Task Difficulty, Practice Techniques, and Confidence in Adult Concert Bands

Debbie Rohwer
University of North Texas

Background

Studies have documented the musical and social benefits of group music making for older musicians (Lehmberg & Fung, 2010). Understanding and learning to avoid the confounding variables to musical participation and growth may help make older adult music settings more enjoyable and productive. One factor that may inhibit, or conversely, increase learning is how participants feel about their abilities when participating in musical ensembles.

A potential challenge with measuring participants’ feelings about their abilities is the terminology used in the research literature. Self-esteem, self-efficacy, self-concept, self-evaluation, confidence, and attitude have been used to address participants’ beliefs about themselves, with definitions varying across these terms. There are also measurement challenges with using self-efficacy assessments; as Dunning, Heath, and Suls (2004) noted, skill and self-assessment measures tend to have only modest relationships due to individuals overestimating their skill levels and confidence in achieving a goal.

Indeed, positive feelings of efficacy can be found in many studies of adults. Kruse’s (2012) study of self-esteem of adults in community music settings documented participants’ positive feelings about music participation, interest, skill, and longevity. In other fields, Grembowski et al. (1993) found that older adults who had high self-efficacy also had fewer health risks. Denissen, Zarrett, and Eccles (2007) found that interest and self-efficacy played an important and positive role in learning situations for school-age learners.

In terms of age, there has been greater diversity of findings for self-efficacy, possibly due to term definition variability or diversity of content areas in the research. Kruse (2012) documented a significantly lower mean of self-efficacy in the oldest adults in his study (ages 62–89) on a general music self-esteem scale than was noted for 49–61 year olds or 19–48 year olds.
Conversely, Demo (1992) found that self-evaluation became more positive with age, but may have periods of fluctuation, noting that situational instability may lead to changes in self-concept. Other studies have documented a curvilinear path with self-efficacy increasing during childhood, leveling off during the middle years, and declining during later years (Gurin & Brim, 1984; Woodward & Wallston, 1987). Lachman (1985), however, found no decline in the oldest participants, with adults aged 60 and over actually having an increase in efficacy.

Past learning, achievement, and the ability to problem solve in new scenarios may also be linked to feelings of self-efficacy. Hammond (2004) found that learning was beneficial and enjoyable to adult participants, but only if the tasks matched the skill levels of the learners. Schafer and Shippee (2010) report that stress produced increases in so-called “subjective” age, or age identity, especially when the participants felt that they had limited resources to handle problems. Lane and Talbert (2014) found that adult musicians possessed very strong awareness of their own musical competencies, and generally assumed a self-deprecating view of their abilities. Blanchard-Fields (2007) noted that due to greater life experience, adults used a larger number of problem solving techniques than children, however Rohwer (2005) found that adults used relatively few practice techniques in their musical practice, as was also found with children (Rohwer & Polk, 2006).

What techniques adult musicians use to combat challenges may also be an important variable in the improvement process. Kruse (2012) constructed a general self-esteem scale for adults in community music settings, but it would be valuable to have an assessment of context-specific challenges faced when playing music, including the techniques adults use to solve their musical problems. While Rohwer (2005) documented that the adults in her study often practiced with repetition as the most common technique, it may be useful to ask adult musicians, over time, how they are practicing and whether they perceive that their practice is leading to improvements.

Becker (2004) documented the one-minute paper as a pedagogical technique that has empirical evidence for improving learning, and it’s use has been supported by the pragmatic
application of the one-minute paper in instructional environments (Chizmar & Ostrosky, 1998; Drabick, Weisberg, Luci, & Bubier, 2007; Harwood, 1996; Higgins, Lauzon, Yew, Bratseth, & Morley, 2009; Kloss, 1993; Ludwig, 1995; Orr, 2005; Rohwer, Coffman, & Raiber, 2012; Stead, 2005; Steele, 1995; Wilson, 1986). In a study by Rohwer, Raiber, and Coffman (2012), the one-minute paper was used to gather information about adult musicians’ perceptions concerning important and frustrating aspects in instrumental rehearsals. The researchers found that musical, human, and environmental issues were experienced as both important and frustrating aspects in rehearsals, and they conclude that conductors can use the one-minute paper as a mechanism to understand the context of member frustrations in order to address these strategically in rehearsals.

