Rebuilding the Pyramid [of Sound]: Shifting Ensemble Pedagogical Approaches

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Olivia Remak graduated summa cum laude from the University of Memphis in December 2023 with majors in Instrumental Music Education and Flute Performance and a minor in Business Finance. She graduated as student marshal of the College of Communication and Fine Arts and earned University Honors with Thesis designations. Throughout her time at the University of Memphis, Olivia has been an active member within the School of Music, serving as both section leader and drum major during her four years in the Mighty Sound of the South and performing in both the university wind ensemble and orchestra. Outside of the university, Olivia has been an active educator, teaching both privately and within school districts in the Memphis area. This combination of performance and education experiences led Olivia to partner with Professor Zack Corpus through the Helen Hardin Honors Summer Research Fellowship to research and improve pedagogical impact on the performance of students. Olivia plans to pursue both a Master’s and Doctorate in Flute Performance with future career goals of winning an audition or becoming a professor of flute at a university.
Olivia Remak
Rebuilding the Pyramid [of Sound]: Shifting Ensemble Pedagogical Approaches

Faculty Sponsor
Zack Corpus
Abstract

Individual achievement is often overlooked by certain pedagogical practices within ensemble settings. Directors’ application of methods that do not directly benefit individual performers may result in students who are following performance practices not well suited to their specific instrument. Common band pedagogical practices, including but not limited to approaches to ensemble intonation, balance and blend, and aural examples were analyzed in the context of improving individual achievement within the ensemble. The researcher contacted high school and collegiate band directors regarding their personal pedagogical practices and beliefs within their own program. Director responses, in conjunction with the literature analysis, demonstrate that a mindset shift towards a learner-centered approach to pedagogy is vital in the face of shifting classroom environments and a greater need for individual achievement.
Introduction

Established band pedagogy, such as the McBeth pyramid of sound or a Bb scale in rounds, often overlooks the varied needs of each instrument family within the ensemble.\(^1\) Factors such as the number of students in a program, uneven instrumentation, geographical location, district and school funding, age of the program, external support, and other external factors mean that there is not one “correct” pedagogical approach to improving any given program. However, there are certain pedagogical practices which may provide greater impact to certain programs compared to others, and would better benefit certain individuals.\(^2\) In this study, the researcher will explore commonly used secondary band pedagogical practices and how this pedagogy might differ in efficacy between instrument families and individual students.

History

Prior to the introduction of bands in American schools in the 19\(^{th}\) century, instrumental music education was practically non-existent outside of the military or private study. Entering into the early 20\(^{th}\) century, more and more school bands were founded, and the 1920s in particular began to see an explosion of the number of school programs and new pedagogy being introduced to support these programs. Beginning in 1920, there were 88 school band programs. This number rose to an estimated 15,000 to 25,000 by 1929, with a further increase to over 50,000 band programs by 1941.\(^3\) This exponential increase in school band programs, coupled with a lack of standardized curriculum, meant band programs and the pedagogy applied to them were largely developed by the director of the program, thus creating significant differences in pedagogical approaches.\(^4\)

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The field of music education has continued to expand into the 21st century, with the 2019 Arts Education Status report detailing that 92% of students in schools have access to some form of music education. This expansion elicits a need for an upgraded mindset to better suit the varied performers found in each ensemble. Certain pedagogical ideas remain in regard to approaching how to lead an ensemble, even as pedagogical philosophies began to shift away from the militaristic background of music education. There exists a “teacher-centered” approach to pedagogy that has been present since the foundation of the school band as we know it. In this approach to band directing, the conductor’s word is law, with the students simply being tasked with following it in order to achieve the director’s ideal band sound.

New philosophies began to emerge as music education transitioned into the 21st century, deviating from a “teacher-centered” approach to pedagogy towards a more “learner-centered” approach to pedagogy. The pedagogical shift from a teacher-centered approach to a learner-centered approach to pedagogy brings several benefits. Band pedagogue David Elliott promoted the development of individual musicians through guided experiential learning as a way to increase overall ensemble achievement through increasing the skills of the individuals within the ensemble. A learner-centered approach encourages students to become more involved in the subject of study, ergo garnering greater educational benefits through an increased willingness to learn and a more welcoming and encouraging educational environment. Additionally, a learner-centered approach allows students to develop critical thinking skills and other necessary skill applications to help them develop into independent learners. With this approach to learning, the director’s job shifts from a role of dictating what the students must learn towards a role of guiding young musicians.

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through the process of learning and growing with their craft. Individual achievement and support leads to improved achievement in the program as a whole. When ensembles are individually efficient at what they do, their ability to master more advanced musical concepts can have a greater impact on the overall ensemble performance. A common example would be that an increased attention to improving individual players’ intonation in the flute section would lead to a more supported flute sound.

As a director, it might be easy to lose sight of the individuals that make up the band when the achievements of the whole ensemble are the end goal: achieving a certain score at a concert festival, performing at the spring concert, ensuring a quality ensemble throughout the semester. In order to provide mentorship, the director of an ensemble must have a detailed and current knowledge of each instrument in their ensemble, in addition to the instrument specific workings and tendencies characteristic of the various instrument families and the individual instruments within those families. The success of an ensemble relies on these details, as well as the knowledge and application of the students on their own instruments, with guidance from the director. It is important for ensemble pedagogy to be impacted and shaped by the needs of the individuals in order for a director to best support them as their skills and the level of the ensemble progresses. A pedagogic shift with an increased focus on individual achievement is likely a more pedagogically sound way of influencing and affecting ensemble sound and skillset, especially for instruments that are not within a director’s primary area of knowledge.

