicated that their marching band met for rehearsal 3.66 days per week (*SD* = 0.89), ranging from 3 to 5 days, for 112.70 minutes per rehearsal (*SD* = 24.62, range = 80 to 180 minutes).

Participants' responses to the question "Briefly describe the drill teaching process utilized by your marching band" were analyzed first by the primary author who assigned codes to each step of their drill teaching process, and then grouped these codes into broader categories of drill teaching procedures (Creswell, 2007). Upon completion of the coding process, the primary and secondary authors exchanged, discussed, and modified emergent categories until consensus was reached (Denzin & Lincoln, 2005). In order to "corroborate qualitative data" (Saldaña, 2016, p. 86), we used a descriptive coding process to transform the qualitative data into quantitative representations (Saldaña, 2016). Because we were interested in the frequency of directors' methods used in each step of teaching drill, we counted each individual step of teaching drill as described by

the participants. References to music rehearsal without drill involved were not included in the coding process, as we were specifically interested in the components they used when teaching drill. In total, respondents described one to three steps in their teaching process. Interrater reliability, using the formula [agreements ÷ total observations], was 88.23%, which exceeded the acceptability threshold of 80% proposed by Madsen and Madsen (2016).

We identified three different categories of drill teaching procedures, which are presented in order of frequency: Teaching Method 1 (march to counts/march to vocalization/stand and play/play and march); $n = 8$, 66%, Teaching Method 2 (march to counts/march to recording/play and march); $n = 2$, 17%, and Teaching Method 3 (march to counts/play and march); $n = 2$, 17%. Some examples of comments in each category included "After one or two repetitions with counts, we will sing parts while executing the movement" (Teaching Method 1), "After the band can march the drill to a particular song, we usually play the recording for the band to hear while marching through the drill" (Teaching Method 2), and "We primarily utilize metronome while teaching drill" (Teaching Method 3).

Open response Question 11, "Where or from whom did you learn the process or method that you use to teach drill during rehearsal?" resulted in four general responses. Among the twelve respondents, origins of methods or processes included personal experiences (75% of respondents, $n = 9$), mentors (67% of respondents, $n = 8$), colleagues (17% of respondents, $n = 2$), and textbooks (8% of respondents, $n = 1$).

### Inclusion of Drill Teaching Methods in Collegiate Marching Band Techniques Courses

Section 5 was designed to provide information regarding whether the respondents taught a course in marching band methods or techniques at their university and, if so, their inclusion of methods for drill teaching in their curriculum. In response to Question 12, "Do you teach a marching band methods or techniques course at your institution?," eight respondents (66%) indicated they taught a course in marching band methods, whereas four (33%) indicated they did not. Of the eight who responded affirmatively, all indicated that they covered drill teaching methods as part of their curriculum (Question 13). When asked "If your institution offers a marching band methods or techniques course, do your students experience teaching drill (i.e., a lab band or utilizing the institution's marching band) as a part of the course?," four (50%) indicated they did, whereas four (50%) indicated they did not.

## Discussion

The purpose of this study was to examine drill teaching methods used by collegiate marching band directors at schools within the Mid-American Conference (MAC), where they learned these methods, and whether these methods were taught to students enrolled in their marching band techniques course. In addition, we surveyed directors about how they organized their

rehearsal time, how they distributed drill to their students, and whether students in their marching band techniques courses were given experiences to teach drill themselves.

With regard to rehearsal time, respondents indicated they spent over 80 percent of their rehearsal time in "Drill/Visual Rehearsal" and "Music Rehearsal." This finding is consistent with the recommendations offered by two prominent and modern marching band techniques textbook authors (Markworth, 2017; Smith, 2019) who wrote that these two activities should comprise the majority of time spent during marching band rehearsals. Although these results may seem unsurprising, they do provide guidance to undergraduate students, in-service teachers, and other collegiate marching band directors about how experts in the discipline spend their rehearsal time. Researchers should consider examining more specifically how marching band directors allocate their rehearsal time throughout the course of an entire show or season. This information could prove helpful in creating short-term and long-term rehearsal and performance goals.