The purpose of the current study was to describe adult band musicians’ perceptions of task difficulty, use of practice techniques, and confidence to learn using the one-minute paper in an adult concert band setting.

Method

The participants in the current study (N = 83) were members of two New Horizons bands in two states (Texas, n = 50; South Carolina, n = 33). The members in band one were males (n = 30) and females (n = 20), ranging in age from 41 to 82 (M = 64.74, SD = 9.35), who played woodwind (n = 29), brass (n = 18) and percussion instruments (n = 3), and represented Caucasian (n = 48), and Hispanic (n = 2) ethnicities. Band 2 membership included males (n = 16) and females (n = 17) ranging in age from 50 to 82 (M = 66.12, SD = 8.68). Distribution of instruments included woodwind (n = 15) and brass (n = 18); there were no percussionists. All members in Band 2 were of Caucasian background. While there were 83 band members at the time of the study, the respondent sample sizes were smaller than this number due to absences or other contextual issues across the sessions.

The music rehearsed for the purposes of this study was Irish Suite for Band by Stan Applebaum (1978). The piece had three movements--Fisher Boat’s Home, Nighttime, and The Festival--and had enough technical challenges that both bands were able to progress across the
time of the study without mastery happening too early in the semester. The first and third movements were in a fast tempo (6/8 meter, conducted in two) and the middle movement was slow (6/8 meter, conducted in six). The key centers across the movements were F, C, D, and E-flat major, and G minor. Assessment of the difficulty of the piece has varied across publications, ranging from a grade three (Miles, 1998) to a grade five (South Carolina Band Directors Association, 2014).

After rehearsing the music, members of both bands used a paper-pencil assessment to answer three open-ended questions: (a) “What was the most difficult aspect of the piece of music we just rehearsed?” (b) “What practice techniques will you use to approach the learning of this piece of music?” and (c) “How confident are you in your ability to learn how to perform this piece of music at a high level?” These three questions were asked in the second week of the semester, and again in the seventh week of the semester. In the fourteenth week of the semester, a culminating set of reflection questions was asked: (a) “What is still difficult in the piece of music we will soon be performing?” (b) “In hindsight, how well do you think your practice techniques worked in preparing this piece for performance?” and (c) “How confident are you in your ability to perform this piece of music at a high level?” Three administrations of the one-minute paper procedure were used instead of the four administrations documented in Rohwer, Coffman, and Raiber (2012) due to their conclusion that quality and quantity of responses decreases with later administrations, and Stead’s (2005) concern with the possible overuse of this evaluation technique.

Analyses of the open-ended responses were completed through coding of themes for the three questions (difficulty, techniques, and confidence) across the three administrations. Because of the following issues, names were not placed on the one-minute paper responses that were turned in: (a) the one-minute paper feedback was being used as an instructional technique endemic to the setting in addition to its research purposes (as approved by the Institutional Review Board); (b) past research has documented the usefulness of anonymous responses to the one-minute paper technique in class settings (Chizmar & Ostrosky, 1998; Drabick et al., 2007;
Harwood, 1996; Higgins et al., 2009; Kloss, 1993; Ludwig, 1995; Orr, 2005; Rohwer, Coffman, & Raiber, 2012; Steele, 1995; Wilson, 1986); and (c) listing names would have caused confidentiality issues that may have led to the respondents providing incomplete or softened responses to their conductors who were also the researchers in the study. Because of these issues, responses could not be tracked for individuals across the three administrations. Instead, general trends across the participants over the three administrations were analyzed. Extensiveness of themes was documented through frequency counts and percentages, and additional support within the themes was provided through respondent quotations.

The administration process and type of short question format were confirmed for content validity based on past one-minute related literature, both in and out of music. The wording of the three questions was assessed for clarity with three band members in a different adult band. Two co-researchers (a graduate student and a music education faculty member at a separate institution from the authors) confirmed the themes and codings for consistency.

**Results**

A total of 75 participants (43 from Band 1, 32 from Band 2) responded on the first administration of the one-minute paper. On administration two, 59 band members responded (34 from Band 1, 25 from Band 2), and on administration three, a total of 49 participants responded (31 from Band 1, 18 from Band 2).