**Literature Review**

The director is the most important facilitator in this shift from viewing the ensemble as a whole to viewing it as the individuals who make it up. The skill sets and educational needs of the students largely dictate the direction the rehearsal or lesson should go, but the teacher or director is responsible for developing the educational foundation of tone and technique to base

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9 Brown, “Student-Centered Instruction” 33.

ensemble performance upon. While it is easy to advocate for an individually minded approach to pedagogy, experienced music educators will also know that, in times of pressing upcoming performance engagements, the individual learning experience may be overlooked in favor of ensuring the ensemble is at the desired performance level. It will not always be possible to address every individual in the ensemble at every rehearsal; however, approaching rehearsals from a learner-centered mindset allows musicians within the ensemble to be guided to become independent problem solvers who are aware of how ensemble pedagogy affects them and their instrument. This approach to pedagogy provides learners with ways in which to solve instrument-specific problems that may arise within repertoire or ways in which to identify ensemble-minded teaching strategies that are used within a rehearsal. For a director, focusing on these strategies can encourage independent musicians who, when building their skills from the pedagogy they are exposed to day after day in rehearsals, can further themselves as musicians and performers when that pedagogy supports their specific instrumental and learning needs. A more systematic approach to every-day rehearsal tactics could empower ensemble directors to be more mindful of the individuals within the ensemble and how certain pedagogical practices benefit or detract from individual instrumentalist achievement.

**Warm-Ups**

Warm-up practices are one of the easiest tools to implement in improving individual achievement, but if approached from an ensemble-first mindset while overlooking the individual sections within the band, some warm-up practices may prove more detrimental than intended. For instance, chorales are a major tool and resource for any wind band warm-up. This form of warm-up can be used to address intonation, phrasing, articulation, and musicianship, among other skills. However, chorales can also prove detrimental over time. If the same chorale is used by the director in warm-up every day, it has the potential to become a monotonous chore for director and ensemble alike. Consider the percussion section. Is their part in the chorale challenging enough and/or technically involved, or is it simply


mallets mirroring the melody? If the chorale is winds only, reflect on the time spent on this chorale. The pedagogical benefits to winds reaped by spending a significant portion on the chorale are overshadowed by the detriment to percussion, especially if the rest of the warm-up has also been centered on the wind players.¹³

Warm-ups are an opportunity to hone individual technique and skill and address gaps in fundamentals that, when corrected and improved upon at the individual level, will have a positive impact on overall ensemble achievement in the context of a piece of repertoire that utilizes the fundamental skills focused on during warm-up. When students have context and understanding for why and what they may perceive as a boring, every-day chore is important to their individual development as musicians, warm-ups may be approached with greater efficacy in the rehearsal space.

**Intonation**

Intonation provides pedagogical considerations that can be applied to different areas of rehearsal in order to better achieve a student-first mindset. For example, tone is a major factor in a musician’s intonation, and tone production must be directly addressed before intonation problems can be approached.¹⁴ If a director instructs a clarinet player with poor tone that they are severely out of tune, this directive might go unresolved if the player is unaware of the cause of the intonation problem or how to resolve it. It is important for directors to maintain an awareness of the discrepancies in the musical education backgrounds and privileges of students. The end pedagogic goal can only be achieved by a music educator through guiding students through all the necessary steps, from point A to point Z, until students are able to navigate musical problem-solving on their own. Specific solutions to the underlying problem of poor tone quality are of a greater help to students than general directives.

Other external factors that impact student intonation may include the quality of a student’s equipment, temperature within the performance or rehearsal space, range, tone as previously mentioned, or the innate pitch tendencies of a particular instrument. This is not an exhaustive list by far,


and even these broad umbrella terms have smaller branches of factors within them.\textsuperscript{15} To achieve an improved ensemble sound and encourage student growth and independent musicianship, it is vital for the director to be aware of the impact of various factors on the performers and to aid in the diagnosing and problem-solving the students must apply to their playing to offset some of these factors. In doing so, the director is guiding and shaping independent musicians, who can then apply the knowledge and problem-solving skills imparted upon them by their director to other aspects of ensemble playing, or in their own private study or individual practice time to become well-rounded and more developed musicians.

Pedagogical tactics such as singing within the rehearsal or addressing an individual’s tone production as a means to improve intonation have direct pedagogic benefits to the students. A student who demonstrates lack of understanding or proficiency in certain musical areas, such as an inability to hear when a note marked in the key signature is played with the incorrect accidental or a lack of awareness regarding their individual intonation problems, requires specific input from the director to address and conceptualize these areas of struggle. Through director modeling, student-led guidance, and direction towards individual growth and problem solving, students of all ability-levels will grow to become more self-sufficient musicians.\textsuperscript{16}

**Instrument Specific Pedagogy**

Consider the three main band instrument families: brass, woodwinds, and percussion. Aforementioned techniques, such as singing in rehearsal, have direct impact on the instrumentalists contained within these families. For brass players, singing can improve audiation skills, leading to increased accuracy in performance of partials and improved intonation when a student is able to hear that the note within their head does not match what they are performing on their instrument. Improved singing and pitch recognition directly aids student musicians from all instrument families in the


quick and accurate tuning of their instrument.¹⁷

Brass pedagogy is inherently different from woodwind pedagogy, which is even further removed from percussion pedagogy. Not every rehearsal will address each instrument family evenly, but it is important for directors to maintain awareness of their personal implicit biases. This often manifests in an uneven instruction of one instrument family due to the director’s familiarity with one aspect of pedagogy more so than others, such as a trumpet-playing band director focusing almost exclusively on brass pedagogy due to their greatest concentration of instrument-specific knowledge being in that area.

