University of Cincinnati

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I, Jason A Hiester, hereby submit this original work as part of the requirements for the degree of Doctor of Musical Arts in Voice.

It is entitled:
An analysis of Ohio Music Educators Association’s 2009 class AA and A choral music with regard to the tessitura demands for the high school male voice.

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An analysis of Ohio Music Educators Association’s 2009 class AA and A choral music with regard to the tessitura demands for the high school male voice

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of the University of Cincinnati

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By

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Advisor________________________

Reader________________________

Reader________________________
Abstract

The purpose of this study is to analyze the male tessitura of the Ohio Music Educators Association’s 2009 AA and A music list for the SATB and TTBB choral ensembles. Through a review of available literature on the subject, a pedagogically healthy and developmentally sound tessitura standard has been defined for the changed young male voice. This tessitura standard has been applied to the Ohio Music Educators Association’s class AA and A High School Required Music List for 2009. An enhanced and modified tessitura analysis tool based on methodology used in Robert Shewan’s text Voice Training for the High School Chorus (1973) has been applied. Conclusions have been drawn as to the appropriateness of these choral selections for the immature high school male voice.
Acknowledgements

I would like to extend my sincere heartfelt thanks to the members of my graduate committee: Assistant Professor Dr. Eva Floyd, Professor Thomas Baresel, and Professor Mary Henderson-Stucky.

To my beautiful and kind wife Christine and our four children, Colin, Maddy, Elliot and Zach, I extend my appreciation.
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Statement of Problem

Over the past few decades the choral profession's interest in healthy singing has been positively evolving and growing. Evidence of this is seen in the increasing number of American Choral Directors Association (ACDA) and National Association for Music Education (NAfME) interest sessions on vocal pedagogy, voice science and vocal health at conferences and conventions. Choral method text books aimed at future choral music educators now have detailed information on the structure and anatomy of the singing voice, including chapters on correct breathing, resonance, registration, phonation, and vocal health. Brenda Smith, D.M.A. and Robert Sataloff, M.D., D.M.A. authored a book entitled Choral Pedagogy (1999) in which ideas of vocal pedagogy and vocal science are used to enrich the understanding of the voice for the choral teacher and singer. Scientific innovations have contributed significantly to the vocal arts by dispelling scientifically-unfounded beliefs about singing that were not based on physiological understanding or human anatomy. It is no longer common practice to find inaccurate statements such as "breathe from your diaphragm" in choral textbooks. This new understanding of the voice has encouraged many choral conductors to question long-held teaching philosophies regarding their role in the choral rehearsal. Shannon Hansen, editor of On the Voice, a voice column in Choral Journal, speaks to this topic: “Choral Directors find themselves in a unique period in the history of their profession as they begin to take on the new understanding that their role in the classroom is primarily as voice teacher” (2008, p. 6). Dale Moore, 1990 President of The National Association of Teachers of Singing (NATS), stated, "[the] young singer spends five times as much
[rehearsal] time per week with the conductor of his or her choral group as he does with his or her singing teacher...need one ask who will have the greater influence upon the young singer?” (1990, p. 53). Esteemed choral conductor Don Neuen clearly asserts that “by far the most important thing any of us teach is singing” (2002 p. 25).

In Ohio, the Ohio Music Education Association (OMEA) is the principal organization promoting music education in elementary and secondary schools. OMEA's website states that the organization advocates for “comprehensive school programs in ... choral music education”, and for “state and national music standards, with assessment to ensure that students meet high academic expectations”. To achieve this mission OMEA, “identifies ‘best practices’ for teaching music at different educational levels”, and uses a “system of adjudicated events that demonstrates an emphasis on educational values and high achievement in school music programs” (OMEA 2012, Mission statement). For the adjudicated events choral directors must select one piece from a list tiered in difficulty level. There are four levels: AA, which is the most challenging, A, B, and C, which is the least challenging. Once a year, choral directors take their choirs to a local adjudicated event and receive constructive feedback as well as a rating from I to V. I is the highest rating and V the lowest; if the choir receives a one rating then they qualify to participate in the state adjudicated event.
Hypothesis

Despite progress in the field of choral music education, and the OMEA stated goal of 'best practice', much of the choral music performed in today's high school mixed and gender-specific ensembles is developmentally inappropriate with regard to tessitura for the vocally immature males enrolled.

The purpose of this study is to analyze the tessitura of the Ohio Music Educators Association (OMEA) 2009 AA and A music list for the changed, yet developing, high school male voice.

To accomplish the analysis, a tessitura range standard has been developed by gathering material published by recognized vocal and choral experts on the subject, and other pertinent studies in the field. Using these resources, a mean has been figured of the various tessitura standards, which defines an accurate representation of current trends and research. These conclusions established a tessitura range standard appropriate for young high school male singers.

After a tessitura range standard was developed, it was applied to all 48 class AA and A choral pieces required of high school SATB and TTB choirs performing at OMEA local and state contests for the 2009 academic year and examined for appropriateness by using the basic methodology outlined in Robert Shewan's text *Voice Training for the High School Chorus* (1973). Shewan asserted that a piece of
choral music could be deemed appropriate or inappropriate based on the percentage of the total number of pitches found to be beyond a predetermined pitch range. Shewan’s methodology is discussed in detail in the methodology section.

**Operational Definitions**

*Changed male voice*- a voice that has passed through Cooksey’s fifth maturational voice classification, the “emerging adult voice”. Cooksey (1999) defines this stage:

> Emerging adult voice represents a marked tendency toward vocal maturity. Adult-like characteristics are still not apparent, but unique qualities begin to appear. There is a gradual expansion in range and vocal capability, and more consistency in vocal production generally. The falsetto register is very clear and ‘focused’...the emerging adult voice is prominent among ninth grade boys and begins approximately at the age of 14-15. (p. 80)

*Falsetto*- Richard Miller (1986) defines falsetto as: “the male imitation of upper-range female voice quality, a sound that can be produced by most males for comic or coloristic effects and serves as the chief register of modern-day countertenors” (p. 122).

*Tessitura*- the prevailing position of pitches found in a vocal composition. Shewan (1971) further explains, “Tessitura is the singer’s comfortable range” (p. 140).

*Tessitura range standard*- the pitches which encompass a healthy tessitura.
**Tessitura threshold cap** - the total percentage of healthy pitches within the tessitura range standard.

**Tessitura violation or range violation** - percentages of pitches in excess of the tessitura threshold cap.

**Vocal Range** - the entire vocal compass of pitches of a voice, from the lowest to the highest

**Voce complete** - complete voice, or a sung tone that exhibits an appropriate balance of the singer’s formant and vowel formants

- **Formant** - area of acoustical strength in the tonal spectrum created in the vocal resonator tract
- **Singer’s Formant** - acoustical areas of the spectrum composed of the third, fourth, and fifth formants, typically around 3K (3000 Hz) for the male voice

**Voce piena in testa** - full head voice

**Review of Literature**

It is accepted in the voice pedagogy and voice science field that singing in an improper tessitura is counter productive to vocal health and vocal development, and
could be vocally damaging. (Brodnitz, 1983; Brown, 1999; Cleveland, 1993; Doscher, 1998; Gregg, 2000; Johnson, 2007; Levine, 1987; McCoy, 2004; McKinney, 1982; MENC, 1991; Miller 2000; Sataloff, 2003; Smith, 2003; Stemple, 1998; Vennard, 1967) Tessitura is defined by the *Harvard Dictionary of Music* (1972, p. 839) as “the general lie” of a voice. Cooper and Kuersteiner stipulate that tessitura indicates “that portion of the vocal range in which it is comfortable to sing for a considerable time without tiring” (Cooper & Kuersteiner, 1970, p. 19). The American Academy of Teachers of Singing identifies it as “the heart of the range” (1969, p. 21). Many conductors describe tessitura as that part of the voice range that can be sung with ease for some time.

Vocally immature young adult males just completing the maturational stages of voice transformation brought on by puberty are particularly at risk of vocal damage from singing in an improper tessitura (Harris, 1996; Miller, 2000). A rationale of caution for the beginning singer and teacher is described in the following statements: “The first essential in singing is to establish good vocal habits within a limited, comfortable range” (McKinney, 1994, p. 107); “establishing vocal freedom is more important than learning to sing high or low” (McKinney, 1994, p. 109); “pushing the extremes of range too soon can result in tension patterns that will last a lifetime” (Mckinney, 1994, p. 109); “the need for choosing the correct natural range of the voice is of greater importance in singing since the outer ends of the singing range need very careful production and should not be overworked, even in trained voices” (Greene, 1989, p. 79); “it is best to begin in the middle part of the
voice and work upward and downward until the voice classifies itself” (Vennard, 1966, p. 78). Further, research has shown that the young voice continues to develop through and beyond the teenage years. “A speaking voice with adult characteristics may not be attained until the adolescent is more than 17 years old, and full development of the singing voice takes much longer”, (Lee, Pennington, & Stemple, 1998, p. 167). Ingo Titze (2000) recommends delaying voice classification of young voices until the age of 20, after the major vocal growth spurts are finished. He also asserts that the voice continues to change throughout adulthood, resulting in a peak in vocal performance in the 30’s or as late as the 40’s. The fragility of the developing voice and the dangers of improper tessitura are summed up in the following statement: “The instability of the developing voice places adolescents at risk for voice disorders and laryngeal pathologies” (Dobres, Lee, Kummer, Kretschmer & Stemple, 1990, p. 167).

In response to the latest in research and interest in musicians’ health, the National Association for Music Education (NAfME) in January 2008 presented an online question in which they asked members about the health of their students. NAfME received 374 responses to the following question: Do you currently see, or have you seen, any… injuries or issues with your students? Fully 46% of survey participants responded that their students are affected by vocal health problems associated with improper or overuse of the voice.
In a more formalized study, the Health Promotion in Schools of Music Conference (HPSMC) in Fort Worth, Texas, indicated that 35%-65% of K-12 students involved in music suffered from neuromusculoskeletal problems, which included problems of the voice (Palac et al., 2004). The HPSMC recommends “revisiting some strategies used in teaching singing, and develop[ing] an array of health-based strategies that work in tandem with growing anatomy” to include “re-assessing vocal pitch range parameters” (HPSMC 2004 Vocal Heath Report-Pre Conference Report-Part 2, p. 2). In response to these findings, NAfME released a position statement entitled Health in Music Education (2007) asserting that “learning, performing and listening to music can produce possible negative health consequences when undertaken incorrectly or excessively. Music teachers need to be health conscious and to engage in prevention education with the students in their charge...Overuse or misuse of the body when playing a musical instrument or singing can lead to health problems...Music educators need to become substantially involved in injury prevention by teaching health-conscious music-related practices to students.” (p. 1-2)

**Methodology**

Robert Shewan (1971) believed strongly that a conductor’s first goal was to foster in his pupils high levels of proficiency in sight-reading and musicianship, the ability to sing in tune, and encourage them to become well-rounded musicians. He also believed that conductors could hurt voices by not paying careful attention to
the range, tessitura and dynamic demands of the music chosen for high school males. Shewan (1971) states:

Conductors damage voices when they select music that pushes voices beyond their physical maturation. Teen-age vocal muscles develop slowly over a long period of time. The director must choose music comparable to the innate talent and musical training of his choristers without damaging their immature instruments, and he must stay within vocal limitations and still select music of aesthetic and social value. (p. 138)

Shewan developed a system for analyzing choral pieces for their appropriateness. The following is an analysis of Mozart’s *Ave Verum Corpus* using Shewan’s tessitura threshold cap and methodology from *Voice Training for the High School Chorus* (1973). Figure 1 is an analysis of the tenor part, figure 2 of the bass part.

Figure 1.

*Ave Verum Corpus*-Tenor Part

![Graph of tessitura analysis for tenor part of Ave Verum Corpus](image)

- **Low Tessitura**: 9%
- **Healthy Tessitura**: 89%
- **High Tessitura**: 2%
Figure 2.

*Ave Verum Corpus*-Bass Part

The entire range of pitches contained in each male voice part is labeled from lowest pitch to highest pitch. This can be seen in the horizontal axis along the bottom of the figures. The pitches in the middle of the figures, which are represented in green, comprise the tessitura range standard that Shewan suggests is most developmentally appropriate for the high school male voice: for the tenor, A3-D4 and for the bass, A2-A3. Range or tessitura violations in excess of the tessitura range standard are noted in blue for violations on the low side of the tessitura range standard and in red for violations on the high side of the tessitura range standard. Shewan recommends that if the number of pitches in a piece is past his tessitura threshold cap of 10%-12% then it is not suitable for the young male voice. Using Shewan’s analysis one can observe that the tenor part of Mozart’s anthem contains only 2% of the notes over Shewan’s recommended tessitura range standard, and 9% under his recommended tessitura range standard. Although the lower portion of
the tenor part would be approaching the unhealthy tessitura threshold cap percentage of 10%-12%, this piece generally falls within Shewan’s recommended tessitura threshold cap. One also observes that the bass part has 3% under the recommended tessitura range standard and 5% over. Therefore, this piece falls well within Shewan’s acceptable tessitura threshold cap for the bass voice.