**Band 1**

At all three stages, the most common difficulty that respondents noted was rhythm/meter (55 total citations: 21 in administration one, 13 in administration two, and 11 in administration three). As two respondents stated:

“I need to go Google 6/8 so I can play it. That is new to me.”

“I am having trouble internalizing how 6/8 can be in two and also in 6. That blows my mind. I just don’t know when to play and when not to and how much notes count for.”
The difficulty of rests was documented in each administration (15 total citations: 6 in administration one, 5 in administration two, and 4 in administration three). The difficulty of tempo was documented in the first two administrations (19 total citations: 8 in administration one and 11 in administration two). In administration two and three, band 1 members noted a unique difficulty component; instead of personal difficulties, some participants noted group difficulties, including cohesiveness \( (n = 7) \), blend \( (n = 4) \), and melodic handoffs \( (n = 4) \). As two participants stated: “As a group we need to make sure the transitions between the instrument groupings on the melody part go smoothly,” and, “Some people are starting and stopping at different times. It makes us sound sloppy.”

In the final administration, two additional categories emerged: no difficulties \( (n = 5) \) and the listing of specific measures that were difficult \( (n = 4) \).

The most common practice techniques that participants documented across the first two, one-minute paper administrations were audio/visual, such as listening to a recording or watching a YouTube video of a group performing the piece (24 total citations: 13 in administration one and 11 in administration two). As two participants stated: “I like to listen to a recording or video of the piece and then practice difficult parts. I do this everyday,” and, “I practice along with a band on the internet.”

The second most common practice technique was varying the tempo (20 total citations: 12 in administration one and 8 in administration two), strategically woodshedding difficult measures (15 total citations: 8 in administration one and 7 in administration two), using a metronome to practice hard patterns (10 total citations: 6 in administration one and 4 in administration two), and counting rhythms (10 total citations: 6 in administration one and 4 in administration two). Gestalt techniques of repetition \( (n = 7) \) and practice in general \( (n = 6) \) were documented in the first administration only.

At the third administration, participants rated how well they thought their practice techniques worked, with 22 stating that the techniques worked well, 5 stating they had moderate
improvement, and 2 stating that they had made little improvement. Some participants discussed barriers to their improvement:

“My techniques were good. I just needed to practice more and more regularly.”

“I needed to do much more personal practice.”

“My practice didn’t go as well as I liked. I needed to use the metronome more.”

“My improvements were too slow! I never attained my goal.”

“I didn’t practice at home. I love being in band, but I’m not a good practicer.”

Overall, the participants documented high confidence in their ability to learn to perform the piece of music at a high level (74 out of 108 total responses, 69%). Perceptions of high confidence remained fairly consistent across the three administrations (administration 1: 29 out of 43 responses or 67%; administration 2: 24 out of 34 responses or 71%; and administration 3: 21 out of 31 responses or 68%). As one participant stated: “I am very confident. I can do it!!!!”

For those who documented the lowest confidence, their response patterns for difficulties and practice techniques had similar low confidence trends. Two low confidence participants stated the following: “I don't know how to respond about difficulties. It is all very difficult,” and “I can’t find myself in the music. I get lost and I don’t know what to do.” And in answer to what practice techniques they would use to approach the learning of the piece, the same low confidence participants stated: “Slapping the side of my head,” and “I have no idea: Practice?”

**Band 2**

Similarly to Band 1, participants in Band 2 most frequently cited rhythm/meter as the most difficult element of the music rehearsed (35 total citations: 16 on administration one, 11 on administration two, and 8 on administration three). Additionally, participants cited elements of pitch accuracy (17 citations total: 9 for administration one, 6 for administration two, and 1 for administration three) and key signature (16 total: 7 for administration one, 1 for administration two, 8 for administration three), across all administrations. Across the first two administrations, participants cited the element of rests (11 citations total: 6 for administration one and 5 for administration two), and tempo (8 citations total: 3 for administration one and 5 for administration two).
administration two). Additional elements identified in administration 1 that received only 1 citation included expression, dynamics, and balance. Participants cited two elements unique to administration 2, range (2 citations) and phrasing (1 citation). One citation unique to administration 2 described elements in relation to musical preference: “The whole first movement, rhythm, notes – it lacks melody or sense to me and I don’t enjoy playing it. I hope we don’t play another one like this again. I love the second movement, the phrasing and dynamics.”