In the section of the questionnaire regarding drill distribution, respondents indicated that digital distribution of drill (such as PDF files) was the most frequent method of providing drill to their students. Although eight of the respondents (66%) indicated using some combination of methods, directors may be trending toward distributing drill charts digitally to students, including 58% of respondents who indicated they provided visual representation of drill (e.g., video from computer charting software) to students. These trends should be considered when developing curricula and objectives for marching band techniques courses, including how to create and distribute digital media such as PDF and video files effectively to marching band students, as digital distribution is an inexpensive and efficient method of providing this information to students. Future research involving the development of drill distribution methods, such as utilizing digital platforms and applications on mobile devices, may be important as these have the potential to improve rehearsal instruction and efficiency.

Based upon respondents' answers, we categorized three methods of drill teaching, the most popular of which (Teaching Method 1) included four segments: (1) march to counts, (2) march to vocalization, (3) stand and play, and (4) play and march. While other drill teaching methods were provided, eight of the 12 respondents (66%) used Teaching Method 1 when teaching new drill to their students. This teaching method is consistent with recommendations made by Smith (2019), who indicated that drill teaching and rehearsal methods should alternate marching drill with playing music, as well as the concept that drill formations should be learned without music before attempting to pair it with music (Gall, 1974; Hindsley, 1932; Janzen, 1985). As a result, university faculty charged with teaching marching band techniques courses and high school marching band directors may want to consider this as one of the standard methods for the drill teaching process.

Respondents attributed their methods and processes for teaching drill mostly to their own experiences (75%) and mentorship (67%). Although previous research has indicated that techniques learned for teaching drill in undergraduate

techniques courses were helpful for high school marching band directors (Ammann, 1989), the results of this current survey do not corroborate that finding at the collegiate level. However, our collegiate marching band director respondents may not rely solely on information found in undergraduate marching band textbooks and methods courses due to the amount of additional information they have learned over their careers (e.g., professional development workshops, graduate teaching experiences, colleagues). It is also possible that these directors did not experience marching band methods or techniques courses in their own degree programs. Further exploration of the methods used by high school directors, who could expand on their experiences in methods courses as well as their own professional experiences, may yield additional knowledge that can be utilized in undergraduate techniques courses.

The need for marching band techniques classes that include "real-world" teaching methods is well-documented (Ammann, 1989; Legette, 1988; Williamson, 2009). Only eight of the respondents (66%) responded that they personally taught a marching band techniques course at their institution. However, all of those who taught these courses indicated that methods for teaching drill are covered in their curriculum, supporting the need to include this valuable topic for undergraduate music education majors. This area should be considered for expansion and researchers might consider the application of drill teaching methods in a marching band setting when compared to rehearsal teaching methods taught and utilized in concert band settings.

A limitation of this study was that we surveyed only 12 individuals from a single mid-sized athletic conference. We made this decision thoughtfully, however, as we wanted to explore the drill teaching methods used by a sample of collegiate marching band directors from a specific geographic region. This was due to the primary author's involvement with an institution within the single athletic conference surveyed for this study. We acknowledge that the findings of this study may not be indicative of all collegiate marching band teachers, as all athletic conferences differ in size and structure. Nonetheless, we do believe they are representative of the drill teaching practices that many collegiate directors employ with their marching bands and use in their marching band method courses. Caution should be exercised when interpreting the generalizability of these results.

Further exploration of topics surrounding marching band pedagogy in the undergraduate curriculum seems warranted and important. Many first-year instrumental music teachers are introduced to their students, administrators, and communities through marching band performances at football games, parades, and competitions that occur in their first few weeks of employment. Given the high-profile and high-stakes nature of these events, not only for novice but experienced music educators, identifying ways to increase and maximize rehearsal efficiency and effectiveness will prove worthwhile for directors and students.

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# RESEARCH TO PRACTICE ARTICLES

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# What did you expect? Helping Students Make Musical Predictions that Guide Musical Development

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## What did you expect?

Teachers recognize the important role of practice in our students' development as musicians, but sometimes the definition of practice can be rather nebulous for our students. Some of our students might think, for example, "*I have my bassoon in my hands and I'm playing the music we're working on, so I'm practicing, right?*" Not necessarily. Success on any instrument requires the refinement of both perceptual and motor skills, and neither necessarily develops naturally as a result of devoting time playing the instrument (Duke, Simmons, & Cash, 2009).