In this study Shewan’s 10%-12% tessitura threshold cap will be used, however a new healthy tessitura range standard of pitches will be developed by averaging current research and trends on which the choral pieces will be analyzed. In addition to a different tessitura range standard other important variables not considered in Shewan’s schematic, namely dynamic intensity, duration of notes above the optimum tessitura, contour of melodic line and hierarchy of pitches above the optimum tessitura have been included in this study. In Shewan’s methodology, a pitch at E4 is given the same value as a high A4. These two pitches are not vocally equal; the second example is considerably more vocally taxing. Both contour and dynamics would affect this vocal scenario also and thus an analysis of pitches out of context does not provide enough information. The contour of a vocal line which has a few isolated higher pitches approached by leap is vocally less taxing than a line which creeps by step through the transition between the chest and head voice registers also know as the passaggio. In addition, extremes in dynamic range, whether piano, forte or their superlatives, are much more fatiguing than a comfortable mezzo-forte; these extreme dynamics applied at either end of the vocal range can be incredibly taxing for the immature instrument. Richard Miller (2004)
stipulates, “he must at all costs avoid the physical trauma of trying to produce legitimate tone at subtle dynamic levels in a tessitura in which he does not yet function freely” (p. 240). The American Academy of Teachers of Singing concurs: “We believe....that the easiest volume for singers in the upper half of the range is best vocalized mezzo-forte” (p. 2). Finally, a hierarchy of pitches will be taken into consideration. This portion of the analysis will be included in a narrative form below the tessitura analysis charts of each piece.

**Review of published tessitura standards**

A review of the published tessitura and range standards reveals many different criteria on which the various authors have based their published findings. For some it is simply what range the male voice can produce regardless of maturity or limitation concerns; for others their findings are divided into different categories based on comfortable versus extreme; still others take into consideration the health of the voice as do the American Academy of Teachers of Singing and voice pedagogues. Those that were most involved in the teaching and developing of young voices were more conservative in their recommendations, while those involved with choral arranging or the business of choral music came from a point of view little concerned with the health of the young singer. The recommended tessitura and range guidelines of major published choral arranging and voice pedagogy textbooks are highlighted below.

In *Choral Composition*, Davison (1946) has stated,
“In the vocal mechanism with which nature has endowed humanity, she has made no distinction between the trained and the untrained singer, and it is the physical properties of voices that the composer is first concerned...how high or low it is advisable or even safe to write; and how long the chorus may be counted on to sustain extremes of range, particularly at the top, without discomfort to the singers and without incurring the danger of flatting.” (p. 16)

Davison has divided each voice part into three different range categories: conversational, traditional and extreme. Conversational ranges are “entirely comfortable” for the singer. The traditional ranges “allow for ample melodic expansion, yet which does not subject the performer to vocal strain” (p. 17). The final range is the extreme range, which is “inadvisable to venture beyond” (p. 17). Davison also warns “…the upper limits may occasionally be raised. But such excursions should be, at most, of brief duration” (p. 17)

Davison’s categories are as follows:

<table>
<thead>
<tr>
<th>Voice</th>
<th>Conversational</th>
<th>Traditional</th>
<th>Extreme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenor</td>
<td>G3-D4</td>
<td>F3-G4</td>
<td>E3-A4</td>
</tr>
<tr>
<td>Bass</td>
<td>Bb2-G3</td>
<td>G2-C4</td>
<td>Eb2-D4</td>
</tr>
</tbody>
</table>

In *Contemporary Choral Arranging*, Arthur E. Ostrander and Dana Wilson (1986) have stated:
“...of greatest importance is the fact that the tessitura of any part must not be in either extreme end of the range, as the voice tires quickly in extreme registers.” (p. 5)

The following are their suggested ranges for a high school level composition:

<table>
<thead>
<tr>
<th>Voice</th>
<th>Weak</th>
<th>Lyrical</th>
<th>Bright</th>
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<tbody>
<tr>
<td>Tenor</td>
<td>C3-F3</td>
<td>G3-C4</td>
<td>D4-G4</td>
</tr>
<tr>
<td>Bass</td>
<td>G2-D3</td>
<td>F3-C4</td>
<td></td>
</tr>
</tbody>
</table>

In *Choral Arranging* (1966) Hawley Ades has stated that:

“upper extensions of range...should be employed sparingly even under the most favorable circumstances...and must be short because prolonged singing in extremely high or low tessitura will overtax the voices.” (p. 1)

Hawley's suggested ranges:

<table>
<thead>
<tr>
<th>Voice</th>
<th>Range</th>
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<tr>
<td>Tenor 1</td>
<td>D3-G4</td>
</tr>
<tr>
<td>Tenor 2</td>
<td>C3-F4</td>
</tr>
<tr>
<td>Bass 1</td>
<td>Ab2-D4</td>
</tr>
<tr>
<td>Bass 2</td>
<td>F3-C5</td>
</tr>
</tbody>
</table>

*Choral Pedagogy* by Brenda Smith and Robert Sataloff (2000), states:

“The range of a singing voice is the number of notes, from the lowest to the highest pitch, a voice sings. With vocal training, the musically acceptable range of a voice will expand.” (p. 128)

The approximate singing ranges according to these authors are as follows:
<table>
<thead>
<tr>
<th>Voice</th>
<th>Full Range</th>
<th>Passaggio</th>
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<td>Tenor 1</td>
<td>F3-A4</td>
<td>D4-F4</td>
</tr>
<tr>
<td>Tenor 2</td>
<td>C3-F4</td>
<td>C4-E4</td>
</tr>
<tr>
<td>Bass 1</td>
<td>G2-D4</td>
<td>B3-Db4</td>
</tr>
<tr>
<td>Bass 2</td>
<td>E2-C4</td>
<td>D3-F4</td>
</tr>
</tbody>
</table>

The American Academy of Teachers of Singing published the following statement in 1944, updated in 1997:

It is common knowledge that a great many teachers of singing hesitate to permit their pupils to participate in choral singing because experience has proven that due to the unusually high TESSITURA dominating the arrangements of many choral works, harm is done to the voice. In this connection the designation TESSITURA, or ‘heart of the range,’ is used in accordance with the definition given by Grove’s Dictionary as ‘the prevailing or AVERAGE position of the notes in relation to the compass of the voice, whether high, low or medium’, and is not to be confused with the word RANGE. The American Academy of Teachers of Singing believes, 1. that a general tendency exists among composers and arrangers to write parts in a dangerously high TESSITURA, and that continued singing in this TESSITURA is apt to strain and even permanently injure young and adolescent voices and prevent normal development of the vocal apparatus. 2. that the safest and best RANGE and the safest and best TESSITURA for the various voices are as follows (p. 1):
Vance D. Wolverton (1989), in his article *Classifying Voices for Choral Singing*, indicates the following tessitura and range designations:

<table>
<thead>
<tr>
<th>Voice</th>
<th>Tessitura</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenor 1</td>
<td>G3-F4</td>
<td>C3-B4</td>
</tr>
<tr>
<td>Tenor 2</td>
<td>F3-Eb4</td>
<td>B2-A4</td>
</tr>
<tr>
<td>Baritone</td>
<td>C3-Bb3</td>
<td>A2-G4</td>
</tr>
<tr>
<td>Bass</td>
<td>Bb2-A3</td>
<td>F2-E4</td>
</tr>
</tbody>
</table>

Barbara Doscher (1988), states in *The Functional Unity of the Singing Voice*, “In high School, few males sing to F4 with ease; an upper limit of C4 or D4 is more common, especially for the bigger voices” (p. 240)

*Teaching Kids To Sing* and *Directing the Choral Music Program*, both by Kenneth H. Phillips (1996 & 2004), state the following ranges and tessituras for the male changed voice:

<table>
<thead>
<tr>
<th>Voice</th>
<th>Tessitura</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenor 1</td>
<td>G3-D4</td>
<td>D3-A4</td>
</tr>
<tr>
<td>Tenor 2</td>
<td>Eb3-Bb3</td>
<td>Bb2-F4</td>
</tr>
<tr>
<td>Baritone</td>
<td>C3-G3</td>
<td>G2-D3</td>
</tr>
<tr>
<td>Bass</td>
<td>A2-E3</td>
<td>E2-B3</td>
</tr>
</tbody>
</table>
John Baker Hylton, in *Comprehensive Choral Music Education* (1995), outlines the following ranges and tessitura for high school males:

<table>
<thead>
<tr>
<th>Voice</th>
<th>Tessitura</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenor</td>
<td>C3-F4</td>
<td>Bb2-A4</td>
</tr>
<tr>
<td>Bass</td>
<td>G2-C3</td>
<td>E2-E4</td>
</tr>
</tbody>
</table>

Robert Shewan, in *Voice Training for the High School Chorus* (1971) states the following:

> Range defines (1) the extreme notes a singer can sing musically, and (2) the extreme notes of a vocal line in a composition. ‘Correct’ ranges put forth by authors vary greatly. The ranges [I recommend] resulted from a study of ranges recommended by vocal authorities placed in light of my own vocal composition for high school voices. (p. 139)

<table>
<thead>
<tr>
<th>Voice</th>
<th>Range for Mature Singer</th>
<th>Range for Young Singer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenor 1</td>
<td>C3-Ab4</td>
<td>E3-F#4</td>
</tr>
<tr>
<td>Bass</td>
<td>F2-D3</td>
<td>G2-C4</td>
</tr>
</tbody>
</table>

Shewan (1971) states further:

> Tessitura is the singer's comfortable range. Victor Alexander Fields defines it as: ‘That part of the vocal range that can be sung with ease for some time.’ Authorities agree that beginning voice students should limit most of their singing within their tessituras; that is, somewhere in the middle of their ranges. Where this middle area falls varies from one authority to another.
As I analyzed many compositions that worked and failed for my high school choirs, a pattern of tessitura limitations began to take shape. How could I predetermine the success of a composition on the basis of tessitura. First, I studied compositions that were successful. From these I developed a set of tessituras that works for high school voices. (p. 140)

<table>
<thead>
<tr>
<th>Voice</th>
<th>Tessitura</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenor</td>
<td>G3-D4</td>
</tr>
<tr>
<td>Bass</td>
<td>Bb2-Bb3</td>
</tr>
</tbody>
</table>

Don L. Collins in *Teaching Choral Music* (1999) states the following ranges and tessituras:

<table>
<thead>
<tr>
<th>Voice</th>
<th>Tessitura</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenor</td>
<td>D3-Eb4</td>
<td>Bb2-G4</td>
</tr>
<tr>
<td>Bass</td>
<td>Ab2-C3</td>
<td>F2-Eb4</td>
</tr>
</tbody>
</table>

**Tessitura Average Instrument**

The average tessitura range for Tenor 1 and Tenor 2 from the resources consulted is F4 to E5 and E flat 4 to D5, with the full mature vocal range falling between C4-A5 for Tenor 1 and B flat 3-G4 for Tenor 2. The average tessitura range for Baritone and Bass is C4-B flat 4 and A3-G sharp 4, respectively, with the full mature range as G3-C5 for Baritone and F3-B flat 4 for Bass. When there is only one part to analyze a modified tessitura range to accommodate both Tenor 1 and 2 (E flat 3-E flat 4) and Baritone and Bass (A2-B flat 3).
<table>
<thead>
<tr>
<th>Voice</th>
<th>Average Tessitura</th>
<th>Average Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenor 1</td>
<td>F3-E4</td>
<td>C3-A4</td>
</tr>
<tr>
<td>Tenor 2</td>
<td>Eb3-D4</td>
<td>Bb2-G4</td>
</tr>
<tr>
<td>Baritone</td>
<td>C3-Bb3</td>
<td>G2-C4</td>
</tr>
<tr>
<td>Bass</td>
<td>A2-G#3</td>
<td>F2-Bb3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voice</th>
<th>Average Tessitura</th>
<th>Average Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenor 1 &amp; 2</td>
<td>Eb3-Eb4</td>
<td>Bb2-A4</td>
</tr>
<tr>
<td>Baritone &amp; Bass</td>
<td>A2-Bb3</td>
<td>F2-C4</td>
</tr>
</tbody>
</table>
Ohio Music Educators 2009 High School Required SATB Class AA Material

Alleluia from Brazilian Psalm-Composed by Jean Berger

Figure 1a.

Brazilian Psalm- Tenor Part

![Figure 1a. Brazilian Psalm- Tenor Part](image)

<table>
<thead>
<tr>
<th>Note</th>
<th>Healthy Tessitura 87%</th>
<th>High Tessitura 13%</th>
</tr>
</thead>
<tbody>
<tr>
<td>G#3</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>A#3</td>
<td>34%</td>
<td></td>
</tr>
<tr>
<td>B3</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>C4</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>C#4</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>D#4</td>
<td>24%</td>
<td></td>
</tr>
<tr>
<td>E4</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>F4</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>F#4</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>G4</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>G#4</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1b.

Brazilian Psalm- Baritone Part
Figure 1c.

*Brazilian Psalm*-Bass 1 Part

Figure 1d.

*Brazilian Psalm*-Bass 2 Part
The *Alleluia* from Brazilian Psalm falls unquestionably outside of the accepted tessitura threshold cap outlined in this study for the bass voice. While the tenor part is less dramatically so, it too is outside the recommended range. The bass parts are 71% and 81% outside of the recommended tessitura threshold cap. The bass part functions for most of the piece as a drone with repeated low F sharp 3’s in an ostinato rhythmic pattern. The bass is also required to attempt this low tessitura at a piano dynamic marking then, as the music develops, at a forte. The tenor part lies mostly in an acceptable tessitura, with 87% falling within this range. However, the 13% of the piece that is above the recommended tessitura range standard all occurs in the span of 16 measures at the climax of the piece where the tenor part melodically holds the most crucial part. During this section the other parts have ostinati or melodic background material, while the tenor part, marked forte, must trumpet over the other sections through the passaggio and beyond. The baritone part lies almost entirely within the recommended tessitura range standard and is therefore acceptable. Given the excessive range violations for the bass and the
weight placed on the climatic section for the tenor part, the piece is not recommended for the high school choral ensemble.