Woodwinds, for example, are known to have complicated intonation tendencies that a director may perceive as hopeless if they do not understand these tendencies or the factors which can impact them. However, a director must ensure that certain details such as embouchure, air support, posture, and correct usage of equipment are in order prior to approaching pedagogy related to woodwind intonation, as improper knowledge of these factors can provide a roadblock to ensuring student success and achieving the desired sound.¹⁸ When woodwind players are taught the intonation tendencies of their specific instrument, students are able to better identify the source of common issues they will face within the ensemble. Through exposure to the specifics of their instrument and guidance from their instructors, students can build this knowledge into their musical skill base and decision making.

There are instrument-specific techniques, warm-ups, and tendencies which can be discussed with the ensemble as a whole can benefit from knowing. Pedagogy of instruments outside the director’s primary instrument family is often a deficit in many directors’ pedagogical lexicon. Despite this, an active attempt to create intentional ensemble warm-ups which benefit all instrument families and a working knowledge of the impact of different factors on band intonation can positively influence individual achievement. This is not an exhaustive list, and there should be a continued pursuit of expanding knowledge in areas of deficit in any director’s given pedagogical knowledge base.


Aural Examples

As a student’s tone development and control improves, so does intonation, thus positively impacting the ensemble as a whole. However, it is up to the director to guide young musicians towards this state of improved tone production. Modeling and auditory examples of tone and musical expectations are prime pedagogical approaches in doing so.

Aural examples are vital for student improvement. The multitude of tasks necessary to play an instrument, such as embouchure and mouth control, finger coordination, and reading of the music, can detract from students’ auditory environment when they are asked to actively listen while also engaged in playing. Providing students with aural examples they can be wholly attuned to can better create independent, self-sufficient musicians.\(^{19}\) By providing reference recordings or recording the rehearsal for students to later listen back to, directors can ensure students develop a greater understanding of the music they are playing. Directors can promote a sustained knowledge of the characteristic sounds of the various instruments through positive auditory examples of more advanced players in each section and videos or audio recordings of professionals on each specific instrument.\(^{20}\)

It is necessary to promote these positive aural examples for all instruments within the band. All musicians in the ensemble are deserving of a positive auditory example from which to learn from and grow. Aural examples can be implemented in short but consistent exposure, such as playing a recording of a professional at the start of class while students are setting up. The same holds true for the ensemble sound as a whole. Exposure to positive aural examples of professional bands and orchestras can aid in molding students’ perceptions of overall ensemble goals and achievement.

Balance and Blend

One of the most notable pedagogical contributions relating to ensemble balance is the double pyramid balance system developed by W. Francis

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McBeth. This system, more commonly referred to as the pyramid of sound, was intended to correct ensemble intonation, and was derived from McBeth’s belief that “Pitch is a direct result of balance.” The pyramid is a so-called “double pyramid” because McBeth breaks down the ensembles into two separate pyramids: one for brass and one for woodwinds. These pyramids are structured from top to bottom, with the highest instruments at the top and the lowest at the bottom. A simpler version of the double pyramid is notated as a single pyramid with all the instruments for younger ensembles as seen in Figure 1 and Figure 2 below. Figure 2 is what most people refer to today when referencing the pyramid of sound.

![Diagram A and Diagram B](image)

**Figure 1.** McBeth Double Pyramid of Sound (McBeth 2–3)

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According to McBeth, balance cannot automatically be achieved through blend, good intonation, or tone production, even as students improved in their musical skill. He wrote that it was necessary to adhere to this pyramid system to achieve balance within the ensemble. McBeth’s pyramid system is a commonly referenced pedagogy when balancing ensembles, with directors encouraging upper woodwinds to play softer and low brass to play louder to achieve the desired ensemble balance. However, consider the impact of sustained use of the pyramid on the individuals within the ensemble. Prerequisites to achieving improved woodwind intonation include proper air support, amongst other factors. Encouraging upper woodwinds to play softer in order to achieve a balanced sound, thus improving ensemble pitch according to McBeth, can negatively impact less developed players who may not yet have the proper knowledge or systems to achieve a softer tone without sacrificing their air flow. Contrary to what McBeth wrote, a focus on intonation over the supposed balance provided by the pyramid will lead to a more natural development of a balanced sound. A director can achieve this form of balance without having to box

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Encouraging individual student performance rather than diminishing individual dynamics for the sake of ensemble blend and balance can be a more effective pedagogical approach for music educators. The latter may encourage poor performance practices and detract from individual growth. Detriments may arise through adhering to the pyramid of sound through practices such as constantly “giving the hand” to upper woodwinds to play softer for the sake of balance. Upper woodwind players may develop an unsupported tone with poor intonation control, while their low brass counterparts who are consistently encouraged to play out, thus utilizing proper breath control and support, may develop a more developmentally characteristic tone on their instruments. It is important for directors to remain cognizant of the pedagogical impacts on certain instrumental groups in order to better aid in the development of more independent musicians.

Application to Pedagogically Relevant Repertoire

Pedagogical applications as they apply to ensemble warm-ups are one thing, but the primary focus of most rehearsals center around prepared repertoire. To further the discussion on creating an inclusive and student-centered learning musical environment, it is important to analyze pieces of band repertoire that may be encountered by both directors and students within their time in the band room. The primary goal of band as an educational medium must be the musical development of the students more so than the performances given to the audience. An important facet of band education lies in exposing students to repertoire that they can successfully perform, but also which challenges their musicianship and performance skills. It is to this end that the director is responsible for maintaining and developing a well-balanced band and imparting musical concepts and rehearsal techniques to aid in the creation of this music.