Getting our students to structure their practice time so that they improve takes effort. At some point between the time they learn "French Folk Song" and the time they are ready to play a Mozart symphony, our students have to become independent artists that can function as their own teachers on a daily basis. Our students might begin their musical lives practicing repetitions of activities meticulously outlined in class, but eventually practice becomes a self-directed, independent activity with the goal of improving as efficiently and effectively as possible (Duke et al., 2009; McPherson, Osborne, Evans, & Miksza, 2017).

We often encourage our students to employ the same practice strategies that we all use: repetition, altered rhythms, varied bowings or articulations, metronomes, drones, etc. All of these tools can be effective, of course, but our students need to know when and how to use these tools to attain desired goals.

Improvement in the practice room requires that musicians perceive discrepancies between what they could or should be doing and what they are doing, which, of course, requires a clear mental image of what they are trying to do (Chaffin, Imreh, Lemieux, & Chen, 2003; Maidhof, 2013). Only then do practice strategies become meaningful and helpful.

Before a practice session even begins, learners' minds contain memories of information and skills. Some memories are advantageous in relation to the task at hand, whereas others are potentially detrimental. As learners' brains reorganize to accomplish a new skill or refine an old one, new memories are being stored around already existing memories.

When learners receive new input about the world, they compare and integrate what they see, hear, feel, smell, and taste, with what they expected to see, hear, feel, smell, and taste. If the experience matches their expectation, the memory that led to the prediction is strengthened. If the experience does not match the

expectations, learners experience a prediction error, which in many cases results in the updating and refinement of the memory (Maidhof, 2013).

Ever pick up a full glass of water and suddenly realize the glass was made of plastic instead of glass? Prediction error. That C# that was accidentally played really sharp on the violin that made you cringe a little bit? Prediction error. That same C# you were about to play really sharp but you realized it was the wrong trajectory as your finger was coming down, so you were able to correct it mid-air? Really useful, pre-prediction error.

When prediction errors occur, two things that were paired together (if I play a C# that feels like this to me, it matches the piano) can become re-paired (actually, if I play a C# that feel like this, I get a C# that's quite sharp) and can result in subsequent changes to behavior. These changes in the learned associations between motor actions and auditory outcomes are manifest as overt changes in the learner's level of skill (Maidhof, 2013). As we recognize discrepancies between the expected outcomes of our behavior and the actual outcomes of our behavior, we learn.

It makes sense, then, that learners who experience error making, and manage errors during self-directed active practice, perform better than do learners who avoid errors during the learning process (Huang, Shadmehr, & Diedrichsen, 2008; McPherson et al., 2017). Our students often think they are practicing so that they will eventually stop producing errors. *Perfect practice makes perfect, right*? However, as learners become more experienced, their expectations and the precision of their motor planning and their perceptual acuity become more refined (Hamilton & Duke, 2017). As musicians' skills improve, they are able to perceive different kinds of errors and to perceive them sooner. What varies among the performances of novices and experts is often more than simply the number of errors that occur, but how quickly adjustments are made that render errors imperceptible to observers (Chen, Woollacott, Pologe, & Moore, 2008; Kruse-Weber & Parncutt, 2014).

As teachers we have had the time and experience to refine our perceptions. We are capable of hearing, seeing, and feeling errors that our students may not be aware of. While our students may play through "French Folk Song" thinking, "Yeah- I've got this! I played every note that was printed in the music!" we're experiencing, "Yikes! There was no inflection in those phrases and the tone on the dotted half notes was nothing like the tone on the quarter notes."

For students to be successful, independent learners, they have to recognize and perceive errors at home the same way we perceive errors in the classroom. *Our* perceptions do not motivate our students to learn; our *students'* perceptions motivate them to learn. In the classroom, we have the opportunity to establish in our students a threshold of beautiful musical playing—a level of healthy posture, excellent intonation, exquisite tone, and expressive musicianship— and we can structure opportunities for students to practice comparing their own sound to an idealized image. Our students learn when they make these comparisons accurately, and in this way our classrooms serve as excellent environments to practice practicing.