*Ascendit Deus*- Composed by Peter Philips, Edited by Peter le Huray

Figure 2a.

*Ascendit Deus* - Tenor Part

Figure 2b.

*Ascendit Deus* - Bass Part
The tenor part is 21.3% above the recommended tessitura threshold cap of 10%-12%. The tenor part begins with an ascending triadic pattern climaxing with a repeated G on the fourth measure of the phrase. This pattern is repeated in several permutations. Measure 27 and 28 are particularly troublesome for the vocal health of a young tenor section; in these measures the tenor line, with a measure and a half of F4 and two beats of G4, is exposed without the cover of the other parts. This line is marked mezzo piano, an unhealthy dynamic choice in that range of the voice.

There are small breaks in the high tessitura, but on the whole the duration of notes above the optimum tessitura makes this piece unacceptable. The bass part remains within tessitura threshold caps set forth in this study.

*Beati Quorum Via*- Composed by Charles Villiers Stanford

Figure 3a.

*Beati Quorum Via*-Tenor Part
Figure 3b.

*Beati Quorum Via*-Bass 1 Part

![Diagram showing tessitura distribution](image)

Figure 3c.

*Beati Quorum Via*-Bass 2 Part

![Diagram showing tessitura distribution](image)
Stanford’s *Beati Quorum Via* is an appropriate piece for the young male voice. The tenor and bass 1 parts stay within the 10%-12% tessitura threshold caps. The moments of higher tessitura are presented on closed vowels which can aid in creating the correct vocal posture for passaggio singing, therefore this piece could be used as a possible training vehicle for vocal growth. The bass 2 part is beyond the recommended tessitura standard. The pitch A flat 2 comprises 17.8% of the bass total with F2 and G2 making up only 1.4%. While the bass part is below the tessitura threshold cap of 10%-12%, the majority of the offending notes are a mere half step below the tessitura range standard of A2. The occurrence of the A flat 2 is almost entirely presented on the last page as a bass pedal at a comfortable dynamic level. When one considers the possible advantages of the piece for the tenor and bass 1 voice, as well as the minor infraction of the bass 2 part, this piece seems a good addition to the OMEA list.

*Elijah Rock*-Arranged by Moses Hogan
Figure 4a.

Elijah Rock - Tenor 1 Part

Figure 4b.

Elijah Rock - Tenor 2 Part

Figure 4c.

Elijah Rock - Bass 1a Part
Figure 4d.

_Elijah Rock_- Bass 1b Part

Figure 4e.

_Elijah Rock_- Bass 2 Part
Moses Hogan’s *Elijah Rock* is an exciting choral arrangement of this traditional spiritual. However, it falls far beyond the tessitura range parameters set forth in the study. The piece proves to be incredibly vocally demanding and could easily be considered excessive for most young male voices in range extremes, duration of pitches at those extremes, and dynamic requirements. As with most of Moses Hogan’s excellent arrangements, Elijah Rock is built on ostinato patterns. The lower voices maintain a repetitive four-note ascending ostinato below the tessitura range parameters. This continues unabated, gaining in dynamic and intensity until near the end of the arrangement where the opposite tessitura range parameters are offended; the basses are asked to sing E flat 4 fortissimo on a fermata. The tenors have an ostinato pattern, which complements the bass pattern, both in rhythm and pitch. At the climax of the piece the tenors are asked to sing repeated A4 for 8 measures. Moses Hogan’s arrangement was written for adult voices, not the developing male voice, and thus is potentially damaging to the immature male instrument.
How Lovely is the Dwelling Place-Composed by Johannes Brahms

Figure 5a.

How Lovely is the Dwelling Place-Tenor Part

Figure 5b.

How Lovely is thy Dwelling Place-Bass Part
One can see from the table that the tenor part is significantly above the tessitura threshold caps of 10%-12%. The tenor part is also below the tessitura threshold cap by a small margin. It is clear from the very first phrase of the tenor line that the difficulty of this part lies well beyond the physical limitations of the young tenor voice. Subtle dynamic shadings are required at the onset of the first phrase which is then followed by measures 9 and 10, progressing through the passaggio with a subsequent decrescendo through a G4. Measure 24, which consists of an exposed tenor section solo requiring long phrasing and controlled expressive singing, begins with a piano dynamic marking. The ascent to the climax on measure 29 is preceded by a slow crawl through the passaggio, and the climax arrives on a forte F4 followed by a decrescendo in a descending pitch pattern. This general pattern of high tessitura, romantic phrase contouring, and subtle expressive dynamics continues unabated throughout the entire song. Some of the most challenging singing is required in the fugato section at the end of the piece, measures 127-174. Here the tessitura remains consistently higher than the tessitura range standard used; frequent A flat 4 pitches are required of the tenors in this section. Measures 165-170 require the tenor to sing the pitches F4, F sharp 4, G4, A flat 4, G4, F4 as dotted half notes in a slow tempo while progressing through a gradual crescendo/decrescendo. This challenging tenor part is extremely difficult even for adult tenors, and completely developmentally inappropriate for the high school tenor.

The bass part of Brahms’ piece is more developmentally appropriate than the tenor part, although some of the challenges required of the tenor section, including
high tessitura, are also evident for the bass voice. Measures 32-35 require the bass to sing the pitches D4 (three beats), C4 (three beats), A3, B flat 3, as a section solo in an expressive piano. The long phrasing and subtle dynamics are repeated again in measures 54-57. As with the tenor part, some of the most demanding tessitura is required in the fugato section at the end of the piece; frequent E flat 4 and D4 pitches are required. While the lower tessitura of the bass part is generally acceptable, the higher tessitura, in the manner in which it is written by Brahms, is quite challenging and beyond the vocal maturity of most high school basses. It is the researcher’s opinion, based on this study, that it is safer to set this piece aside until the males are developmentally ready to experience this masterwork of the choral tradition.

\[O \textit{Danny Boy}\text{-Arranged by Fred Prentice}\]

\textit{Figure 6a.}  

\textit{O Danny Boy-Tenor 1 Part}
Figure 6b.

*O Danny Boy*-Tenor 2 Part

Figure 6c.

*O Danny Boy*-Bass 1 Part
This beautiful arrangement of *O Danny Boy* by Fred Prentice is appropriate for the young male voice with the sole exception of the bass 2 voice, which is beyond the tessitura threshold cap by 21.3%. The bass part exceeds the tessitura range parameters primarily with three pitches (E flat 2, F2, and A flat 2) which are
approached by leap and usually function as a dominant or tonic pedal. If a choir director did choose to program this piece, regardless of the warning signs in the bass 2 part, it would be advisable to put only the basses that had significantly matured voices on the lowest part.

*O Nata Lux* - Composed by Morten Lauridsen

Figure 7a.

*O Nata Lux*-Tenor Part

Figure 7b.

*O Nata Lux*-Bass 1 Part
Morten Lauridsen’s compositional vocabulary in *O Nata Lux* features frequent homophonic textures, often including tonal clusters, and syllabic text settings, combined with a smaller range of pitches. This pleasing combination of developmentally appropriate range and lush texture makes Lauridsen's *O Nata Lux* setting an acceptable, yet challenging, piece for high level choirs.
Regina coeli- Composed by Luke Mayernik

Figure 8a.

Regina coeli- Tenor 1 Part

Figure 8b.

Regina coeli- Tenor 2 Part

Figure 8c.
Luke Mayernik is an organist and composer. The influence of his organ is present in the thick homophonic textures undergirded by the male choral parts. The mood of the piece is tranquil and subdued and moves slowly at a metronome marking of sixty. The bass 2 part functions as a pedal, much like an organ pedal,
and accounts for the tessitura threshold cap offense of 21.5%. Besides the bass 2 part, however, the other voices function mostly within an acceptable range, and phrase contouring is healthy and appropriate. The tenor 2 part is above the tessitura threshold by a slight 1.3% on the E flat 4. This occurs at doublings with the tenor 1 part and could be easily remedied by the tenor 2 section singing the bass 1 part instead of the tenor 2 part at that point in the piece. Since the tenor 1 section would already be singing the offending notes, both parts would be covered. While this would fix the tenor 2 range violations, the bass 2 part is key to the composition and can not be rewritten. As with *O Danny Boy*, the choral conductor should put only the most mature bass voices on the bass 2 part. However, even with these considerations and adjustments, the range violation of the bass 2 part necessitates the exclusion of this piece from a list based on the parameters set forth in this study.

*Sing Unto God*- Composed by George F. Handel

Figure 9a.

*Sing Unto God*- Tenor Part
This piece from Handel’s oratorio *Judas Maccabaeus* is a masterpiece in the canon of choral repertoire and should be experienced by all those who love to sing choral music. However, as with most pieces in the Handel choral repertoire, the tessitura in this selection can become exhausting. To some degree, *Sing unto God* combines the difficult melisma work in *And He Shall Purify* and the trumpet-like range.
extremes in the *Hallelujah* chorus, both pieces from Handel's famous oratorio *Messiah*.

The piece begins with the tenors at the top of the staff with repeated E4 and F4, both in episodic melismatic patterns and individual notes. The basses are in the extremes of their range as well, climbing up to repeated E4 notes. In fact, the bass part does not get below the pitch D3 in the entire piece, removing the comfortable and vocally relaxing elements of their lower range. The total tessitura violation for the bass high range category is 15.9 percent. The tenors' total is 21.6%, with the bulk of the offending notes occurring on the passaggio note F sharp 4 and an occasion G4 approached by step. The entire piece is performed forte. The level of technical skill required to sing this difficult piece is high and well beyond the vocal maturity of many adults, let alone the young male voice. This choral gem, based on the standards set forth in this study, must be saved until the voices are older and more mature.

*Sleep*-Composed by Eric Whitacre

Figure 10a.

*Sleep*- Tenor 1 Part
Figure 10b.

Sleep - Tenor 2 Part

Figure 10c.

Sleep - Bass 1 Part
Figure 10d.

*Sleep*-Bass 2 Part

Eric Whitacre’s moving setting of the Charles Anthony Silvestri poem *Sleep* is very challenging for the bass 2 section, which needs to facilitate through a nearly two-octave range. The bass 2 part begins low, and dips down to its lowest pitch of E flat 2. This generally low texture continues till measure 14 where the bass section must abruptly navigate two octaves up from a low E flat 2 to a D4 with little preparation.
and then maintain that general tessitura through measure 15. Possibly the most challenging singing occurs in measures 27-35. Here the bass section is anchoring the choir to c minor tonality by sustaining a C4 the entire eight measures at the dynamic level of pianissimo. After more oscillation between the two extremes of range, the bass part concludes as it began. The bass 2 part is 39.5% below the tessitura threshold cap used in this study and 14.9% above the tessitura range parameters. Only 45.6% of the notes in this piece fall within the healthy tessitura range. The bass 1 part is less extreme, yet still beyond an acceptable range; 17% of the pitches fall above the tessitura range parameters. Though this piece is a powerful testament to Eric Whitacre’s skill as a master composer, it falls far beyond the tessitura parameters used in this study and could potentially be damaging to young voices.

*Verbum Caro Factum Est*-Composed by Hans Leo Hassler, Edited by John Leavitt

Figure 11a.

*Verbum Caro Factum Est*-Tenor 1 Part
Figure 11b.

*Verbum Caro Factum Est*- Tenor 2 Part

Figure 11c.

*Verbum Caro Factum Est*- Bass 1 Part
Hans Leo Hassler’s *Verbum Caro Factum Est* is a great example of a Renaissance masterwork that fits within tessitura parameters outlined in this study. The texture of the piece is primarily homophonic with occasional rapid descending notes. The tenor 1 part is a mere 2% above and 4.7% below the tessitura threshold caps. The tenor 2 part is slightly more concerning with 11.3% above the tessitura threshold cap, but still below the 12%. The majority of the 11.3% is made up of repeated E4 pitch class. The bass part is 4.7% below the recommended tessitura threshold cap, well within the accepted range. This piece represents a good vehicle for teaching Renaissance styling and phrasing within a healthy tessitura for the male voice.

*Virga Jesse Floruit*-Composed by Anton Bruckner

Figure 12a.

*Virga Jesse Floruit*-Tenor 1 Part
Figure 12b.

*Virga Jesse Floruit*-Tenor 2 Part

Figure 12c.

*Virga Jesse Floruit*-Bass 1 Part
Anton Brucker's setting of *Virga Jesse Floruit* represents a wonderful example of a pivotal romantic choral work. The compositional elements that make this piece characteristically Romantic are the extremes in dynamic range within a very short duration, extremes in pitch, and a harmonic vocabulary that utilizes an expanded tonality. The compositional elements in this Bruckner selection that are most
problematic for the young male are the dynamic demands and the extremes in pitch, and these challenging elements present themselves immediately. The first measure of the piece requires the tenor to sing an E4 piano for a measure; eleven measures later he is required again to sing a piano, this time on G4. The same G4, marked fortissimo, appears six measures later. The extremes in dynamics and pitch continue throughout the piece until measure 68 where the tenor is marked fortissimo on G sharp 4, followed by a pianissimo marking a measure later. The final few measures require the tenors to sing a high B4 on a forte dynamic. This note is marked falsetto, which makes the forte marking curious, since singing in the falsetto voice for the male does not normally produce a true forte. The tenor 1 part is 9.4% above the tessitura threshold cap and the tenor 2 part is 33.8% above. The bass parts are perhaps even more demanding: the bass 1 part is 13.7% above and 31.6% below the tessitura threshold cap and the bass 2 part is 28.9% above and 22.3% below. As with the tenor part, drastic changes in dynamics are common in this setting, though the range required of the bass is wider and more problematic. In measure 21, the bass part, marked forte, oscillates back and forth over an octave from a B flat 3 or C4 down to G flat 2. At the climax of the piece at measure 65, basses are expected to sing a C sharp 4 marked forte-fortissimo for four measures followed by piano expressive singing on an F sharp 2, before finishing the piece on a pedal of low E2 for 9 measures. One cannot deny the magnificent place this piece has in the canon of romantic choral music, however the piece far exceeds the tessitura standards used in this study.
Ohio Music Educators 2009 High School Required SATB Class A Material

*And In That Day* - Composed by John Ness Beck

Figure 13a.