There are certain pieces of repertoire commonly known throughout the band world, and which high school directors and students alike will

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25 Everett, “The Limitations of the Pyramid of Sound.”

26 Hiestand, An Evaluation of Recommended Literature, 199–200.
likely encounter during their time in the band classroom. *Into the Clouds!*, a concert band grade 3 piece by Richard Saucedo, is an example of a commonly performed piece of band repertoire that many students will encounter over the course of their time in band. This piece was selected upon review of 9–10 and 11–12 grade West Tennessee School Band and Orchestra Association (WTSBOA) District Honor Band (All-West) programs from 2012 to present in conjunction with Memphis Area Concert Festival programs from the past 2 years. Both the WTSBOA All-West and the Memphis Area Concert Festival are benchmarks of performance quality in West Tennessee. Their educational and musical relevance to all students and educators in the area provide trustworthy and pedagogically relevant programs from which to determine a musical selection.

*Into the Clouds!* was selected based on composer relevance throughout the programs. Richard Saucedo’s music was performed a total of 9 times throughout the analyzed programs, with *Into the Clouds!* appearing twice.

As previously mentioned, Saucedo’s work is a concert band grade 3. In order to understand the pedagogical and skill-level implications of these numbers, it is important to understand the concert band grading system. Across the United States, there is not a universal system for which to assign skill-level necessities to concert band repertoire. The grading system differs from state to state, as well as between various music publication houses. There are similar systems in place, often with numbers assigning a grade level to a piece based on musical and technical difficulty, with the grade level ranging between 0.5 and 6. Younger instrumental ensembles typically perform music between a grade 0.5 to a grade 2+.\(^{27}\)

Figure 3. Numerical Grading System for Band Literature (Baugher 17)

<table>
<thead>
<tr>
<th>Grade 1</th>
<th>All middle schools and first-year bands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 2</td>
<td>All middle schools and small high school bands</td>
</tr>
<tr>
<td>Grade 3</td>
<td>Better middle schools, all high schools, all universities</td>
</tr>
<tr>
<td>Grade 4</td>
<td>Better high schools, small colleges, all universities</td>
</tr>
<tr>
<td>Grade 5</td>
<td>Advanced high schools, better small colleges, all universities</td>
</tr>
<tr>
<td>Grade 6</td>
<td>The best high schools, all universities</td>
</tr>
</tbody>
</table>

The Hal Leonard Grading Scale.

| 1 | Very Easy – 1 year of playing experience |
| 2 | Easy – 2 years of playing experience |
| 3 | Medium – 3-4 years of playing experience |
| 4 | Medium Advanced |
| 5 | Advanced |
| P | Professional |

Grade level 3 is a relatively standard level for most high-achieving middle school ensembles or honor bands, and average for most high school ensembles, thus providing a middle ground. As previously mentioned, grading systems of band literature vary widely. For the sake of this analysis and the determination of the grade levels of the selected pieces, I used the Tennessee Band Master’s Association (TBA) state music list. This list provides a list of all approved pieces for concert festival performance in addition to their assigned grades.28

Richard Saucedo: Into the Clouds²⁹

Richard Saucedo’s Into the Clouds! is scored for standard band instrumentation. There are divided parts in Bb clarinet, Eb alto saxophone, Bb

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trumpet, and percussion. While these divided parts necessitate harmonic independence within the section, many of these split parts contain unison rhythms, allowing for less experienced players to build independence and confidence even while on a different part than their peers. A primary concern regarding the simplicity of the instrumentation within this piece is the lack of engaging percussion parts. The percussion parts that appear include two mallet percussion parts, as well as two auxiliary percussion parts involving snare and bass drum, triangle, cymbals, and timpani. This is standard percussion instrumentation for most pieces of band repertoire, and, while important, can lead to an under-engaged percussion section, especially if there are greater technical and rhythmic concerns within the winds.

This piece is written with a tempo marking of “Lively!”, with quarter note equaling 160 beats per minute (see Figure 4). The tempo remains consistent throughout the entirety of the piece. This quick, unchanging tempo may have two-fold benefits. The lack of tempo fluctuations can aid in ease of learning, as less experienced players do not have to worry about the added musical challenge of navigating a tempo change. Additionally, the quick tempo and upbeat melodic lines may prove more engaging to certain students. Repertoire engagement is important for students when rehearsing, as it can lead to increased focus, enjoyment, and drive while developing vital musical and technical skills, leading to greater levels of achievement. This quick tempo may also be challenging to younger players and can allow for students to learn how to approach learning a piece of music that is too fast to sight read at tempo. The students can then apply this musical skill in other areas of their playing or individual practice.

Saucedo’s Into the Clouds! begins with a syncopated melodic motif in high brass—F horn and trumpet—along with alto saxophones, supported with interjections by low brass and low woodwinds, with upper woodwinds and mallets playing a sixteenth eighth ostinato, or repeated musical fragment (see Figure 4).
These three sections—upper woodwinds, low woodwinds and low brass, and upper brass and saxes—largely remain grouped together throughout the piece. These blocked sections provide greater support and solidarity within the performers, which can increase performer confidence and aid in
engaging rehearsal practices. Despite this, one still needs to consider the varying needs of the instrumentalists within these groups. It is also important to keep percussion in mind, especially if the winds appear to struggle more in learning their parts than the percussionists. It is important to have varying levels of individual achievement to keep students engaged and explore the boundaries of their instruments. This is especially true for more advanced players who do not find ensemble playing challenging.