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# Using Flow to Reduce Music Performance Anxiety

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One of the most common and the most serious problems of music performers is Music Performance Anxiety (MPA). The incidence of MPA for performers is quite high, and negative effects of MPA can affect musicians at any stage of their careers (Cohen & Bodner, 2018). Thus, ways to reduce or overcome MPA are worthy of study by music students and teachers.

Flow is "a state of consciousness where one becomes totally absorbed in what one is doing, to the exclusion of all other thoughts and emotions" (Jackson & Csikszentmihalyi, 1999, p.5). Flow may cross over from teachers to their students: teachers' flow experiences partly correlate with those of the students (Bakker, 2005, p. 35). This suggests that music teachers who are positive, motivated, and cheerful about performance in their music teaching play an important role in demonstrating and modeling. Teachers also play an important role by selecting suitable music for their students, which is appropriately challenging but not too difficult, to provide scaffolding opportunities (Bakker, 2005).

It has been found that when musicians experience flow, they are less likely to experience MPA—when flow was highest, MPA was lowest, and vice versa (Fullagar, Knight, & Sovern, 2013; Kirchner, Bloom, & Skutnick-Henley, 2008). Flow may predict long-term motivation and achievement in music performing, while MPA has been associated with negative responses related to music performing (Cohen & Bodner, 2018). Thus, flow has been referred to as a desirable state that may help reduce MPA (Wilson & Roland, 2002).

A recent quantitative study of 75 participants from different music majors (Li, 2019) showed that items of four dimensions of the *Activity Flow State Scale* (*AFSS*; Payne, Jackson, Noh, & Stine-Morrow, 2011) were most significantly and negatively correlated with specific items on the *Kenny Music Performance Anxiety Inventory-Revised* (*K-MPAI-R*; Kenny, 2009): higher scores for the flow dimensions were related to lower scores for the *K-MPAI-R* items. Thus, strategies from these four dimensions identified may be useful to music performers in reducing their MPA: 1) *Clear goals* towards both learning of music and for performance may help performers to reduce their depression or hopelessness; 2) *Unambiguous feedback*, including immediate teacher feedback before, during and after their own performance as well as feedback from themselves and others (audience, peers), may help performers to reduce their worry and dread and improve their controllability; 3) *Autotelic (intrinsic) experience*, such as selecting favorite pieces to perform so that they can enjoy the experience of music performance for its own sake, may help performers to reduce their anxiety; 4) Developing a *sense of control* using focused attention strategies, like

meditation and mindfulness, to quiet negative thoughts, focus attention on music, and achieve the "loss *of self-consciousness*" in their performance may help performers reduce negative pre- and post-performance thoughts (p. 84).

A theoretical framework was derived from a recent qualitative study (Li, 2019) and three steps for facilitating flow and reducing MPA were identified: preparation of performers, modeling by teachers, and construction of the flow experience. The preparation of performers includes keeping a Challenge/Skill Balance (CSB), deep learning of flow and MPA through music education classes, identifying individual MPA (causes, levels, and effects), and examining specific steps of flow in music performance. Teachers of performers should provide modeling to show their students what flow and MPA are and provide memory strategies for their students. Performers need to construct a flow experience by setting flow as a goal and experiencing a flow cycle which includes deliberate practice, self-relaxation, focused attention, and immediate feedback.

In summary, there are three main aspects to using flow to reduce MPA: 1) Music performers should have clear goals, unambiguous feedback, loss of self-consciousness, and autotelic experience during their music performance; 2) Music education teachers should have sufficient knowledge of flow and MPA, model positive performance behavior, select music that falls into CSB, and provide memory strategies for their students; 3) Music students should always have good preparation toward their performance, including keeping the CSB, studying flow and MPA theory, practicing different strategies from the literature to reduce their own MPA, and constructing flow experience by setting flow as a goal, including deliberate practice, self-relaxation, focused attention, and immediate feedback.

We all want our students' music performance experiences to be as successful and pleasurable as possible. Incorporating some of the research-based findings about using flow to help alleviate detrimental effects of performance anxiety into our classrooms and studios can assist students with achieving positive music performance experiences.