*And In That Day*- Tenor Part

![Tessitura Chart for Tenor Part](image)

- **Low Tessitura**: 0.7%
- **Healthy Tessitura**: 78.3%
- **High Tessitura**: 21.4%

Figure 13b.

And In that Day- Bass 1 Part

![Tessitura Chart for Bass Part](image)

- **Healthy Tessitura**: 92.1%
- **High Tessitura**: 7.9%
And In That Day- Bass 2 Part

And In That Day by John Ness Beck is 21.4% above the tessitura threshold cap for the tenors and 14.9% above for the bass 2 section. In the tenor part these range violations come mostly with the pitch E4 where the tenor part is 15.6% above the recommended parameter. The bass part is only 2.9% over the recommended limit with a larger swath of pitches causing the range violation. The piece is an uplifting fast tempo anthem in praise of God. Other than the range violations, this piece does not present significant vocal challenges in any other way.

Domine, labia mea aperies- Composed by Orlando Lassus,- Edited by Charlene Archibeque

Figure 14a.

Domine, labia mea aperies- Tenor Part
Charlene Archibeque’s arrangement of *Domine, labia mea aperies* is rather high for the men. The tenor part is 21.2% over the tessitura threshold cap while the bass is 16.3% over. The bass part begins with some very delicate piano singing on E flat 4, and the tenor has similar subtle expressive singing on G4. As with most Renaissance choral music, the piece asks for a transparent, vibrato-less tone so the music can
carry clearly in churches and acoustically live venues. This tone quality presents its own problems when required of immature voices. This piece would not be included in a list that was based on the tessitura standards used in this study.

*Echo-Composed by Robert H. Young*

Figure 15a.

*Echo-Tenor 1 Part*

![Diagram of Echo-Tenor 1 Part]

Figure 15b.

*Echo-Tenor 2 Part*
Figure 15c.

*Echo*-Bass Part

*Echo* by Robert H. Young represents a good example of a piece to be included in a high school required list. The tessituras are all within acceptable range and tessitura parameters with the exception of the bass part which is a mere 1.9% percent over the limit. Even the bass part, however, is relatively non-offensive in its violation since the majority of the lower range extension is on pitch A flat 2, a mere
half step below the recommended parameter. The piece presents no other vocal concerns.

*Even When God is Silent*-Composed by Michael Horvit

Figure 16a

*Even When God is Silent*- Tenor Part

![Graph showing tessitura percentages for Even When God is Silent - Tenor Part.]

Figure 16b.

*Even When God is Silent*- Bass Part
Even When God is Silent by Michael Horvit is a very healthy choral anthem for high school singers. The bass part is 96.5% within the healthy range. The tenors are 88.5% within the healthy range. There is a climatic moment in the piece could serve as training for the male higher voice. On the text ‘I believe in God’, the tenors and basses go through the passaggio, tracking an E flat major scale. The conductor could instruct both vocal parts to position the vowels more towards the closed [i] or [u]. This vowel modification would achieve the correct vocal posture for the males to negotiate this very difficult area in the male voice.

Flower of Beauty-Composed by John Clements

Figure 17a.

Flower of Beauty-Tenor 1 Part
Figure 17b.

*Flower of Beauty*-Tenor 2 Part

![Graph showing percentage distribution of tessitura]

- Healthy Tessitura 98.7%
- High Tessitura 1.3%

Figure 17c.

*Flower of Beauty*-Bass 1 Part

![Graph showing percentage distribution of tessitura]

- Healthy Tessitura 93.1%
- High Tessitura 6.9%
John Clements’s stunningly beautiful setting of *Flower of Beauty* presents little in the way of challenges for the tenor parts, yet the bass parts are challenged with some significant tessitura violations. The bass 2 part is in excess of the tessitura threshold cap by 21.9% below and 15.1% above. The bass 1 part is 32.8% below the tessitura threshold cap. Fully 25% of the range violations for the bass 1 are on the pitch B flat.
2. Clements’s piece does not require the basses to sing in extreme dynamics, or in phrases that require romantic contouring as we have seen in some of the aforementioned pieces. This piece is simply beyond the tessitura parameters used in this study.

_Gloria Patri_- Composed by Giovanni Battista Pergolesi, edited by Patrick M. Liebergen

Figure 18a.

_Gloria Patri_- Tenor Part

![Graph showing tessitura distribution for the tenor part of Gloria Patri.]

Figure 18b.

_Gloria Patri_- Bass Part
As with many classical compositions, this energetic setting of the Gloria Patri text by Pergolesi has some very challenging singing. This is true especially for the tenor part, which is 28.3% above the tessitura threshold cap. The piece is in B flat major and the tenor has been given the fifth in the chord, F4, in the amount of 17.7% above the tessitura threshold cap. The high tessitura is often approached by step through the passaggio and left the same way, often in eight-note roulades which are in thirds, fourths and fifths with the bass or alto part. At times the tenor functions as harmonic scaffolding; the harmony goes from tonic to dominant and the tenor’s F4 serves as a tonal center. Alternately the tenor part is more declamatory, trumpeting the majestic Gloria Partri text at high dynamic levels and typically at the top of the tenor staff or above. This is a wonderful piece for *experienced* tenor voices, but is not appropriate for high School males based on the standards set forth in this study.

*Hark All Ye Lovely Saints Above*-Composed by Thomas Weelkes

Figure 19a.
**Hark All Ye Lovely Saints Above**- Tenor Part

![Tessitura Chart for Tenor Part](chart.png)

Figure 19b.

**Hark All Ye Lovely Saints Above**- Bass Part

![Tessitura Chart for Bass Part](chart.png)

**Hark, All Ye Lovely Saints Above** is a perfect example of a vocally appropriate piece for a young high school choir. The tenor is 1.5% over on the high end of the tessitura threshold cap and 3.8% over on the low end of the tessitura threshold cap, both of which are well within the range set out in this study for the tenor voice. The
bass is a miniscule .4% over the limit on the low end of the tessitura threshold cap. Despite this small violation in the bass part, this piece should be included in a high school repertoire list.

*O Clap Your Hands*-Composed by John Rutter

Figure 20a

*O Clap Your Hands*-Tenor Part

Figure 20b.

*O Clap Your Hands*- Bass Part
Rutter’s *O Clap Your Hands* is an uplifting and exciting anthem for organ and mixed choir. It seems this arrangement was written with very high male voices in mind. The male voices are at the top of their respective staves for a majority of the piece. The bass part is 42.2% above the tessitura threshold cap while the tenor is 21.6% above. It seems as if the voices are competing with the organ in the most climactic moments of the piece, which perhaps explains why Rutter set the male parts so high; only then could the voices hope to compete with the organ in volume.

However, for the young, immature male voice without the proper technique, this anthem presents significant challenges. The range violations would most likely be performed with shouts and straining rather than an appropriate healthy vocal posture. Young vocal instruments of this age are most likely unable to achieve, let alone maintain, the technique required. This piece was written for Rutter’s professional adult chamber choir. It would be best to save this piece for a college level or excellent church ensemble.
*Omnia Sol*- Composed Z. Randall Stroope

Figure 21a.

*Omina Sol*- Tenor Part

![Tenor Part Diagram]

Figure 21b.

*Omina Sol*- Bass Part

![Bass Part Diagram]

Z. Randall Stroope's *Omnia Sol* is very good example of a healthy twenty-first century choral piece composed specifically for the high school choir market. An
internet search on the piece revealed that it has been performed at countless choral festivals and workshops throughout this country since its composition in 2006. The tenor part is a very small .6% in excess of the tessitura threshold cap on the low end of the range parameters. The bass part is within the margin of acceptance. The piece is a moving, expressive “song of parting” and is rightfully included in many high school choir adjudicated lists.

*She Walks In Beauty*-Composed by David Foltz

Figure 22a.

*She Walks In Beauty*-Tenor Part

![Chart showing the tessitura of the tenor part of *She Walks In Beauty*.](image-url)

Figure 22b.

*She Walks In Beauty*-Bass 1 Part

![Chart showing the tessitura of the bass part of *She Walks In Beauty*.](image-url)
She Walks in Beauty- Bass 2 Part

Figure 22c.

She Walks In Beauty by David Foltz has range violations in excess of the parameters set forth in this study for both the tenor 1 part and the bass 2 part. The bass 2 part is 22.7% above and 13% below the tessitura threshold caps. The tenor part is 13.9% above the tessitura threshold cap. The bass part presents the most challenges for the young male voice and choir director. It begins on E3 and
descends to E2 on a piano dynamic marking, only to skip up to C sharp 4 on the same dynamic level. Many times in the piece the bass parts are unison and quite high for the bass 2. The end is particularly difficult for the low male voice; after some very low expressive singing at E2 and F2, basses are asked to sing C sharp 4 for a measure at forte-fortissimo. The tenor part also has challenging moments for the healthful singing of a young male voice, but the difficulty does not approach that of the bass voice. The piece would not be an acceptable choice according to the tessitura parameters set forth in this study.

*Walk Together Children*-Composed by Moses Hogan

Figure 23a.

*Walk Together Children*-Tenor 1 Part

Figure 23b.

*Walk Together Children*-Tenor 2 Part
Figure 23c.

Walk Together Children-Bass 1 Part

Figure 23d.

Walk Together Children-Bass 2 Part
Moses Hogan's spiritual arrangements are a delight to perform and hear, but as with the other Hogan arrangement reviewed in the previous section the tessitura violations in this selection make his arrangements more appropriate for a college or adult choir. The piece is made up of small melodic elements. These elements frequently repeat with minor variations in text and pitch. These pitch variations add a layer of freshness and excitement to this piece, which has few melodic subjects. Often these additions are in the tenor part, making this already vocally-challenging part harder to sing. The tenor 1 part is 31.5% above the tessitura threshold cap and the tenor 2 part is 28.1% above. The bass 1 part is 16% above the cap. This piece would not be an acceptable choice based the tessitura parameters set forth in this study.

*Zion's Walls*-Composed by Aaron Copland, arranged by Glenn Koponen

Figure 24a.

*Zion's Walls* Tenor 1 Part
Figure 24b.

Zion’s Walls Tenor 2 Part

Figure 24c.

Zion’s Walls-Bass Part
Aaron Copland's *Zion's Walls* arranged by Glenn Koponen is another good example of a twentieth-century piece with roots that go much farther back in Americana. The original melody and words were taken from *The Sacred Harp* published in 1855. Copland also uses this melody in *The Promise of Living*, which is the finale of the second act to his opera *The Tender Land*. In the spirit of inclusive teaching, this piece could offer many opportunities for the choir director to instruct the students on shape note singing, Appalachian folk songs, *The Sacred Harp*, early American farm life, and an important twentieth-century America composer. As a choral arrangement this piece offers little in the way of challenges for the tenor voice in terms of tessitura. The tenor 1 part is 7.5% above the tessitura range cap. The tenor 2 part is 8.4% above. The bass part, however is 15.8% above the tessitura threshold cap, which makes a violation of 3.8%. The entire violation occurs on C4, a whole step above range parameter of B flat 3. *Zion’s Walls* is in a 6/8 time signature and the bass notes are often set as eighth notes with the C4 notes approached quickly and left in a likewise manner. A choir director would have to evaluate if the
bass section could handle the range violations without undue strain or damage. However, with the range violations to the bass voice this piece would not be included in a list based on the parameters set forth in this study.

Ohio Music Educators 2009 High School Required TTBB Class AA Material

**Alleluia**-Composed by Randall Thompson

Figure 25a.

**Alleluia**- Tenor 1 Part

![Graph showing tessitura distribution for Alleluia Tenor 1 Part]

Figure 25b.

**Alleluia**- Tenor 2 Part
Figure 25c.

*Alleluia*-Bass 1 Part

Figure 25d.

*Alleluia*-Bass 2 Part
Randall Thompson’s famous *Alleluia* setting is well loved throughout the choral world. Unfortunately, this arrangement for a cappella male choir pushes the boundaries of what is considered healthy for the young bass voice. The tenor parts are within the margin of acceptability, as is the bass 1 part. The bass 2 part is most concerning with 7.6% above and 18.7% below the tessitura threshold caps, requiring a full two octaves of usable range. During the most climactic portion of the piece the bass 2 part must perform D4 at a forte dynamic for three measures only to be followed by octave leaps on A2 and A3 descending to a low D2 as the piece draws to a close and returns to the tonal center of D major. Besides being an absolutely exquisite piece of choral music, the value of this arrangement for the young male singer lies in its potential as a training vehicle for the male high range. The only text within the entire piece is “Alleluia”. Thompson has wisely set the closed vowel [u] on many of the climactic high notes as well as many of the moving notes up and through the passaggio. However, the piece would not be included in a repertoire list due primarily to the bass 2 tessitura violations.
Ave Maria—Composed by Tomas Luis de Victoria, edited by Robert Sunday

Figure 26a.