A set of responses from Band 2 that was noticeably different from Band 1 included a general topic of ‘timing’, which received multiple citations across all three administrations (12 total: 5 for administration one, 5 for administration two, 2 for administration three). From the responses given, it was not clear exactly what was intended; for example, on administration four of the five participants who responded wrote only the single word ‘timing’.

Whereas Band 1 participants identified audio/visual aids as the most common practice technique, Band 2 participants identified repetition as most common (21 citations out of 64 total, 33%; 11 citations out of 28, 39%, for administration one; 10 out of 37, 27% for administration two). Chunking (or ‘breaking things down’) received the next most citations (19 citations out of 64 total, 30%; 12 citations out of 28, 43%, for administration one; 7 out of 37, 19% for administration two). Practice with a metronome was identified in 13 citations (out of 64 total, 20%; 5 citations out of 28, 18%, for administration one; 4 out 37, 11% for administration two). Other techniques identified included playing long tones (7 citations out of 64 total, 11%; 1 citation out of 28, 4%, for administration one; 6 out of 37, 16% for administration two). Techniques cited only one time included breathing and practicing scales. One participant may have had the most honest response by simply commenting, “Pray!”

All but one participant (17 of 18) in Band 2 indicated that they felt that their practice techniques were successful. Examples of comments from these individuals include, “Repetition at home - very effective. ‘Practice makes perfect,’” and “Yes. Metronome, clapping, really helped me get the beat.” The lone responder who felt that their practice techniques were not successful commented, “Tried it over and over. Never got to quarter note equals 60.”
Half of the participants (9 of 18) indicated that they would do nothing different in their future practice. Among those who stated that they would change their practice, 7 indicated that they would simply practice more, 1 indicated they would use a metronome more regularly, and 1 indicated that they would use audio/visual aids (specifically YouTube) to help them learn.

Like those of Band 1, Band 2 participants described high levels of confidence in their ability to perform the music at a high level (65 out of 74 total responses, 88%); and this confidence seemed consistent across all three administrations of the one-minute paper (28 out of 32, 88% for administration one; 22 out of 25, 88% for administration two; 15 out of 17, 88%, for administration three). Individuals who expressed less than very high or high levels of confidence tended to be somewhat self-deprecating in a humorous way, as evidenced by this comment: “Not confident. In the history of human trombone honking, maybe with work I’ll get it.”

Conclusion

Participants in this study identified elements of rhythm and meter as difficult throughout the rehearsal process, reflecting trends reported in previous research (Lane & Talbert, 2014). It should be qualified that the perceived difficulty of rhythm and meter may have been specific to the music that was rehearsed during this study, and therefore, potentially not generalizable to less rhythmically complex music or to bands of different skill levels. The finding of rhythm and meter difficulty suggests that directors may want to sequence this instructional component strategically, using a variety of practice techniques and instructional approaches. One example may be for the director to identify potentially difficult or problematic rhythmic material from the music prior to distributing the selected piece, then develop activities that would allow the musicians to engage with the difficult material in other contexts (e.g., call and response, isolated exercises). This process may help facilitate more efficient learning once the actual sheet music is distributed.

In general, responses from participants in the current study indicated that they had very few practice techniques at their disposal. Similar trends have also been reported in previous
research (Rohwer, 2005; 2006; Lane & Talbert, 2014). The need for specific practice techniques is a key part of self-regulated learning (Lane & Talbert, 2014) and developing skills that lead to musical independence. Therefore, it seems important for future research efforts to investigate ways in which adult musicians can learn specific practice techniques and then be provided opportunities to work with the techniques and identify those that they perceive as most effective in a variety of scenarios. A first step may be to model options for practicing difficult rhythms during the band rehearsal, then the musicians could work with the demonstrated techniques on their own, and finally the musicians could discuss the various options with the director as a way to compare the contextualized techniques.

The trend of progressing from personal musical difficulties (such as notes, rhythm, and articulation) to group difficulties (such as balance, blend, and chordal intonation) across the rehearsals was documented in Band 1. This may have occurred because of the specific rehearsal format of Band 1’s early rehearsals highlighting basic technical issues and later rehearsals moving to more gestalt group issues; the components that were rehearsed most often, then, may have been cited as the participants’ own perceived difficulties during those times in the rehearsals. This may be a message to directors that what is valued as important in rehearsal may be what the adult participants deem as important enough to practice at home. Directors may be able to reinforce important musical concepts by planning lessons that address the issues in a variety of places in the music being rehearsed, such as pinpointing dynamics associated with the important melodic lines across all of the pieces that the band is playing. In that way, the reinforced concept becomes memorable and potentially transferrable to the process of practice when the musicians are at home.