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# Getting Inside their Heads: Jazz Musicians' Thought Processes While Improvising

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It is intriguing and challenging to think about "getting into the head" of a musician to figure out what they are thinking and how they are making decisions about what they are performing. For classical music, most of the musical decisions are made by the musicians prior to the performance, so the performer likely can explain the thinking that went into their decisions as a result of their pre-performance preparation and rehearsal. In the case of improvised music, however, which requires spontaneous and real-time musical thinking and decision making while performing, there is an added challenge to learning about the thoughts that guided the player's performance. Fortunately, researcher Martin Norgaard found a way to investigate the "improvisational thinking" of expert and developing jazz musicians to help provide insights that are not only fascinating, but also directly applicable to pedagogical practice (Norgaard, 2011, 2017).

To capture the thoughts of professional jazz artists about their improvisations, Norgaard (2011) had seven instrumentalists each record a "blues in F major using melody of their choice, playing the melody first and then improvising a solo" (p. 113). They were accompanied by a recorded drum track at 212 beats per minute. As soon as they finished, Norgaard used a series of audio and transcription software applications so that he could display the notation along with the audio. Then, he interviewed each participant while they listened to the audio and viewed the notation, phrase by phrase, and provided commentary about the performance. Norgaard transcribed all of the interviews to analyze the data, looking for terms and ideas used and then organizing them into themes.

Norgaard identified two main processes, *sketch planning* and *evaluative monitoring*. In sketch planning, "one or more musical features of upcoming passages are conceived by the improviser before the passages' performance" (Norgaard, 2011, p. 116). Evaluative monitoring was the process of the players "monitoring and evaluating their own playing as they performed and using that information in subsequent decision making" (p. 116). There were also four general strategies identified that the performers used to make choices about what to play: 1) using material from an idea bank of known musical elements and models; 2) selecting pitches based on the harmonic structure; 3) focusing on the melodic features more linearly and not as much on the chord progression; 4) repeating material played earlier in the solo, the same as previously played or with modifications.

Based on his findings, Norgaard provided several implications for jazz instruction. He suggested that the work on different modes of thinking, including: "(1) a 'theory mode' that explores the idea bank and harmonic priority generative

strategies, with conscious attention focused on technical and theoretical concepts, and (2) a 'play mode' that focuses on planning and evaluative processes in addition to interaction with other students and teachers" (p. 123). Norgaard emphasized that students should be engaged in activities to experience and learn not only what accomplished improvisers *do*, but also how they *think*.

Norgaard also was interested in how younger instrumental jazz improvisers might approach and think about their solos, and how that would compare with the professionals' thinking. He completed another study with six students, aged 12-17, who were enrolled in a university-based after-school jazz program. These students each played a solo over a 12-bar blues recorded track with piano, bass and drums, and completed an interview similar to those completed by the professional musicians.

The analysis indicated that these younger performers reported using some thinking strategies that were similar to those used by the professionals in the earlier study, including drawing on idea banks, repeating material and monitoring and evaluating as they played. Norgaard also analyzed the responses of the more experienced improvisers as compared with the less experienced. He found that they planned more than did those less with experience, and were more likely to relate their improvisation to the underlying harmonic progression, as opposed to a focus on melodic line almost exclusively by the least experienced students.

Norgaard drew on this research to develop recommendations for teaching improvisation skills in large ensembles, which may be found in a very informative article published in the *Music Educators Journal* (March 2017). The article, titled "Developing Musical Creativity through Improvisation in the Large Performance Classroom," addresses improvisation in various styles in addition to jazz, and provides an annotated list of suggested pieces for choir, orchestra, and band. Norgaard also authored an article specific to improvisation on string instruments, published in the *American String Teacher* (May 2016). These articles provide excellent examples of ways that music education research can be used to directly inform and improve music education pedagogy and practice, and provide insights into Norgaards' thinking processes, in addition to those of his research participants.