Ave Maria—Tenor 1 Part

Figure 26b.

Ave Maria—Tenor 2 Part

Figure 26c.
Ave Maria-Bass 1 Part

Figure 26d.

Ave Maria-Bass 2 Part

Tomas Luis de Victoria’s setting of Ave Maria is probably one of the most performed late Renaissance choral pieces in the canon of Renaissance choral music. Victoria’s sacred music displays a strong influence of his musical mentor Giovanni Pierluigi Palestrina. His music is composed in a more free style of harmony and melody than
his contemporaries, who were looking more toward the eventual *seconda practica* of the 16th century. While the piece is well-loved, as an arrangement for a young TTBB men’s choir it presents many tessitura violations. The tenor 1 part is 31.7% above the tessitura threshold cap. The tenor 2 part is within the margin of acceptability at 6.7% above the tessitura threshold cap. The bass 1 part is 20.6% above the tessitura threshold cap and the bass 2 part is 16.6% beyond. As with many Renaissance pieces the tempo has a metronome marking of 60. The piece moves quite slowly through the high tessitura, and the long phrases require significant vocal skill to negotiate these passages in a healthy manner. The famous work would not be included in a list that seeks to uphold the tessitura standards used in this study.

*Daemon Irrepit Callidus*-Composed by György Orbán

Figure 27a.

*Daemon Irrepit Callidus*-Tenor 1 Part
**Figure 27b.**

*Daemon Irrepit Callidus*-Tenor 2 Part

**Figure 27c.**

*Daemon Irrepit Callidus*-Bass 1 Part
Figure 27d.

_Daemon Irrepit Callidus_- Bass 2a Part

Figure 27e.

_Daemon Irrepit Callidus_- Bass 2b Part
Daemon Irrepit Callidus by György Orbán is a high-energy piece that dramatically sets its very and descriptive text. The first verses translates:

The Demon sneaks expertly  
Tempting the honorable heart;  
He sets forth trickery amidst praise, song and dance.  
However amiably the Demon acts,  
It is still worth less than the heart of Jesus.

The piece is based on a constant eighth note pulse that functions as a propelling and energizing force. In the beginning of the piece this eighth note pulse comes as an oscillating D4 and C sharp 4 in the tenor 1 part, which is interrupted by bursts of the primary motivic interest in the bass parts at pitch D4 marked forte. Dynamic contrast is used extensively in the setting as it helps paint this battle between the “Demon” and the “honorable heart”. These dynamic contrasts also coincide with some of the larger range violations. In measure 15 the tenor 1 section, still in a constant eighth note pulse, oscillates on G4 and F sharp 4 at the dynamic level of fortissimo. Soon after, in measure 25, the opposite extreme is explored as the bass sections again present the primary motivic material on D4, though now at a piano
dynamic marking. The tenor 1 part is 16% above the tessitura threshold cap. The tenor 2 and bass 1 parts are within the margin of acceptability. The bass 2a part is 17.7% above the tessitura threshold cap and 5.9% below. The bass 2b part is 17% above and 14.2% below. This piece would not be included in a high school music list using the tessitura parameters set forth in this study.

*Deep River*-Arranged by H.T. Burleigh

Figure 28a.

*Deep River*-Tenor 1a Part

Figure 28b.

*Deep River*-Tenor 1b Part
Figure 28c.

Deep River - Tenor 2 Part

Figure 28d.

Deep River - Bass 1 Part
Figure 28e.
Deep River-Bass 2a Part

Figure 28f.
Deep River-Bass 2b Part
Deep River arranged by H.T.Burleigh was written for, and has been recorded by, the all male group Cantus. Cantus is a full-time professional male vocal ensemble and has become one of the most sought-after groups in the country. H.T. Burleigh must have had Cantus’ ranges in mind when he fashioned this arrangement because the tessitura is quite challenging. The tenor 1a and 1b parts are 16% above the tessitura threshold caps. The bass 2a is 14.6% below the tessitura threshold cap set forth in this study and the bass 2b is 41.7% below. The piece begins lento as the tenor 1 part slowly crawls up to a G flat 4 marked piano with a fermata, and the bass down to G flat 2. This high tessitura piano singing continues throughout most of the piece for the tenor, and the incredibly low pitch demands placed on the bass voice also continue unabated. The section marked poco animato presents an exception, where at the most climactic moment in the piece, the tenor 1 section has a B flat 4 marked forte (measure 25). This same B flat 4 is found again at the end of the piece, although here marked with a piano and decrescendo. The two middle parts of the arrangement, the tenor 2 and bass 1 parts, present no challenges in terms of range.
The melody finds its way mostly in the bass 1 part. Both bass 2 parts are beyond the limit of acceptability. The bass 2b section is dramatically beyond the limit with only 58.3% of the notes within the healthy range parameters. This arrangement is best left to a college level or professional level choir.

*The Fear Of The Lord*- Composed by Michael Cox

Figure 29a.

*The Fear Of The Lord*- Tenor 1 Part

Figure 29b.

*The Fear Of The Lord*- Tenor 2 Part
Figure 29c.

*The Fear Of The Lord*-Bass 1 Part

Figure 29d.

*The Fear Of The Lord*-Bass 2 Part
The Fear Of The Lord by Michael Cox is a very difficult piece in terms of tessitura for men’s choir; every part is above the tessitura threshold caps used in this study. The tenor 1 and tenor 2 parts are 26.1% and 23.1% above the tessitura threshold cap, respectively. The bass 1 and 2 parts are above the caps with 33.7% and 43.3%.

From the very beginning of the piece, the range limits are violated. The initial melodic material for the vocal line has the bass 1 and bass 2 parts singing in unison a phrase that crests at E4 for one and a half beats; the phrase then repeats after 2 beats on D4. The initial tenor line crests with an A4 followed by a G4 for eight beats marked forte. The tenor then sings a B4 and maintains that general tessitura for the next 8 measures. The piece is quite long with a total of 224 measures and there are only small moments of respite where the middle parts sing in a more acceptable range. The moments of extreme tessitura and dynamics seem to punctuate the entire piece. This piece would not be included on a high school repertoire list that used this study’s tessitura standards as a guide.
Good Old Goober Peas!-Arranged by Wallace De Pue

Figure 30a.

Good Old Goober Peas!-Tenor 1 Part

![Bar graph showing the distribution of notes played by the tenor 1 part.]

Figure 30b.

Good Old Goober Peas!-Tenor 2 Part

![Bar graph showing the distribution of notes played by the tenor 2 part.]

Figure 30c.

Good Old Goober Peas!-Bass 1 Part

1.1% 0.4% 1.3% 2.2% 0.7% 6.0% 0.5% 3.8% 12.3% 12.3% 8.6%

0.0% 2.0% 4.0% 6.0% 8.0% 10.0% 12.0% 14.0% 16.0% 20.0% 22.0% 24.0% 26.0% 28.0% 30.0% 32.0% 34.0% 36.0% 38.0% 40.0% 42.0% 44.0% 46.0% 48.0% 50.0% 52.0% 54.0% 56.0% 58.0% 60.0% 62.0% 64.0% 66.0% 68.0% 70.0% 72.0% 74.0% 76.0% 78.0% 80.0% 82.0% 84.0% 86.0% 88.0% 90.0% 92.0% 94.0% 96.0% 98.0% 100.0%

C#3 D3 D#3 E3 F3 F#3 G3 G#3 A3 A#3 B3 C4 C#4 D4 D#4 E4 F4 F#4 G4 G#4 A4
Figure 30d.

*Good Old Goober Peas!*-Bass 2 Part

*Good Old Goober Peas!*, arranged by Wallace De Pue, is a humorous civil war song from the perspective of the southern side in which the singer laments the poor condition of his diet, primarily made up of goober peas or boiled peanuts. This arrangement is accompanied by a jug band of combs, slide whistle, tablespoons, and a tin cup. As with most folk songs, the piece includes verses alternated with a
refrain, and the melodic content is simplistic, repetitive and follows an antecedent-consequent phrase structure. De Pue does a good job of taking this very basic folk song and turning it into an interesting and engaging piece. The verses are split between the basses, tenors and the solo quartet, and entire choir sings the refrains, which vary in texture, shape, tempo and style. To add a layer of interest to the setting the composer modulates to a higher key three times in the piece. The tenor 1 part is 19.2% above the tessitura threshold caps the tenor 2 is 12.7% above. The bass 1 part is 19.5% above and the bass 2 part is within the margin of acceptable tessitura. While I believe the humorous nature of the piece and the simplicity of the melodic content would be very attractive to young males, the tessitura does present a challenge to a choir director looking to keep within a healthy tessitura range.

*I'm Gonna Sing!* Composed by Robert Hunter

Figure 31a.

*I'm Gonna Sing!* Tenor 1 Part
Figure 31b.

*I'm Gonna Sing!* Tenor 2a Part

![Graph](image)

- Low Tessitura: 6%
- Healthy Tessitura: 72.2%
- High Tessitura: 21.8%

Figure 31c.

*I'm Gonna Sing!*- Tenor 2b Part

![Graph](image)

- Low Tessitura: 5.8%
- Healthy Tessitura: 72.4%
- High Tessitura: 21.7%

Figure 31d.

*I'm Gonna Sing!*- Bass 1a Part

![Graph](image)

- Low Tessitura: 6%
- Healthy Tessitura: 72.2%
- High Tessitura: 21.8%
Figure 31e.

*I’m Gonna Sing!* Bass 1b Part

Figure 31f.

*I’m Gonna Sing!* Bass 2 Part
"I'm Gonna Sing!" by Robert Hunter is a joyous encore piece for an adult or college level men’s choir. The textual and melodic phrase structures are intertwined and follow a common pattern throughout the arrangement. The primary textual phrase begins at measure 5: "I'm gonna sing, Oh Lord, I'm gonna sing, Oh Lord, I'm gonna sing my love for you." Musically, the entire spiritual is composed of a four-measure melodic phrase that follows the textual phrase. There are six verses, and each new verse modulates up a half step or a whole step while the piano part steadily becomes thicker and more complex. Near the end of the piece the piano is instructed to improvise in a “revival” style. The choral parts also add layers of complexity with added notes. The verses progress from choral unison, to a split of five or six parts. In terms of range, every vocal part in this arrangement is over the tessitura threshold cap set out in this study. The tenor 1 part is 33.2% over the tessitura threshold cap. The tenor 2a is 21.8% over and 6% under the tessitura threshold caps while the tenor 2b part is 21.7% above and 5.8% below the caps. The bass 1a and bass 1b parts are 24% and 24.8% above the recommended caps.
The bass 2 part is 21.2% above and 3% under the tessitura threshold caps. This piece, though vibrant and valuable for older male singers, would not be included in a list for high school male voices that followed the parameters set forth in this study.

*O Vos Omnes*-Composed by Pablo Casals

Figure 32a.

*O Vos Omnes*-Tenor 1a Part

![Diagram of tessitura levels for *O Vos Omnes* Tenor 1a Part]

Figure 32b.

*O Vos Omnes*-Tenor 1b Part
Figure 32c.

**O Vos Omnes**-Tenor 2a Part

![Graph showing frequency distribution of notes with percentages]

Figure 32d.

**O Vos Omnes**-Tenor 2b Part

![Graph showing frequency distribution of notes with percentages]
**Figure 32e.**

*O Vos Omnes*-Bass 1 Part

**Figure 32f.**

*O Vos Omnes*-Bass 2 Part
Pablo Casals's hauntingly beautiful *O Vos Omnes* setting is most definitely a gem in the canon of twentieth-century choral music. The original setting by Casals is for mixed ensemble. Perhaps in its original mixed choir version it would be more developmentally appropriate for a young male ensemble. However, this arrangement is unfortunately not within the healthy standards set forth in this study, specifically for the bass 2 voice. The piece is written in c minor and has a very somber, dark quality throughout. Possibly this explains the low tessitura violations in the bass 2 and the low ranges at or near capacity in the tenor 2 and bass 1 parts. The tenor 1a and 1b parts are within the acceptable range set fourth in this study. The tenor 2a and 2b parts are 12.1% beyond the tessitura threshold caps. The bass 1 part is 11.5% below the accepted tessitura range and the bass 2 part is 46.9% beyond the tessitura threshold cap. This piece would not be included in a high school repertoire list that used the parameters set forth in this study.
She Is My Slender Small Love- Composed by Eric H. Thiman

Figure 33a.

She Is My Slender Small Love-Tenor 1 Part

Figure 33b.

She Is My Slender Small Love-Tenor 2 Part

Figure 33c.

She Is My Slender Small Love-Bass 1 Part
Figure 33d.

*She Is My Slender Small Love*-Bass 2 Part

*She Is My Slender Small Love* by Eric H. Thiman is an a cappella arrangement of the endearing Sydney Bell poem, which honors the author's "soon to be bride" with her "little white feet and shining hair". The arrangement is constructed in two measure phrases that closely mirror the textual phrases of the poem. Written in the lush key of E flat, the piece displays moments of closely structured "barbershop" part writing.
in a homophonic texture as well as expansive individual section characteristics. Also found in the arrangement are very tender 2-1 and 4-3 suspensions, moments of subtle delicate dynamics, and impassioned testaments of devotion. As with many of these TTBB arrangements, the middle parts are within the margin of acceptability while the outer tenor and bass voice parts are beyond the realm of acceptability. The tenor 1 part is 24.9% over the tessitura threshold cap on the high end of the scale while the bass is 29.2% over on the lower scale end. Some of the subtle and delicate dynamics described earlier are written for the tenor 1 on an exposed A flat 4. This occurs in both the opening and the closing sets of phrases. It is possible an advanced high school tenor section could handle the tessitura demands, but the singing required for this piece is as skilled and precious as the text and would demand considerable technical ability to negotiate. This piece would not be included in a repertoire list based on the parameters set forth in this study.