Measures 17 through 37 provide an exposed percussion part, coupled with a flute solo supported by a clarinet countermelody (see Figure 5).
The inclusion of these more exposed parts, as opposed to the melodic blocking seen through most of the piece, is beneficial to encouraging individual performance practices. However, it is important to note the instrument-specific nuances and challenges that may arise as a result of this solo. Most notably, the solo flute risks being covered up by the entirety of the
clarinet section with the counter melody. This section is already marked *mezzo piano* for the clarinets and involves important harmonic supporting lines to the solo. Rather than asking clarinets to play quieter at the risk of suffering poor intonation, encourage increased tone production and air support to yield a greater and more resonant flute tone.

While not the primary focus of this phrase, low reeds also play an important part in this upper woodwind feature. The bassoonist and bass clarinet, while having performed in tandem with low brass prior to this section, now sustain a single note for the entirety of the section. While the part may be unengaging and “easy” to these players, it is vital that the director informs them of the harmonic importance of their part. Encouraging low reed players to shape the long note with the melodic phrase can add further musical nuance and interest to this feature. Additionally, the simplicity of their part is important to note. These students cannot solely rely on ensemble repertoire to be challenged. Exclusive performance of ensemble repertoire by students such as low brass and low reeds is a detriment to these players if one is not encouraging soloistic growth along with encouraging more musical performance practices in ensemble playing.

The upper woodwind feature seen in measures 17 through 37 is the only occurrence of a juxtaposition of lyrical woodwind sections between fast paced reiterations of the main theme that occurs in the entire piece. Despite its brevity, this section can provide great pedagogical benefit to the woodwind players. This can occur through discussion of the best way to attain stylistic differences through articulations found in the section such as slurs, tenuto, and the notable lack of accents and staccato compared to the rest of the piece. In addition, focusing on a more woodwind centered ensemble color compared to the bright and brassy color found in the rest of the piece encourages the development of instrument-specific tone.

The remainder of the piece is scored for the full ensemble, with a few phrases of note that feature specific sections. Measures 56 and 57 contain a percussion interlude the winds rest while only the percussion play (see Figure 6).
Figure 6. *Into the Clouds!* mm. 54–58

It is important for percussionists to be rhythmically accurate during these measures, but these two measures are the most exposed and arguably challenging measures for the percussion section, a fraction of the musical gravitas the piece holds compared to the rest of the ensemble.

The extremely repetitive melodic material that occurs in multiple sections throughout the piece can be a benefit to an ensemble, especially one that is struggling to achieve at a high level with prepared repertoire. The predictable form and repetitive nature of the piece provides recurring melodic and harmonic motifs that can allow a lower-achieving ensemble to reap the benefits of musical achievement without challenges that may prove insurmountable.
Unison rhythms, harmonies, and melodies allow for less “musical” interest from an audience perspective; however, it should be noted that audience entertainment should not be the primary educational focus of an ensemble. These unison musical motifs, while overlooked by many as lack of musical interest or lack of challenge to certain ensembles, can provide ample pedagogical opportunities to lower-achieving bands, while still exposing them to well-established band literature. An example of unison musical motifs occurs in measures 81 to 86 (see Figure 7). This span of music demonstrates unison rhythm in upper woodwinds and percussion, along with block melodies and harmonies occurring in brass and alto saxophones.
When approached with the intention of providing as much benefit to the performers, Saucedo’s work allows lower-level bands to feel a sense of accomplishment through inclusion of solos and unison rhythms to allow for further musical growth while also pushing them towards a higher standard of performance.
Conclusion

Viewing a piece of repertoire based on the potential pedagogic benefit it can offer ensembles of varying levels can help to further aid in the development of directors’ growth mindset when it comes to encouraging student development and performance ability through the use of repertoire. Music education, which includes learning and performing repertoire, is to benefit the students. Student exposure to challenging literature, whether it is through aural examples or a low-stakes rehearsal for the sake of demonstrating what it might be like to perform such literature, can be considered a vital part of student music education.

Research Methodology

Ensemble playing alone does not encourage student performance development. In an effort to further improve and encourage student soloistic growth and to enable current, qualitative and quantitative data, high school directors were contacted regarding their individual pedagogical philosophies. These directors were high school directors who are members of the West Tennessee School Band and Orchestra Association (WTSBOA) in addition to collegiate directors at colleges and universities within Tennessee that offer a Bachelor of Music or higher. This provided a geographic limit for the research participant pool. These music educators were sent a survey inquiring about their personal pedagogical practices and beliefs within their own program. The aim of this vein of research is to investigate if there is any correlation between the specific pedagogical practices of certain directors and the relevance analysis conducted on written sources. The demographics of the two groups of surveyed directors varied widely, as seen below in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>WTSBOA</th>
<th>COLLEGIATE</th>
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</thead>
<tbody>
<tr>
<td>Male</td>
<td>67%</td>
<td>100%</td>
</tr>
<tr>
<td>Female</td>
<td>33%</td>
<td>0%</td>
</tr>
<tr>
<td>African American</td>
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<tr>
<td>White</td>
<td>83%</td>
<td>100%</td>
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Table 1. Participant Gender and Race Demographics
It should be noted that there are no female collegiate band directors in the state of Tennessee. Hence, the gender disparity is evident in the demographic results. Additionally, while collegiate directors of all racial and ethnic backgrounds were contacted, the demographics reflect only those who responded to the surveys.

Both groups of participants included directors of all instrumental backgrounds: woodwind, brass, percussion, and even piano, voice, and composition. The distribution can be seen in Chart 1 below.