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# Support Middle School Boys Through the Voice Change and they Will Continue to Support our Choral Programs

**Philip A. Woodmore**
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Adolescence presents many challenges for students navigating through middle school. Choir teachers comment on the lack of interest of boys in their choral programs and challenges of retaining the boys they do have (Koza, 1993). Boys do not stay in choir past elementary school for many reasons: voice change, social status, time constraints, and academic pressure, for example. However, I have found that our young boys who feel supported in their middle school choir programs will have the drive to consider sticking around throughout the voice change and even going on to sing through high school.

Janice Killian (1999) found that on average, boys' voices begin changing in seventh grade. However, more recent studies have shown that boy's voices begin changing in fourth and fifth grades and at a much more rapid pace (Fisher, 2010; White & White, 2001). With the five stages of the voice change that our young male singers experience during the middle school years, music educators must be informed about the changing voice to help guide our male singers to be successful in middle school choir.

## The Voice Change

A major problem in supporting changing voice students may be the boys' lack of knowledge of voice change issues. It is important to discuss this information with them. Teachers should not be afraid to talk about what is happening as boys' voices are changing and help them to feel comfortable being honest about what they are going through. Here is some helpful information to share with young male singers about their voice and the process they are going through during this time, which will allow them to be informed of the vocal changes they are experiencing: We all know that there are visible physical changes to the body during puberty but it may be less obvious that as the human body grows and matures so do the muscles and cartilage of the larynx. Thus, the singing voice also changes during this time in range, power and tone. The larynx grows at different rates and in different directions according to gender. The male larynx grows primarily in the front-to-back direction, leading to the angular projection of the thyroid cartilage, the Adam's apple, a visible indication of the impending voice change. The vocal folds grow at a rapid rate during puberty and a shift occurs from a boy soprano to new baritone during the five phases of the voice change (White & White, 2001).

**Support Boys Through Social and Emotional Issues**

Children are curious about the world around them, enthusiastic about learning, and eager to try new activities (White & White, 2001). White and White explained that in regards to music the child's attitude, family members, entertainment, and exposure to music at school influence preferences. With this in mind, young singers need to continually have positive reinforcement at school in the choir classroom. Choir needs to be relevant to them and what they experience on a daily basis not just 'quality choir literature' (Kennedy, 2002). With these students being at such an impressionable age they will be strongly influenced by many people in their lives, and if the music teacher is not among this group of positive influences, these students will shy away from the choir programs and move to places they feel more accepted and that are perceived as 'cool' by their circle of influence. Furthermore, it seems to be more difficult to get boys into choir in middle school because students begin to make elective choices rather than going to music class every day as in elementary school.

To reiterate, it is critical that music educators support our boys with the social and emotional challenges they face. Even if a young boy has a love for music, he will often agree with his peer group's opinions rather than sharing his own. Students who are getting ridiculed for their interest in music from family members and peers often shut down and slowly disconnect from music ensembles. But we can fix this problem! The choir teacher should have a strong presence in the school. Allowing all students and staff to see who they are and what a great choir teacher is about makes a statement to the naysayers in the school. In a study with a group of junior high boys, Kennedy (2002) found that one of the three motivating factors for all of the students was the teacher. "People don't care what you know until they know how much you care" is a quote often attributed to Theodore Roosevelt (http://www.theodorerooseveltcenter.org/). This advice should be the center of every middle school choral director's philosophy of teaching. Making connections with students will allow them to be comfortable talking about issues they face being in middle school and in the choir program.

It is important to make choir relevant! If your boys feel that being a part of choir is of great benefit to them as they mature through middle school, hopefully they will decide to continue enrolling in choir. According to the findings of one study of male adolescent singers, the boys "felt more engaged with choral singing when they realized that their vocal identity was a powerful tool for constructing their male gender identity" (Elorriaga, 2011, p. 318).

Finally, provide great opportunities for your boys such as choir festivals, choir trips, school performances, solo opportunities, and musical theatre opportunities. Having these opportunities will show your boys that choir is relevant and important to their musical growth.