Sing Me To Heaven- Composed by Daniel E. Gawthrop

Figure 34a.

Sing Me To Heaven-Tenor 1a Part
Figure 34b.

_Sing Me To Heaven_-Tenor 1b Part

Figure 34c.

_Sing Me To Heaven_-Tenor 2 Part
Figure 34d.

_Sing Me To Heaven_- Bass 1a Part

Figure 34e.

_Sing Me To Heaven_- Bass 1b Part
Figure 34f.

*Sing Me To Heaven*-Bass 2 Part

*Sing Me To Heaven* is a beautifully touching arrangement of this Jane Griner poem. The octavo is better known as an SATB arrangement but works well as a TTBB arrangement for mature male voices. As with many of the other TTBB arrangements in this study, the middle parts are within an acceptable range while the outer tenor and bass voices are beyond the range parameters set forth in this
document. The tenor 1a and 1b parts are 25.9% and 23% beyond the recommended tessitura threshold caps respectively. The bass 2 part is marginally over the limit for the lower end of the tessitura standard with 14.6%. Tessitura violations in the tenor 1a part are the most concerning, where the tenor is required to sing C5 and B flat 4. The piece unfolds with a simple statement of the main thematic material in the tenors. This material is passed on to the basses in measure 8. At the text ‘wraps me in song’, the four individual parts come together, and move homophonically for most of the piece. The textual phrase and musical phrases are configured in two measure increments. At climatic moments the outer voices are required to perform range violations at both ends of the dynamic spectrum. The piece ends with the tenors floating a G4 and A4 for 9 measures at a piano dynamic, very difficult even for a skilled singer.

*Stars I Shall Find*-Composed by David Dickau

Figure 35a.

*Stars I Shall Find*-Tenor 1a Part
Figure 35b.

*Stars I Shall Find*-Tenor 1b Part

Figure 35c.

*Stars I Shall Find*-Tenor 2 Part
Figure 35d.

*Stars I Shall Find*-Bass 1a Part

Figure 35e.

*Stars I Shall Find*-Bass 1b Part
With the exception of the tenor 1a part, which is over the tessitura threshold cap by 3.8%, *Stars I Shall Find* by David C. Dickau is appropriate for a high school men’s choir. While this piece would not be included in a high school repertoire list which used Shewan’s tessitura guidelines strictly, the researcher was conflicted about whether to include this piece as an acceptable AA high school male selection. Every
piece of male repertoire in the AA category thus far reviewed has been deemed inappropriate, and the range violations in the tenor 1a part alone and seem minor at first glance. However, upon analysis of the melodic and textural characteristics of the piece, the researcher decided that this selection is also inappropriate for the young male voice. The piece begins with a very romantic piano part, full and lush. The initial melodic material is presented at a comfortable mid-range in all voices and requires long phrasing at mezzo forte. The piece is set almost entirely homophonically. The tessitura is rather high for the tenor 1a, with frequent leaps into and out of the passaggio, more often than not on open vowels (a more difficult choice in that part of the male voice). For example, at measure 41 on the text, ‘There will be rest’, the first tenor sings an A flat 4 on the open [E] vowel for one measure, then, while remaining on the A flat 4, moves to the words ‘and sure’. This is not the only example of range violations on vocally challenging vowels. Again, while the piece has many merits it would not be included in a high school repertoire list based on the range parameters set forth in this study.

*What Shall We Do With the Drunken Sailor*—Arranged by Alice Parker and Robert Shaw

Figure 36a.

*What Shall We Do With the Drunken Sailor*—Tenor 1 Part
Figure 36b.

*What Shall We Do With the Drunken Sailor*- Tenor 2 Part

Figure 36c.

*What Shall We Do With the Drunken Sailor*- Bass 1 Part
What Shall We Do With the Drunken Sailor, arranged by Alice Parker and Robert Shaw, is a raucous, high energy, sea shanty for a cappella men’s choir. The melodic content and phrase structure follow a two-measure phrase pattern throughout all seven verses. The dynamics are varied, and instances of text painting on the phrase, ‘Wayhay, and up she rises’ add to the playful nature of the piece as the 2/4 time
signature becomes 6/8 and 5/8 for a few measures as if the choir was a little inebriated. Besides these variations, each subsequent verse in the arrangement requires the tenor 1 part to sing higher. The tenor 1 part is 16.8% above the tessitura threshold cap. The tenor 2 is 2.8% above and 15.5% below the tessitura threshold cap. The bass 1 part is 9.8% above and the bass 2 part is 12.5% above. While this piece would be an amusing and engaging piece for a high school choir it still falls short of the tessitura requirements used in this study.

Ohio Music Educators 2009 High School Required TTB Class A Material

*Ave Maria*-Composed by Jacob Arcadelt

Figure 37a.

*Ave Maria*-Tenor 1 Part

![Bar chart showing tessitura for Ave Maria-Tenor 1 Part]

Figure 37b.

*Ave Maria*-Tenor 2 Part

119
Figure 37c.

*Ave Maria*-Bass 1 Part

Figure 37d.

*Ave Maria*-Bass 2 Part
Jacob Arcadelt’s setting of *Ave Maria* arranged for a cappella men’s chorus by Henry Wilder Foote presents a few challenges for the high school male ensemble but the researcher believes that the piece could be acceptable if the choir director has a few more advanced bass 2 voices at his/her disposal. The tenor 1 is marginally over the tessitura threshold cap by 13.2%. The middle parts are within the range of acceptability and the bass 2 represents the largest range violation with 20.9% over the tessitura threshold cap. The arrangement is in G major, so the bass 2 section, which provides the harmonic foundation, often have the tonic pitch G2. It is worth noting that G2 is only one whole step below the bass 2 range limit of A2. Thus while the excesses of this pitch do represent a violation, G2 does not carry the same consequence as a significantly lower pitch, such as E2, a pitch we have seen in many of the male chorus pieces analyzed so far. In its strictest sense the piece does not meet the standards set forth in this study, but with the help of the most mature members of the bass section the piece could be a good addition to a high school male ensemble list. As far as the piece itself, it proceeds along almost entirely in a block
chordal fashion. Musical phrase length is determined by the textual agogic accents. Higher phrases for the tenors are mostly on closed vowels, a choice by the composer/arranger that is helpful in passaggio negotiation. Overall, this short anthem would be a addition edition to a high school list for the male choir, especially if the choir director felt that the bass 2 section could handle the range violation on G2.

*Cape Cod Girls*-Arranged by Emily Crocker

Figure 38a.

*Cape Cod Girls*-Tenor 1

![Tessitura Graph](image)

Figure 38b.

*Cape Cod Girls*-Tenor 2
Figure 38c.

*Cape Cod Girls*-Bass 1

Figure 38d.

*Cape Cod Girls*-Bass 2
Cape Cod Girls is an up tempo sea chantey arranged by Emily Crocker. Set in E major, it is a repetitive, simple piece with a macro phrase structure of four measures that can be divided further into smaller measured phrases of two bars each. The refrain, with the text, ‘heave, away my bully, bully boys, heave away’, naturally repeats after each of the three verses. After the second verse the piece transposes up a half step to F major, and the final refrain ensues with a final shout, Heave away! The range violations occur most noticeably in the bass 1 and 2 parts at 30.9% and 34.1% above the tessitura threshold caps used in this study. This can be explained by two factors: 1. much of the singing is in unison for the lower part placing the bass 2 section beyond a comfortable range much of the piece and 2. The key choice of E modulating to F is on the high side for the basses. Setting the piece in C with a modulation to D flat would have been a healthier choice vocally, though this would not be as easy to read for the pianist, a fact which could have been a deciding factor of E as the initial key. While the subject matter and accessibility of the arrangement
would be a good fit for many high male ensembles, this arrangement falls short of the tessitura parameters set forth in this study.

*Ching-A-Ring-Chaw*- Adapted by Aaron Copland, Arranged by Irvine Fine

Figure 39a.

*Ching-A-Ring-Chaw*-Tenor 1 Part

![Graph](image)

**Figure 39b.**

*Ching-A-Ring-Chaw*-Tenor 2 Part
Figure 39c.

*Ching-A-Ring-Chaw-Bass 1 Part*

![Bar chart showing percentages for Low, Healthy, and High tessitura for Ching-A-Ring-Chaw-Bass 1 Part.]

Figure 39d.

*Ching-A-Ring-Chaw-Bass 2 Part*

![Bar chart showing percentages for Low, Healthy, and High tessitura for Ching-A-Ring-Chaw-Bass 2 Part.]

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This famous arrangement of Ching-A-Ring-Chaw by Aaron Copland features rambunctious male voices with banjo style accompaniment on the piano. The melodic and subject matter stems from the minstrel tradition of the 1860-1880s. In the piece the chorus sings, ‘bout the promised land’, that ‘you don’t need to fear, if you have no money, you don’t need none there to buy you milk and honey’. As with many pieces from Americana that originated in the days after the Civil War, solace and longing are found in the revered “promised land”. Those who suffered through the reconstruction of our country tried to shove off their anxiety and pain through pieces that made light of their plights. Simple joyous refrains like the one found in this song: Ching-a-ring-a-ring-ching-ching, ho-a ding-a-ding kum lar-kee and statements like, “we will dance to the harp and fiddle, and sing and shout” must have accomplished this goal. Unfortunately this arrangement goes beyond the tessitura standards set forth as a guide in this study. The tenor 1 and tenor 2 parts are 24.7% and 22.6% beyond the tessitura threshold cap on the lower end of the range scale. The bass 1 and 2 parts are above the cap on high end of the range scale by 13.4%
and 24.6% respectively. The tenor range violations are less concerning than the bass because they are on the lower end of the scale. A tenor singing too many low D3 pitches as a range violation is not vocally equivalent to a bass singing too many D4 pitches; the latter is far more potentially damaging. Regardless, the piece falls short in this regard and would not be included in a high school music list that used the parameters set forth in this study as a guide.

*Dirait-on*-composed by Morten Lauridsen

Figure 40a.

*Dirait-on*-Tenor 1 Part

![Diagram of Tenor 1 Part](image)

Figure 40b.

*Dirait-on*-Tenor 2 Part
Figure 40c.

*Dirait-on* - Bass 1 Part

Figure 40d.

*Dirait-on* - Bass 2a Part
Morten Lauridsen’s secular octavo Dirait-on from the poetry of Rainer Maria Rilke is certainly one of his most famous pieces, and with good reason. It is an especially charming piece filled with gorgeous lyricism, and delicate beauty. Written in the very warm, lush key of D flat major, the piece unfolds with the tenors presenting the opening theme in unison with sparse piano texture. The opening theme, which
forms the primary thematic material throughout the piece, is constructed of two equal phrases of four measures. The bass section joins in the restatement of the theme again at the unison. Subsequent restatements are presented in canon and with further variation. There are tessitura violations in almost all of the parts on the lower end of the scale. The tenor 1 and 2 parts are 17.1% and 15.8% beyond the tessitura threshold cap respectively; the bass 2a and 2b parts are 14.9% and 20.1% beyond the cap on the lower end of the range scale. For the bass voice, the range violations come solely from the pitch A flat 2, a mere half step below the range cap of A2, hardly a vocally taxing stretch. The tenor parts are a little more concerning with 9.6% on pitch D flat 3 for the tenor 1 and 15% for tenor 2. All the tessitura cap violations in the lower range are only by a few pitches and at a healthy dynamic level. In the strictest sense, this piece would not be included in a repertoire list, which uses the parameters set forth in this study as a guide. However, in light of the complete lack of acceptable repertoire thus far reviewed in the AA and A categories, and the apparent lack of damage the piece would cause, this piece could be a healthy addition to a high school male repertoire list despite the range violations at the lower end of the scale.

Heaven-Composed by Andre Thomas

Figure 41a.

Heaven-Tenor 1 Part
Figure 41b.

*Heaven*-Tenor 2 Part

Figure 41c.

*Heaven*-Bass 1 Part
Figure 41d.

*Heaven*-Bass 2a Part

Figure 41e.

*Heaven*-Bass 2b Part
With *Heaven* by Andre Thomas we again see range violations in the outer voice parts. The tenor 1 part is 29.6% above the tessitura threshold cap. The bass 2a and 2b parts are 17.7% and 17% above the tessitura cap as well beyond the tessitura cap on the lower side of the tessitura scale at 5.9% and 14.2% respectively. The piece begins with an f minor theme in the bass part, mainly spanning the interval of a fifth, and this theme is maintained throughout the piece, transferred from voice part to voice part. At the second verse the bass 2 part continues the theme while the upper three parts accompany with half notes. The piece comes to a climax as all the parts, on an impassioned forte dynamic, proclaim, “*Lord, O Lord, Heaven is my one true home*”. The tenor 1 part is very concerning with 21.8% on the pitch violation F4, 3.3% on G4 and 4.5% on A flat 4. The basses have 8.3% on D4, which is a major third above the acceptable tessitura range parameters. This piece is far beyond the tessitura standards set forth in this study.
*Laudamus*-Arranged by Daniel Protheroe

Figure 42a.

*Laudamus*-Tenor 1 Part

![Bar chart for *Laudamus*-Tenor 1 Part](image)

Figure 42b.