The use of the term timing, prominent in comments from Band 2, deserves attention. In a previous study of musical learning processes demonstrated by adult amateur musicians in solo settings, Lane and Talbert (2014) found that participants sometimes had difficulty in describing elements of music, especially in relation to the description of perceived errors during performance. In the context of the current study, it is difficult to determine what exactly the
participants were referring to; this may be in part to due to difference in data collection method. The previous study involved one-on-one individual interviews with no time limits as opposed to the one-minute paper method used in the current study.

This finding also highlights the need for development of appropriate vocabulary within music learning contexts. This seems especially important for adult musicians, who may have more firm conceptions and more consistent interpretations of word meanings than young learners might have. Differences or lack of options in word choice, context, and application can confound the learning process; for example, in the context of this study, the use of the word timing may have been interpreted and used differently both between individual participants and between musician and director. Issues of contextual vocabulary development within the learning environment should be examined in future research. In addition, it would be valuable for directors of adult bands to purposefully introduce musical concept vocabulary that could be used and understood consistently by all musicians in the rehearsal context.

Audio/visual tools such as recordings and YouTube were common rehearsal techniques for Band 1, and therefore may be useful as a possible pragmatic practice technique for some adult band members to try. Band 2’s most commonly used technique was repetition, as has also been cited in past research (Rohwer, 2005). The different techniques used may be due to rehearsal modeling by the director, or practicing by different sections within the bands, or may have been developed by band members on their own. Band members may need access to a great number of practice techniques to approach musical challenges, and they may need the practice at using techniques in appropriate ways. It may be useful for band sections (e.g., trumpets, clarinets) to have sectional practice sessions where members can brainstorm and try out practice strategies to approach musical challenges.

Most of the participants in the current study reported high confidence to learn the music, as was also found by Kruse (2012). It should be noted that confidence appeared to remain fairly steady across administrations, which may be more of a personality or self-efficacy issue than an increase of competence or comfort. While those participants with high confidence may have
been well matched to the musical challenges found in the music, directors may need to weigh how challenging is too challenging for a group of adult musicians, and whether difficulty can be moderated through greater learning about how to error detect and practice well.

Low confidence comments that lacked reflective specificity on how to improve were noted in both bands. Since the one-minute papers were anonymous, it was impossible to track the low confidence responses across the administrations, therefore it is difficult to determine if any of the low confidence comments from the first administration became more confident in later administrations or not; specifically tracking low confidence adult musicians in their musical progress may be a beneficial future study to assist this subgroup.

Low confidence musicians may need the most help if they have trouble determining what their specific musical difficulties are and how to determine what the most appropriate practice techniques to use would be. As reported by Rohwer (2005), there may have been older adults in the current study who lacked a musical feedback loop so it was difficult for them to know if what they were playing was correct or not. The one-minute paper (using names to track responses) may be a viable way to find these individuals, through their statements about being lost or through their self-deprecating comments. If this low confidence trend is noted, then the director could model error detection, reflection, and problem solving in one-on-one sessions. Undergraduate students from area universities may also be able to help by providing this one-on-one personal connection with the low confidence musicians.

Finally, as noted by Rohwer, Coffman, and Raiber (2012), the one-minute paper appears to be a useful and efficient means to gather descriptive information from adult band members. It should be noted that one-minute paper participation diminished on each subsequent administration. While the numbers and percentages of comments decreased across administrations for difficulties, it is unclear whether participants may have perceived an increase in skill level across the time of the study that made these difficulties seem less problematic, or whether they simply tired of responding to the prompt. Directors who wish to use the one-minute paper should carefully weigh frequency of use based on the needs and
desires of their groups.

**Keywords**

adult concert bands, confidence, practice techniques, task difficulty

**Address for correspondence**

Dr. Debbie Rohwer, College of Music, University of North Texas, 1155 Union Circle #311367, Denton, TX 76203; Email: debbie.rohwer@unt.edu

**References**