**Support Boys Through Voice Change in the Classroom**

Once we have made our young males feel comfortable in choir, choir teachers need to be prepared to handle all of the many changes that these boys will go through vocally. The only way to tackle these challenges is to be informed about the voice change process. Four main researchers who focused on the voice change initially were John Cooksey, Irvin Cooper, Duncan McKenzie and Frederick Swanson. These authors have identified characteristics of the changing voice, developmental stages, comfortable singing ranges and strategies for working with changing voices. In addition to these researchers, who created the foundation for changing voice research, more contemporary scholars who have added to the body of research such as Janice Killian, Ryan Fisher, Patrick Freer and Mary Kennedy also have great insights into working with students through the voice change (see reference list for suggested resources).

One tool that might be useful in helping young males feel supported in the choir room is creating a private chart for each that tracks their development, and have them keep track of where they are in the voice change process. This is a visual reminder for boys of their progress and shows them your concern as they go through these changes.

Beyond boys charting their voice change and feeling important in the choral program, the final piece to this puzzle is making them feel successful in the music they are singing. Choral directors must find music that is in a comfortable range for their changing voice students and must be willing to do whatever it takes to make the students feel successful with their music. Sometimes this means rewriting a few parts so that all the boys in the different places in the voice change process will feel successful singing in class. Furthermore, the choir teacher's job is to be practical about the music we select. It is very likely that all the boys will not be able to sing an entire piece as written. Therefore, it is necessary to encourage cambiata singers to sing stronger through the higher parts of the song or maybe even sing alto, and the new baritones to support the lower sections of the song. There also may be singers who have unchanged voices in 7$^{th}$ and 8$^{th}$ grade and can sing in the same octave as the girls. The point is to make all of your boys successful regardless the phase they are in vocally. Crocker (2000) also suggested finding simple SATB arrangements for those boys who need to sing more in the tenor range and having the opportunity for the boys who sing everything an octave lower to explore a bass part. Another consideration for the choral director is to prepare warm-ups that the boys will be able to sing successfully. Research shows that young males are more successful on descending warm-ups that are in the middle of their range (White & White, 2001).

**Safety in Numbers**

Even with the best advice and many techniques to build strong male musicians during the changing voice years, it is always best if there is a community of singers for them to lean on during this transition. If you get boys

to sign up with a buddy or a group of friends they will usually work through this voice change together. Furthermore, creating a boys' choir in your program will allow for these boys to feel important and rise to the occasion of performance situations (Zemek, 2010). If your schedule doesn't allow for a boys' choir, at least have a boy's sectional rehearsal time for all the boys to get together and work on music without the girls from time to time during the year. Not only will this be a more productive use of rehearsal time, it will also give the boys a comfortable space to take risks with their singing. Finally, especially for female choir directors, make sure to let your middle school boys see other males who are successful musicians. Introduce your middle school boys to high school buddies they can ask questions and sing with, bring in male guest speakers to work with the boys or talk about singing techniques, invite other male choir teachers to come and work with your students, find male role models that your students can connect with who are in the industry. Hitting this challenge head on is the only approach to retaining your boys through the middle school years.

Every middle school choral program has its own unique set of challenges that cause students to not stay in choir. Unfortunately, it seems to be much harder to retain our young men than our young women. There are many factors that need to be in place for young boys to feel successful in choir, including parents, counselors, administration, other teachers, elementary school programs, and many more. But at the end of the day, we as music educators need to be well educated about the changing voice and be prepared with an informed process for guiding our young men through their voice change. We also need to be flexible to meet the needs of all students to ensure that each one feels important in the choral program. If your boys feel comfortable in your choral program there is a better chance they will stick around through middle school and continue singing in high school.

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# MISSOURI STUDENT ABSTRACTS

# Before the Singing: The Journey of an Artistic Director

**Cynthia A. Williams Phelps, Ph.D.**
**University of Missouri–Columbia**
**May 2020**
**Committee Chairperson: Dr. Wendy Sims**

**Abstract:**

Reflective practices and teacher leadership development can be meaningful and integral components of music teacher education. The purpose of this study was to examine the professional journey and reflective practices of an artistic director of a large, nonprofit community children's choir organization in the Midwestern United States. The conceptual framework for this case study with narrative techniques included two main areas of practice: reflective teaching (critically reflective teaching and reflective practitioner) and teacher leadership. The overarching research question asked: How does a successful children's choir director enact effective teacher leadership through reflective practices? The related sub-questions were as follows: 1) How does the participant's life history inform her vision for the organization? 2) What characterizes the participant's views of teacher leadership and creative work as artistic director? 3) What characterizes the participant's views of learning and teaching in the children's choir context?