*Laudamus*-Tenor 2 Part

![Bar chart for *Laudamus*-Tenor 2 Part](image)

Figure 42c.

*Laudamus*-Bass 1 Part
Figure 42d.

*Laudamus*-Bass 2 Part

*Laudamus* by Daniel Protheroe is an arrangement of the Welsh hymn *Bryn Calfaria* by the Welsh nineteenth-century composer William Owen. This very attractive hymn tune is made up of four macro phrases. The first two micro phrases are identical beginning on the dominant pitch of F sharp and ending on the b minor tonic. The last two phrases of the theme are four and two measures long.
respectively. The third phrase begins on the b tonic and episodically progresses upward with a four-note phrase on the text, “Songs of praises”. The final two measures solidify the b minor tonality with a cadential figure. The form of the piece is ABA’. The middle B section explores f sharp minor while maintaining thematic elements from the A section. The piece ends with a reprise of the A section with an expanded ending. Here the tessituras are generally a third higher than the first statement of the A section, and many of the range violation occur in this section.

The tenor 1 part is 24.5% above the tessitura threshold cap. The bass 1 and 2 parts are 33.2% and 23.2% above the threshold caps. Perhaps the most difficult singing is written for the bass 1 part which has frequent occurrences C sharp 4, D4 and E4. Though this piece is a very beautiful and powerful arrangement from the tradition of Welsh male choir singing, it would not be included in a repertoire list which used the parameters set forth in this study.

*The Quest Unending*-Composed by Joseph M. Martin

Figure 43a.

*The Quest Unending*-Tenor 1 Part
Figure 43b.

*The Quest Unending*-Tenor 2 Part

![Graph](image)

Figure 43c.

*The Quest Unending*-Bass 1 Part

![Graph](image)
The Quest Unending

*The Quest Unending* by Joseph M. Martin is a powerful octavo for men’s voices and piano. The piece is very sectional in key and motivic content, matching Alfred Lord Tennyson’s poem with its clear points of division. Each new section has a new key; the key of the piece progresses through G major, F major, g minor, B flat major, F major, G major and finally E flat major. The final two sections are worthy of note in
terms of the vocal demands placed on the male ensemble. The melodic content has the basses singing consistently at D4 at a forte dynamic. The last section is very heroic in its construction, including the use of homophonic textures, dotted rhythms, fortissimo dynamics, and voices at the extremes of their range. The piece is very dramatic, and perhaps because of this is also beyond the acceptable range parameters set forth in this study. The tenor 1 part is 18.3% above and 5% below the tessitura threshold caps. The bass 1 and 2 parts are 21.7% and 29.8% above the range parameters. The piece would not be included in a repertoire list that used the parameters set forth in this study.

*Regnum Mundi*-Composed by Jacob Handl, Edited by Allen Crowell

Figure 44a.

Regnum Mundi-Tenor 1 Part

Figure 44b.

*Regnum Mundi*-Tenor 2 Part
Figure 44c.

*Regnum Mundi*-Bass 1 Part

Figure 44d.

*Regnum Mundi*-Bass 2 Part
Regnum Mundi by the late renaissance composer Jacob Handl is very similar to Palestrina’s in compositional style. Both composers treat the text polyphonically, with interweaving texture between the independent vocal lines; the flow of music is dynamic, not rigid or static; the melody contains few leaps, but when leaps occur they are small and immediately countered by stepwise motion in the opposite direction; dissonances normally occur on weak beats, and dissonances on strong beats are always resolved immediately. Moments of homophonic texture are few in Handl’s piece, but one can be found at the text, Regnum mundi, translated, “King of the world”. Again the outmost voice parts are beyond the tessitura range parameters, with the tenor part making up most of the range violations. The tenor 1 part is a total of 19.1% above the tessitura threshold cap with 17.7% on F4 and 1.3% on G4. The bass 2 part is a mere 12.6% above the tessitura threshold cap on the high side of the pitch scale. In order to comply with the parameters set forth in this study it is possible that the piece could be sung a half step down in E major, putting the tenor 1 section on an acceptable E4 with fewer range violations. This
would push the bass 2 section down by a half step but the piece would remain within an acceptable tessitura range. In the original key the piece would not be acceptable according to the parameters set forth in this study.

*Tenebrae Factae Sunt*-Composed by Giovanni Pierluigi da Palestrina,

Edited by Archibald T. Davison

Figure 45a.

*Tenebrae Factae Sunt*-Tenor 1 Part

![Graph]

Figure 45b.

*Tenebrae Factae Sunt*-Tenor 2 Part
Figure 45c.

*Tenebrae Factae Sunt*-Bass 1 Part

Figure 45d.

*Tenebrae Factae Sunt*-Bass 2 Part
The previous discussion about late renaissance music applies to Palestrina’s arrangement of *Tenebrae Factae Sunt*. Again the outer voice parts are beyond the tessitura standards set forth in this study. The tenor 1 part is 16.7% above the tessitura threshold cap and the bass 2 part is 21.7% beyond the cap on the low end of the scale. The bass part is concerning especially considering the lowest notes span to C sharp 2 with 3.8% of the range violation. The tenor range violations occur mostly on G sharp 4 and A4 with 7.1% and 4.8% respectively. For the tenor, these offending pitches are presented at both dynamic extremes, the pianissimo singing being the more concerning of the two. The A4 pitches are approached by step from a sustained G sharp 4 and, following typical late Renaissance practice, are left the same way, all while singing at a subtle dynamic. The piece is a beautifully crafted piece for mature voices, though it would not be included in a list of repertoire for the young male voice.
When I Have Sung My Songs To You-Composed by Ernest Charles, Arranged by Timothy Seelig

Figure 46a.

When I Have Sung My Songs To You-Tenor 1 Part

Figure 46b.

*When I Have Sung My Songs To You*-Tenor 2 Part

Figure 46c.
When I Have Sung My Songs To You-Bass 1 Part

![Chart for When I Have Sung My Songs To You-Bass 1 Part]

Figure 46d.

When I Have Sung My Songs To You-Bass 2 Part

![Chart for When I Have Sung My Songs To You-Bass 2 Part]

Timothy Seelig's arrangement of When I have sung my songs to you was written for his 200-voice adult male choir, as evidenced by the range violations that occur in the outer voices. The tenor 1 part is 22.3% above the tessitura threshold cap. The bass 2 part is 32.6% above and 21.6% below the tessitura threshold cap. This short
arrangement begins with the basses and tenors trading off singing the initial thematic content. The voices come together for the first time in block chordal texture reinforcing the tonic key of F major on the text, ‘that I had loved so well so true’, and then proceeds to a unison on the powerfully set text ‘that I could never sing again’. It is on these unison sections that many of the bass range violations, where the bass section is asked to sing D4 and C4, occur. These pitches make up 6.9% and 4.2% of the range violations respectively for the bass voice. The piece is arranged in F major, a fact that explains the 9.2% violation on the pitch F2, which often functions as a tonic pedal. The tenor range violations are not as concerning. In measure 35 the tenors have a high A4 on the word ‘true’ and at the end of the piece the tenors hold an A4 for 12 beats on the word ‘you’. In both of these cases the closed [u] vowel would help in achieving the correct vocal posture for this portion of the piece.

Timothy Seelig is a well-respected choral/voice pedagogue and conductor and his arrangement has significant value. However, it would not be included in a repertoire list, which used the parameters set forth in this study.

Workin’ For The Dawn Of Peace-Arranged by Ron Jeffers

Figure 47a.

Workin’ For The Dawn Of Peace-Tenor 1 Part
Figure 47b.

*Workin’ For The Dawn Of Peace*-Tenor 2 Part

Figure 47c.

*Workin’ For The Dawn Of Peace*-Bass 1 Part
Figure 47d.

*Workin’ For The Dawn Of Peace*-Bass 2 Part

*Workin’ For The Dawn Of Peace*, arranged by Ron Jeffers, is a combination of two Civil War songs: *Two Brothers On Their Way* and *Tentin’ Tonight*. The pieces are beautifully wedded in this short octavo for men’s voices. The piece begins in unison for all voices in C sharp minor. After the initial statement of the theme, the piece is harmonized with four parts. The subsequent section presents the initial theme in
canon for all four voices, modulated to A flat minor. For the second portion of the piece, *Tentin’ Tonight* is arranged in D flat major. Unfortunately, this key choice puts the bass 2 section below the staff for most of the second portion of the arrangement. The bass 2 part is 40.2% beyond the tessitura threshold cap on the low side and 3.2% above the tessitura cap on the high side. The other parts are within acceptable range, though the tenor 1 is barely so with 11.9% of pitches above the tessitura parameters. This piece would be beyond most adult bass sections’ capability, let alone that of a high school choir. This piece would not be included in a repertoire list that used the parameters set forth in this study.
Results

Out of the 47 pieces analyzed, only seven (17%) would be considered acceptable based on the range parameters and tessitura thresholds used in the study. The 40 pieces that were proven unacceptable represent a startling 83% of the total.

Figures 48 and 49 show the individual class category percentages.

Figure 48.

<table>
<thead>
<tr>
<th>Class Designation</th>
<th>Percentage of Acceptable Pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class AA SATB</td>
<td>6%</td>
</tr>
<tr>
<td>Class AA TTBB</td>
<td>0%</td>
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<td>Class A SATB</td>
<td>9%</td>
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<td>Class A TTBB</td>
<td>2%</td>
</tr>
<tr>
<td>Total</td>
<td>17%</td>
</tr>
</tbody>
</table>

Figure 49.

<table>
<thead>
<tr>
<th>Class Designation</th>
<th>Percentage of Unacceptable Pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class AA SATB</td>
<td>19%</td>
</tr>
<tr>
<td>Class AA TTBB</td>
<td>26%</td>
</tr>
<tr>
<td>Class A SATB</td>
<td>17%</td>
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<tr>
<td>Class A TTBB</td>
<td>21%</td>
</tr>
<tr>
<td>Total</td>
<td>83%</td>
</tr>
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</table>

Conclusion and Discussion

The hypothesis, as stated on page six, that “much of the choral music performed in today’s high school mixed and gender specific ensembles is developmentally inappropriate with regard to tessitura for the vocally-immature males enrolled.” A healthy tessitura average was developed by surveying published material on the subject by experts in the fields of voice pedagogy and choral pedagogy. This standard was then applied to all 2009 Ohio Music Educators Association's class AA
and A SATB and TTBB choral pieces, with the exception of one out-of-print octavo. The results show that the author’s original hypnosis was accurate.

To provide a comparison to the class AA and A categories, the author randomly chose 2 pieces from the 2012 Ohio Music Educators Association’s Required Music List both from the SATB class B and C categories as well as 2 pieces from the TTBB class B and C categories. The author applied the same tessitura standards and range parameters that were applied to the 2009 class AA and A material.

Ohio Music Educators 2012 Required SATB Class B Music List Selections

*Al Shlosha D’varim* Composed by Allan E. Naplan

Figure 50a.

*Al Shlosha D’varim*- Tenor part

<table>
<thead>
<tr>
<th>Note</th>
<th>0%</th>
<th>5%</th>
<th>10%</th>
<th>15%</th>
<th>20%</th>
<th>25%</th>
</tr>
</thead>
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<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
<td>4%</td>
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<tr>
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<td>3%</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>F3</td>
<td></td>
<td></td>
<td>4%</td>
<td>10%</td>
<td>17%</td>
<td>20%</td>
</tr>
<tr>
<td>F#3</td>
<td></td>
<td></td>
<td>10%</td>
<td></td>
<td>13%</td>
<td>10%</td>
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<tr>
<td>G#3</td>
<td></td>
<td></td>
<td>2%</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Figure 50b.

*Al Shlosha D’varim*-Bass Part

Heathy Tessitura 96%  High Tessitura 4%
Al Shlosha D’varim by Allan E. Naplan is a completely acceptable piece based on tessitura standards set forth in this study. The tenor part is within the margin of acceptability with 4% above on the high end of the spectrum, and the bass is 100% within the healthy tessitura range. This easy piece has a beautiful simplicity that conveys the meaning of the text: “The world is sustained by three things, by truth, by justice, and by peace.”

Esto Les Digo- Composed by Kinley Lange

Figure 51a.

Esto Les Digo- Tenor Part
Esto Les Digo-Bass Part

Esto Les Digo would be beyond the tessitura standards set forth in the study but only marginally so. The tenor is within the margin of acceptability with 10% beyond the tessitura cap on the low end of the scale. The bass is within the margin of acceptability with 9% on the high side of the scale, however is over by 15% on the low side. This represents 3% beyond tessitura threshold cap. While in its strictest
sense the piece would not be included in a repertoire list based on the tessitura parameters used in this study, however a choir director might consider including this piece as a healthy example on a repertoire list for the following reasons: the piece is only 3% beyond the cap on the low side and is only a whole step away from the furthest extreme pitch of A2 and that the offending notes in this octavo do not reach the point of unhealthiness for the young male voice.

Ohio Music Educators Association 2012 Required TTBB Class B Music List Selections

*Black Is The Color Of My True Love's Hair*- Composed by Victor C. Johnson

Figure 52a.

*Black Is The Color Of My True Love's Hair*- Tenor 1 Part

![Chart](image)

Figure 52b.

*Black Is The Color Of My True Love's Hair*- Tenor 2 Part
Black Is The Color Of My True Love’s Hair is a wonderful arrangement for male voices and solo cello, written by Victor C. Johnson. This piece is completely within the range and tessitura standards set forth in this study. Both the tenor 1 and tenor 2
parts are within the margin of acceptability with 7% and 2% beyond the scale on the high side. The bass part is over by 4% on the high side and 7% on the low side. This piece is an excellent example of healthy expectations for the young male voice.