![Chart 1. Participant Instrument Backgrounds](image)

WTSBOA respondents recorded teaching experiences ranging from 1 to 25 years of classroom experience, with a mean of 9 years. There was a notable increase in years of experience from the collegiate respondents spanning 13 to 41 years of experience and a mean of 23.5 years. The education distribution reflected a similar trend, with collegiate directors recording a higher level of post-graduate education than the WTSBOA participants (see Table 2).

<table>
<thead>
<tr>
<th></th>
<th>WTSBOA</th>
<th>COLLEGIATE</th>
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<tbody>
<tr>
<td>Bachelors</td>
<td>67%</td>
<td>0%</td>
</tr>
<tr>
<td>Masters</td>
<td>33%</td>
<td>14%</td>
</tr>
<tr>
<td>Doctorate</td>
<td>0%</td>
<td>86%</td>
</tr>
</tbody>
</table>

Table 2. Participant Education Distribution
The size of the instrumental programs the directors ran ranged from 24 to 180 students in the WTSBOA results, and 15 to 400 students in the collegiate results. Despite the large range in both WTSBOA and collegiate responses, the average size of the high school ensembles was 70 students, while the collegiate ensembles averaged 212 students.

Participants were asked to provide a few sentences regarding the key aspects of their instrumental teaching philosophies. The majority of responses, at both levels, were focused on student achievement before musical performance. The quotes below, one from each participant group, highlight this.

“My philosophy in teaching music is acknowledging that all students are unique in their own way. Therefore, all students have different learning needs. Everyday I strive to create the best environment for every student to learn in. An environment that breeds positivity, inspiration to learn and grow, as well as hard work.” (WTSBOA)

“I teach people first and use music as the vehicle. Teaching musical literacy towards the goal of matriculating independent, life-long learners and critical thinkers is at the core of what I do. The job of a teacher is to help students realize potential they may not know they have and to spark passion and joy for learning and performing.” (Collegiate)

Directors were also polled in regard to their opinions on certain pedagogical practices and how they line up with their own pedagogy. There were three categories in total: intonation practices, balance and blend, and music literature. These categories were chosen in an effort to align with the primary pedagogical approaches discussed within the analysis of literature, as well as the pedagogical application to musical repertoire. Within these categories, directors were given a total of 7 phrases that reflect various pedagogical approaches relating to the category. Directors were asked to indicate their preference for each approach on a scale of 1 to 10, with 1 being the least important and 10 being the most important. It should be noted that directors were allowed to assign the same value to multiple approaches within the same category, due to the acknowledgement that these approaches were not laid out in such a way that was conducive to a set numerical order. The responses to each of these categories are outlined in the sections below.
Prior to discussing the responses to each category, however, it is pertinent to describe the measurements used to come to the described conclusions. There were two numbers referred to in order to decipher the numerical responses to written questions. First was the mean, which demonstrates the average number assigned to each subcategory. Secondly was the standard deviation, which indicates the spread of the numerical data. The higher the standard deviation, the greater each individual response deviated from the mean, while a lower standard deviation indicated that most of the responses fell within a closer range to the mean. The standard deviation was used to corroborate that the response with the highest average, or mean, aligned with the highest rating from directors. Additionally, a high standard deviation also indicated the most “contested” answer. Namely, the pedagogical approach which most directors assigned widely varying ratings. The variance was also calculated for all responses and will occasionally be referred to in conjunction with the standard deviation.

### Intonation Practice

The table below outlines the subcategories regarding intonation practices, as well as the responses provided for each category from WTSBOA directors.

<table>
<thead>
<tr>
<th>#</th>
<th>Field</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Variance</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tuning the whole ensemble to a single pitch (ex: Concert F (Bb))</td>
<td>4.00</td>
<td>10.00</td>
<td>6.33</td>
<td>1.97</td>
<td>3.89</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Split tuning (ex: Tuning woodwinds and brass separately, either with a single pitch or two different pitches)</td>
<td>0.00</td>
<td>10.00</td>
<td>7.50</td>
<td>3.45</td>
<td>11.92</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Tuning woodwinds with a separate pitch from brass (ex: Concert A)</td>
<td>0.00</td>
<td>10.00</td>
<td>6.83</td>
<td>3.67</td>
<td>13.47</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>Tuning each individual with a tuner</td>
<td>6.00</td>
<td>10.00</td>
<td>7.33</td>
<td>1.60</td>
<td>2.56</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Tuning with a drone</td>
<td>4.00</td>
<td>10.00</td>
<td>7.60</td>
<td>2.94</td>
<td>8.64</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Tuning an ensemble down (to the tuba)</td>
<td>5.00</td>
<td>10.00</td>
<td>7.83</td>
<td>1.57</td>
<td>2.47</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>Tuning an ensemble up (to the oboe)</td>
<td>1.00</td>
<td>9.00</td>
<td>4.50</td>
<td>3.20</td>
<td>10.25</td>
<td>4</td>
</tr>
</tbody>
</table>

**Table 3: WTSBOA Intonation Responses**

No notable conclusions can be drawn from the results, as all categories received a rating of 10 from at least one respondent and exhibit similar means.
The table below outlines the subcategories regarding intonation practices, as well as the responses provided for each category from collegiate directors.