Data collection included transcripts from three semi-structured interviews, a follow up interview, two rehearsal observation sequences with one video-stimulated recall iteration, field memos, and artifacts. I used a constant comparative method to examine the coded transcripts, memos, field notes, video observation logs, and artifacts. Trustworthiness was established through data triangulation, a follow-up interview, participant checking, and peer checking.

Three main themes emerged from the analysis: building a scaffold for reflective teacher leadership, artistic director as leader, and the intersection of reflective practitioner and teacher leader. Findings suggested that the participant's well-defined philosophies of leadership and teaching, reflective rehearsal pedagogy, and pedagogical thoughtfulness had a significant, positive impact on the high quality, experiential opportunities provided to the choristers and the choir organization as a whole.

# An Examination of Democratic Educational Processes Within Concert Band Rehearsals

**Alec D. Scherer, Ph.D.**
**University of Missouri–Columbia**
**May 2020**
**Committee Chairperson: Dr. Brian Silvey**

**Abstract:**

This dissertation consists of three projects that I designed to examine high school band directors' and collegiate musicians' experiences and perceptions of democratic educational processes within concert band rehearsals. The first investigation is a review of literature about democratic educational principles and their application in non-music and music classrooms. The second investigation is a phenomenological study of collegiate musicians' lived experiences with democratic rehearsal procedures in a concert band setting. Emergent themes included (a) the value of multiple perspectives, (b) ownership and musical agency, (c) engagement, (d) the ability to provide feedback, and (e) concerns with the amount of rehearsal time. The third investigation was a survey study of high school band directors' attitudes toward democratic rehearsal procedures, self-reported use in a typical rehearsal cycle, and perceived disadvantages and advantages. Results indicated that respondents believed several democratic rehearsal procedures were important for their students to experience; however, the frequency of their application was inconsistent. Taken together, results from these three projects indicated that democratic educational principles may be beneficial for students and teachers by providing opportunities for students to (a) actively engage in their learning, (b) exercise their agency, (c) work collaboratively, and (d) develop skills related to musical independence.

# *Antigone In Ferguson*: The Experience of Seven Members of the Democratic Chorus in a Social Justice Production

**Philip A. Woodmore, Ph.D.**
**University of Missouri–Columbia**
**May 2020**
**Committee Chairperson: Dr. Wendy Sims**

**Abstract:**

The purpose of this phenomenological study was to investigate the experiences of seven of the auditioned chorus members in the five-week run of *Antigone in Ferguson* at the Off-Broadway theater, Harlem Stage in Harlem, New York in the Fall of 2018, through the lens of the theory of transformation (Cohen, 2007a). *Antigone in Ferguson,* an original musical production based on the ancient Greek drama *Antigone* (Sophocles, ca. 441 B.C.E./2016), was created in response to the young Black man in Ferguson, Missouri, who was killed by a police officer and whose body was left on the street for over four hours. The performance includes four actors, a democratic choir comprising singers representing various professions including police officers, and choirs from the community. After each performance, facilitators mediate a discussion with the audience members to address the social justice issues raised during the performance.

Seven chorus members served as participants in this study, completing all requirements including a focus group session, pre-interview questionnaire, semi-structured individual interview, blog about their experience throughout the production, and final reflection. Cohen's (2007a) theory of transformation, based on research about prison choirs, served as a framework for this research and the data analysis. The theory states that the complex relationships through the sung texts, the choir's social and cultural contexts, interactions with audience members, and enhanced self-perception of the performers afford the potential for positive transformational change in the performer (Cohen, 2007a, 2008).

Findings suggest that the transformative power of music was displayed in the seven participants' responses to their experiences as chorus members in this production. Based on their spoken and written statements, all seven participants indicated that positive change occurred related to the music and the processes involved with putting on this show, including awareness and attitudes toward social justice issues and enhanced self-perceptions.

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