_Cantate Domino-_ Composed by Laura Farnell

Figure 53a.

_Cantate Domino-_Tenor 1 Part

![Graph showing tessitura percentages for Cantate Domino - Tenor 1 Part.]

Figure 53b.

_Cantate Domino-_Tenor 2 Part
Cantate Domino by Laura Farnell is not a suitable choice for young male ensemble. The tenor part is 24% beyond the tessitura threshold cap used in this study. Much of those range violations occurring on F sharp 4 and G sharp 4 at a forte dynamic and on vowels not conducive to correct laryngeal vertical posturing. The other parts
are within the margin of error. This piece would not be included in a repertoire list based on the parameters set forth in this study.

Ohio Music Educators Association 2012 Required SATB Class C Music List Selections

*By Waters Clear and Flowing* - Composed by Douglas E. Wagner

Figure 54a.

*By Waters Clear and Flowing* - Tenor Part

![Bar chart showing tenor part frequencies](image)

Figure 54b.

*By Waters Clear and Flowing* - Bass Part
By the Waters Clear and Flowing by Douglas E. Wagner is completely within the range and tessitura standards set forth in this study and would be a very healthy addition to a repertoire list for the immature male voice.

*Dindirin*- Composed by Ruth Morria Gray

Figure 55a.

*Dindirin*-Tenor Part
Figure 55b.

*Dindirin* - Bass Part

**Dindirin** by Ruth Morris Gray is completely within the range and tessitura standards set forth in this study and would be a very healthy addition to a developing male voice repertoire list.

Ohio Music Educators Association 2012 Required TTBB Class C Music List Selections

*Bound For Jubilee* - Composed by Joyce Elaine Eilers

Figure 56a.

*Bound For Jubilee*- Tenor 1 Part
Figure 56b.

*Bound For Jubilee*-Tenor 2 Part

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Figure 56c.

*Bound For Jubilee*-Bass 1 Part
Bound For Jubilee by Joyce Elaine Eilers is completely within the range and tessitura standards set forth in this study and would be a very healthy addition to a repertoire list for the high school male voice.

Kyrie-Composed by John Leavitt
Figure 57a.

*Kyrie*-Tenor 1 Part

![Graph showing tessitura distribution for Kyrie-Tenor 1 Part.]

- Low Tessitura: 18%
- Healthy Tessitura: 76%
- High Tessitura: 6%

Figure 57b.

*Kyrie*-Tenor 2 Part

![Graph showing tessitura distribution for Kyrie-Tenor 2 Part.]

- Low Tessitura: 5%
- Healthy Tessitura: 88%
- High Tessitura: 7%

Figure 57c.

*Kyrie*-Bass Part

![Graph showing tessitura distribution for Kyrie-Bass Part.]

- Low Tessitura: 0.9%
- Healthy Tessitura: 0.6%
- High Tessitura: 0.3%
Kyrie by John Leavitt is beyond the parameters set forth in this study. The tenor part has a range violation of 18% on the low side of the tessitura cap. The bass part is 14% above the range parameters on the high end of the scale. The tenor 2 part range violations are within the margin of acceptability. This piece would not be included in a repertoire list that used the parameters set forth in this study.

This small sample of class B and class C material provides evidence that these categories are much more in line with the healthy tessitura standards set forth in this study than the class AA and class A material used in the main body of this document. Figures three and four show, that the acceptable pieces in the Class C and B make up 75% of the total, and that the unacceptable pieces make up 25%.
Out of the 47 OMEA pieces analyzed, only seven (17%) would be considered acceptable based on the range parameters and tessitura thresholds used in the study. The 40 pieces that were proven unacceptable represent a startling 83% of the total. The small sample taken from the Class B and C lists reveals a much higher acceptable percentage at 75%.

It is telling that Shewan uses Mozart’s *Ave Verum Corpus* in his text, *Voice Training for High School Choirs* (1971) as an example of a healthy piece for the young male voices. This piece is included in the 2012 OMEA Required List in the class C category, a fact which, along with the examples taken from the 2012 OMEA class B and C list, strongly suggest that the lower categories of B and C are more in line with the tessitura parameters used in this study. Ultimately, it will be the choir director’s decision as to what repertoire he or she feels is most healthy for the young males in his/her care. It is this author’s sincere hope that ensemble directors will use the information synthesized in this research, and the words of caution provided by both National Association for Music Education and Health Promotion in Schools of Music Conference’s words of caution when making repertoire decisions.
Choral directors, like physicians, must ‘First, do no harm’ in physiological considerations regarding the young men, and women, in their vocal care.

Appendix A

The Falsetto Approach

I have included this section on the male falsetto to address the most common fall back instruction choir directors give to their young males when the tessitura of a choir selection is excessively high. This question posed to Richard Miller in Solution for Singers (2004) captures the conflict precisely.

Question:

How can I help my young tenors survive daily singing in two choral ensembles, as they have to do at my university? Is it okay to tell them to use falsetto in upper range?

Related Question:

The tessitura in much of the choral literature is fatiguing for freshman and sophomore tenors. Should I advise my young tenors to mostly use falsetto in rehearsal and even in performance? (p. 238)

Before a discussion of the pedagogical uses or lack there of concerning the male falsetto, and Richard Miller’s reply to these questions, the researcher wishes to first present a context as to the physiological and acoustical properties of the male falsetto. Falsetto is characterized by a reduced closed quotient in comparison to voce complete. Closed quotient is defined as the amount of time the vocal folds are
closed versus open. During falsetto the crico-thyroid muscles are active, stretching and thinning the vocal folds, while the vocalis muscle is relaxed. Only a small percentage of vocal fold length is adducted, and then only at the vocal fold edge. There is a great increase in air flow, in comparison to voce complete, due to the lack of resistance in the open glottal area, and this subsequently results in inefficient vocalism audibly characterized as “breathy”. In fact, male falsetto somewhat resembles a stage whisper, and extended whispering is a very unhealthy form of phonation. R. Miller (1986 & 2004), McCoy (2004), Nair (2007), Doscher (1988)

Richard Miller’s (2004) response to the above questions:

The two questioners express a concern shared in academe by many teachers of singing. The sustained tessitura of much choral writing for tenor voice lies consistently higher than that of many tenor arias. What is the answer for the poor student tenor (and his teacher) called on to maintain a tessitura in choral literature that he would not encounter in “Celeste Aida”? He has the choice, in upper range, of either straining his as-yet-marginal voice technique or of reverting momentarily to falsetto. Although it would not be advisable to rely on falsetto production in solo appearances, it may be advantageous for him to resort to falsetto timbre in choral situations. He must at all costs avoid the physical trauma of trying to produce legitimate tone at subtle dynamic levels in a tessitura in which he does not yet function freely. It should not be necessary for the young tenor to use destructive vocal means in order to comply with a conductor's tonal concept. (p. 238)
While Miller does give assent to falsetto use as the lesser of two evils, this is hardly a ringing endorsement for the use of falsetto as a consistent “fix” to high choral tessitura for the male voice. Robert Sataloff and Brenda Smith agree with Miller’s position as evidenced by this statement in *Choral Pedagogy* (2000): “It is not advisable to request the use of falsetto singing for extended periods of time or in isolation from the other registers, or to require falsetto from singers who find it difficult.”

Respected voice pedagogues also differ as to the value of falsetto in the training of the male high voice; some find value, while others do not. Barbara Doscher, in *The Functional Unity of the Singing Voice* (1988), has stated:

Some pedagogs [sic] favor the use of falsetto voice to develop the full head voice, contending that such an approach leads to more ring and avoids the danger of an overly dark and weighty sound. They believe that young voices in particular have difficulty vocalizing only in ascending patterns into the passaggio and above, and that falsetto exercises develop strength in the crico-thyroid stretcher and prevent the vocalis muscle from over-working. Other teachers feel equally strongly that the falsetto has no relation to the full head voice and that its use as a training device leads to a thin, overly bright sound. The decision must be left to individual teachers and their particular aesthetic preferences. (p. 186)
In regard to the use of falsetto as a substitute for voce piena in testa to negotiate high tessitura, Miller (2004) states:

...substituting falsetto for full voice in any male category is something of a dodge, an avoidance of the discipline it takes to find true voce piena in testa. Reliance on falsetto for high-lying pitches attests to an inability to accomplish a completely balanced vocal scale. The argument is sometimes made that by singing the top voice in falsetto, a young tenor will lose his fear of high notes. On the contrary, it makes him realize that he is avoiding the very energy and resonance levels necessary to accomplish enough vocal-fold closure to produce legitimate upper-range sounds. What goes for the tenor is equally true for the baritone, bass-baritone, and the bass. (p. 145)

However, well-respected voice pedagogues have used falsetto in their training of male voices. Scott McCoy, for example, has stated in the NATS journal 2003 that:

In my own teaching, falsetto has been used, albeit sparingly, in three ways. First, it can help to establish appropriate vertical positioning of the larynx. Second, falsetto occasionally is used to help students find appropriate vowel modification or “cover” through the upper passaggio. Finally, simple falsetto exercises are used to gently stretch the vocal ligament, which should ultimately lead to easier production of higher tones in the full voice. (p. 405)

McKinney quotes Clippinger in The Diagnosis and Correction of Vocal Faults (1994):
There is one place in voice training where the practice of falsetto has a distinct value. I have seen many tenors and baritones who used the heavy chest voice up until they developed an automatic clutch, and could sing the upper tones only with extreme effort. To allow them to continue in that way would never solve their problem. In such a condition half voice is impossible. It must be one thing or the other, either the thick chest voice or falsetto. The falsetto they can produce without effort, and herein lies its value. They become accustomed to hearing their high tones without the association of effort, and after a time the real voice appears. When the head voice appears the use of the falsetto may be discontinued. (p. 190)

In light of this discussion, it would seem that the use of falsetto should be used sparingly if at all for the attainment of the male high voice. Further, it should be used with the one-on-one guidance of an experienced voice teacher or coach with specific pedagogical goals, not as a band-aid for an immature tenor or bass section consistently singing in an inappropriate range. While most voice pedagogues would agree that the occasional use of falsetto is much less damaging than attempting subtle dynamics or voce complete in the high range, it is far preferable that choral directors uphold the Hippocratic oath of those who are in their care- “First, do no harm”- by choosing music that helps develop their immature and fragile instruments with a developmentally-appropriate tessitura.
Appendix B

Teaching Methodologies for the High Male Voice

The previous discussion begs an answer to the question: how does one teach the male high voice? Well-respected vocal pedagogues' beliefs center around two main theories: register-mixing and formant tuning.

Register-mixing holds that muscular antagonism between the thyroarytenoids and the cricothyroids allows for an ideal mix of vocal fold mass as the voice progresses up and down the scale. Nair (2007) states that, “proponents of this theory claim that the result of this variable mass is a timbre that combines acoustical elements of both the chest and head registers (the blend)” (p. 578). In 1970, Hirano et al presented data that offered strong support for this viewpoint, one with which Titze (1994) and Richard Miller (1986, 1993, 2000, & 2004) agreed.

The other theory is formant tuning. Formant tuning holds that the solution to register blend and thus the male high voice is mostly acoustic and not a manipulation at the vocal fold level, i.e. register-mixing. A quick background in acoustics as it relates to the voice will help this discussion. When the vocal folds adduct and vibrate, the loudest sound produced in the sound spectrum is the fundamental, often abbreviated as Fo. Along with the fundamental in the sound spectrum is a series of mathematically predicable sounds called harmonics. Key to the formant tuning school is the source filter theory (Sundberg, 1987), which states that when harmonics pass through the vocal tract they receive an acoustical boost
upon approach of a formant. The opposite of this statement is also true: if a harmonic passes through the vocal tract and is not near a formant then the harmonic is unaccented or even canceled out. When a harmonic receives an amplitude boost by its proximity to a formant, the result is called a formant/harmonic link also referred to as F/H (Nair, 2007; Sundberg, 1987; Miller, 2010).

Formants are areas of acoustical strength in the vocal tract. In the formant tuning theory the singer slightly shifts formants to maintain an F/H linkage for a larger portion of the vocal scale (Miller et al). This can be achieved by vowel modification, along with lengthening the vocal tract by protruding the lips, lowering the larynx, and raising the velum (soft palate).

A likely solution to the male high voice is probably a combination of both register-mixing and formant tuning. Gary Nair (2007) states, "We have enough evidence on both sides of the question to be able to sense their plausibility, but not enough to declare on one side of the other the ‘winner’" (p. 597)
Appendix C

Vowel modification and “covered” singing

As males progress through the passaggio and into the top range, the principle of vowel modification should be employed to avoid a register violation or shout (Nair, 2007). To perform a vowel modifier, both front and back vowels should move to a more open vowel. For example [i] should modify to [I] and [I] to [e], or [u] to [U] and [U] to [o] etc. (Miller, 2004; Doscher, 1988; Titze, 1994). This is a well-established truism in the bel canto singing technique. Doscher states:

“...the traditional signs of covered singing to blend male registers [are]...the widened laryngo-pharynx, the comfortably low larynx, the raised soft palate, the lowering of f1 via rounded and closed vowels, and increased and constant transglottal air flow.” (p. 184)
References


Ohio Music Educators Association. Retrieved from: [https://www.omea-ohio2.org/WhoAreWe/WhoAreWe/Mission.html](https://www.omea-ohio2.org/WhoAreWe/WhoAreWe/Mission.html)