<table>
<thead>
<tr>
<th>#</th>
<th>Field</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Variance</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tuning the whole ensemble to a single pitch (ex: Concert F in Bb)</td>
<td>0.00</td>
<td>9.00</td>
<td>4.29</td>
<td>2.91</td>
<td>8.49</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Split tuning (ex: Tuning winds and brass separately, either with a single pitch or two different pitches)</td>
<td>0.00</td>
<td>10.00</td>
<td>6.83</td>
<td>3.53</td>
<td>12.47</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Tuning winds with a separate pitch from brass (ex: Concert A)</td>
<td>0.00</td>
<td>10.00</td>
<td>5.00</td>
<td>4.16</td>
<td>17.33</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>Tuning each individual with a tuner</td>
<td>0.00</td>
<td>8.00</td>
<td>2.00</td>
<td>2.89</td>
<td>8.33</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Tuning with a drone</td>
<td>0.00</td>
<td>10.00</td>
<td>3.83</td>
<td>4.41</td>
<td>19.47</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Tuning an ensemble down (to the tuba)</td>
<td>5.00</td>
<td>10.00</td>
<td>8.17</td>
<td>1.95</td>
<td>3.81</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>Tuning an ensemble up (to the oboe)</td>
<td>0.00</td>
<td>8.00</td>
<td>4.17</td>
<td>2.79</td>
<td>7.81</td>
<td>6</td>
</tr>
</tbody>
</table>

**Table 4.** Collegiate Intonation Responses

The collegiate responses demonstrate a much greater deviation of means. The highest indicated preference for tuning an ensemble down is consistent with practices outlined by the McBeth pyramid of sound. McBeth’s pedagogy advocates for building and tuning an ensemble up from the low voices.

The results with the lowest mean included “Tuning each individual with a tuner” followed by “Tuning with a drone.” The low average ratings for each of these pedagogical approaches align with an independent, learner-first mindset, as tuning with tuners and drones often detract from allowing students to develop the ability to discern their intonation tendencies with their own ears. “Tuning with a drone” was also the most heavily contested answer, with a mean of 6.83 and the widest standard deviation of 4.41. Responses ranged from rankings of 0 to 10 for this response.

**Balance and Blend**

The next category directors were asked to rank pedagogical approaches for was balance and blend. This category aligns in part with the discussion of McBeth’s pedagogical approaches and includes mention of the McBeth pyramid of sound. The pedagogical approaches in question, in addition to the responses they garnered from WTSBOA directors, can be seen in Table 5.
The responses for this category garnered a wider spread of means than in the intonation category, with averages ranging from 3.5 to 8. The idea with the highest average was “Balancing to the melodic motif,” with a mean of 8. This statement’s low standard deviation of 1.22 further supports that the majority of WTSBOA directors ranked this an 8 in importance, or close to 8. This was closely followed by “Adhering to the McBeth pyramid of sound to achieve my ideal ensemble balance,” which received a mean response of 7.50. While not the top response in this category, the high ranking of importance given to the McBeth pyramid of sound further demonstrates its impact and reach in ensembles, decades after it was introduced by Francis McBeth.

The most heavily contested pedagogical approach was “Bringing down the upper voices to balance to the lower brass” with a mean of 5 and the widest standard deviation of 3.08. Answers for this category ranged from rankings of 2 to 10. This is an interesting result, because while this statement supports what McBeth advocated for in his pyramid system, low rankings align with a learner-led approach. This further aligns with the pedagogical approaches outlined in the literature analysis, since the implementation of this approach may prove detrimental to upper woodwinds due to loss of tonal and intonation control due to playing at an unsupported soft dynamic to achieve the desired balance.
The table below now outlines the responses received by collegiate directors in this category.

### Table 6: Collegiate Balance and Blend Responses

<table>
<thead>
<tr>
<th>#</th>
<th>Field</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Variance</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adhering to the McBeth pyramid of sound to achieve my ideal ensemble balance</td>
<td>6.00</td>
<td>10.00</td>
<td>8.40</td>
<td>1.36</td>
<td>1.84</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Having flexible seating based on player ability (ex: Placing the best players in the center of the ensemble instead of in chair order)</td>
<td>0.00</td>
<td>10.00</td>
<td>6.57</td>
<td>3.16</td>
<td>9.06</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Recruiting with the aim to meet a number quota (ex: More woodwinds than brass, as many people as possible, etc)</td>
<td>0.00</td>
<td>9.00</td>
<td>3.50</td>
<td>3.35</td>
<td>11.25</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>Recruiting quality of students over quantity of students</td>
<td>1.00</td>
<td>10.00</td>
<td>6.83</td>
<td>3.53</td>
<td>12.47</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Bringing down the upper voices to balance to the lower brass (ex: Having flutes play softer in order to achieve the desired ensemble balance)</td>
<td>3.00</td>
<td>9.00</td>
<td>7.33</td>
<td>2.21</td>
<td>4.89</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Balancing to the melodic motif (ex: Bringing trombones down to allow a clarinet melody to be heard)</td>
<td>7.00</td>
<td>10.00</td>
<td>9.00</td>
<td>1.67</td>
<td>1.14</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Balancing the lower sections to the needs of the higher sections (ex: Asking brass to player softer to allow for unforced tone production in woodwinds/asking brass to play louder to ensure supported sounds in woodwinds without having to sacrifice tone for dynamics)</td>
<td>4.00</td>
<td>10.00</td>
<td>7.71</td>
<td>1.98</td>
<td>3.92</td>
<td>7</td>
</tr>
</tbody>
</table>

The results seen in the WTSBOA responses were reflected in the collegiate responses, with “Balancing to the melodic motif” once again displaying the highest mean and the lowest standard deviation. Similarly to the “Intonation Practices” category, both groups of directors were in agreement for what sub-category held the most importance to them. This specific sub-category demonstrates a deviation from the pedagogy outlined by Francis McBeth in his pyramid of sound, as McBeth identified balance achieved through specific instruments rather than musical phrases or motifs.

### Music Literature

The final category directors were asked to provide rankings pertains to musical literature selection and performance within their ensembles. This category was intended to correspond in part with the discussion of band repertoire and the applications of learner-centered pedagogy when approaching literature with an ensemble. The sub-categories, as well as the responses they received from WTSBOA directors, can be seen in Table 7.
Table 7: WTSBOA Music Literature Responses

These responses displayed the widest spread of means of any category, with means ranging from 1.50 to 9.25. This demonstrates the greatest explicit ranking of any category, as it displays a clear numeric importance.

The category with the highest mean (9.25) and a standard deviation of 1.30 was “I select my band literature to expose my ensemble to different styles of music.” Despite this subcategory receiving the highest mean, it did not receive the lowest standard deviation. The lowest standard deviation (1.09) belonged to the category with the second highest mean (8.25): “I select my band literature slightly above the needs of my ensemble as a whole.” Both of these responses indicate pedagogic preference for student-focused approaches to band literature. Selecting music with the intention of exposing students to different styles of music, as well as selecting music to challenge the students within the ensemble, can benefit the individual performers. The most heavily contested answer was “I select my band literature to challenge specific individuals in my ensemble and help them grow” with a mean of 6 and the widest standard deviation of 2.12. Answers ranged from rankings of 3 to 9 in this category. It should be noted that this is less contested than other areas of mixed responses seen in other categories.

Similarly to the WTSBOA results, the collegiate responses demonstrated some of the most clearly defined rankings, with means ranging from 2.25 to 8.5, as seen in Table 8.
The highest mean belonged to the same category as seen in the WTSBOA results: “I select my band literature to expose my ensemble to different styles of music.”

Once again, the director responses to this category at both levels are congruent with a learner-first approach. The highest ranked responses reflect the importance of student impact when choosing and performing music literature, over responses which reflect ensemble performance goals, such as “I select my band literature according to state concert festival rubrics,” which received the lowest ranking for both groups.

**Notable Pedagogic Responses**

In addition to being asked to rank pedagogical approaches, directors were also invited to discuss or mention practices they consider unique or alternative in their rehearsals. This question was optional, but resulted in some notable responses, especially from the collegiate level. One WTSBOA director wrote, “We discuss why the pyramid of sound works through looking at the human hearing range, the strongest part of that range, and where the instruments fall within that range. It is what causes the pyramid of sound to work properly.” Along with the importance the pyramid received through director rankings, this written statement further indicates the continued relevance of McBeth and his pyramid of sound in the modern band classroom. The continued relevance of this pedagogy further emphasizes
the need for a student-first approach to continue to provide the greatest level of benefit to the students.

A collegiate director wrote, “In marching band rehearsals, I implement some techniques that are tied back to Breathing Gym exercises. For example, playing a phrase on one (usually low in the register) note to encourage more air flow and rehearse elements like sustain or dynamics.” The use of Breathing Gym exercises, which encourage air support and control, directly benefit the performer, which in turn impacts the ensemble as a whole. Improved air support leads to improved tone and intonation on an individual level, as well as dynamic control as indicated by the writer of the response. This improvement made by individual students can then lead to improved ensemble achievement.

Survey Conclusions

While it is difficult to quantify subjective pedagogical beliefs, certain pedagogy saw similar responses between both the collegiate and WTSBOA respondents. The continued relevance of the McBeth pyramid of sound in music education was evident through both director rankings and individual written responses. Many responses demonstrated the application of learner-first approaches to pedagogy at both the high school and the collegiate level. The participants for these surveys are practicing directors, many of whom have multiple degrees and decades of experience to support their pedagogical claims and practices.

Conclusion

This vein of research centered in exploring established high school band pedagogical approaches and their benefits and detriments to individual performers. The history of bands in American schools displayed a shift from a teacher-centered approach to pedagogy towards a learner-centered approach during the late 20th century and into the 21st century. Music education should be an adaptive model. Despite numerous pedagogical developments in recent years, modern music education often still adheres to pedagogy developed in the 1960s or earlier. This does not negate the work of the band pedagogues who provided the foundations for music education during this time, nor does it imply that the pedagogy is ineffective. It is merely a marker of antiquation in an era where there are more effective and pertinent ways that music educators can reach and impact the individuals in their ensembles.
Pedagogical methodologies, such as Social Emotional Learning (SEL), substantiate the use of a more learner-centered approach and its benefits in the classroom. Established sources of literature support this transition from a teacher-led approach to a student-led approach in the music classroom. Benefits of this approach include developing more independent and self-sufficient student musicians who are able to demonstrate self-supported musical decision making in their playing.

Despite this shift in pedagogical methodology through the years, established band pedagogy should not be discarded due to changing pedagogical beliefs and views, rather, adjusting one’s pedagogical approach to fit the individual needs of those within the ensemble rather than focusing solely on overall ensemble sound and achievement can provide a greater benefit to individual students. Implementation of approaches such as learner-centered models demonstrate increased individual achievement which, according to established band pedagogues such as David Elliott, leads to increased ensemble achievement. Surveyed directors at both the high school and collegiate levels provided pedagogical responses that further align with this pedagogical shift and a more individual-centric approach to pedagogy.

Pedagogy which directly impacts the individual further benefits students from underprivileged backgrounds as well, as many of these students rely solely on the band classroom to receive any form of music education and to further their musical skills. A pedagogical mindset shift is needed due to a change in the social-learning environment of classrooms across the country and a greater advocacy for individual benefits in the classroom, in addition to the shifting needs of teachers and students alike, especially in the lingering wake of the pandemic.
References


