

What Happens When Middle School Students are Individually Assessed on Their Sight-singing Skills?

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## I. Problem Statement

This is my 14<sup>th</sup> year of teaching. My teaching career began at a private school in Clarksville, Indiana where I taught general music in grades K-8. I taught there for seven years, then accepted a position at a public school in New Albany, Indiana where I was Director of Choirs for three years. I am currently in my fourth year at two schools where I co-teach the choirs. These schools are located in Brandenburg, Kentucky, a picturesque town along the Ohio River. These schools are the only middle and high school in the county, so students are bussed in from the mostly rural county. The choral and band programs at the schools have a long tradition of excellence. My teaching assignment is to co-teach five choir classes each day, as well as an extra-curricular show choir. All choirs are fairly large, but manageable because of the co-teaching arrangement. A typical lesson plan for all choirs consists of vocal and physical warm-ups, a sight-reading component, and rehearsal of concert repertoire.

The topic of my research stems from the current administrative requirement to individually track each student on his/her growth in our classes. A simple method for fulfilling this requirement could be a multiple choice test given on the computer to test knowledge level of note names, key signatures and other music theory concepts. Although there is value in this, I do not feel that this would be an authentic assessment of success in the choral classroom. I feel the assessment should lie in the observable application of knowledge during a singing performance. Our choirs have always been assessed on their performance in our yearly Kentucky Music Educator Association (KMEA) Assessments. We also consider our public

concerts to be an assessment of the concepts learned each semester. This year we are charged with documenting the growth of each individual student as a component of the new formula for teacher evaluations.

The problems surrounding the idea of assessing individuals on their singing skills are many. With up to 88 students in a class and 412 students that we see each day, how do we manage this efficiently and effectively? What are the other students doing while one is being assessed? What is the best method to accomplish this task without losing valuable rehearsal time? How do we accomplish this without stressing out the students? How can we make this a positive experience for each student? How can we use technology? Will this individual assessment help or hinder enrollment in choir for the next year? Assuming we can accomplish the hurdles of efficiency without stress, what rubrics should be used to objectively assess each student and how can we manage timely individual feedback?

And finally, will we observe that our students grow in their personal responsibility as a member of the choir? Will we observe better rehearsal behaviors? Will the choirs improve as a whole if individual accountability is part of the routine? Demorest (1998) states, "the added expectation that students in a group setting demonstrate individual-performance skills may actually help students' progress by motivating them to increase their individual practice" (p. 190). These questions led me to the guiding question "what happens when middle school students are individually assessed on their sight-singing skills?"

To find the answer to this question, I researched various methods of performance assessment and chose the method that I feel will be the most valuable and least stressful for the students. I

prepared the students and then assessed their individual skills on short musical passages similar to those that the choir had been rehearsing together. I collaborated with my teaching partner in order to utilize the method that preserved the most whole group rehearsal time. I assessed the students individually in the same manner three weeks later on a similar (yet different) musical passage. Student growth (or lack thereof) was documented by a comparison of points earned on a rubric. Student attitudes and behaviors were observed before, during and after the assessments. Students also completed a take a short “student voice” survey before the initial assessment and again at the completion of the assessments. My teaching partner and I documented student adherence to rehearsal expectations throughout the process.

Insight learned through this investigation was considered when planning similar strategies for the high school choirs. I chose to initiate this process with the middle school choirs as their performance schedule is much lighter than that of the high school choirs.

## **II. Review of Literature**

The National Association for Music Education’s (NAfME) position statement on assessment suggests that assessment should serve the goal of educational accountability by providing data that can be included in the school –or district level “report card” disseminated to the public. Effective assessment systems can provide teachers with information that enables them to provide better instruction to students and to give parents, administrators and other decision-makers information they can use to evaluate the sufficiency of resources allotted to music education (NAfME, 2014). Unfortunately, “as music teachers we tend to be some of the worst in all of education about actually recording the individual student evidence that we have

observed” and “when we get too caught up in preparing for a performance instead of educating individual students ... we don’t always know what each individual student has learned and is able to demonstrate.” (Weatherred, 2013, para. 3)

In recent years, educators have led a push toward authentic assessment, in which students are assessed on how they perform on an actual task rather than how they recall information on a test (Randall, 2010). Deep understanding in performance assessments focuses on the use of knowledge and skills....students are asked to demonstrate what they understand through application of knowledge and skills (Macmillan, 2001). Authentic assessment benefits students and parents by giving students choices, grading on knowledge rather than behavior and ensuring that testing is valid based on content taught (Craig & McCormick, 2002). According to NAFME, music educators face the challenge of using assessment in and of their own programs in order to inform their own teaching, as well as benefit the students in their charge. Keenan-Takagi (2000) contributes to the discussion with the following, “by valuing individual success, you will be making a strong commitment to each student” (p. 44).

According to Wesolowski (2012), with implementation of some formative methods of assessment, such as a rubric, music educators can better monitor and improve student learning as well as shape their instruction in a tangible, sequential manner in response to what they discover. Strengths of authentic assessment include an emphasis on application of knowledge. Weaknesses include measurement error due to the subjective nature of scoring which may be significant (MacMillan, 2001). It is also very time consuming to construct good tasks, develop scoring criteria and rubrics, administer the task, observe students, and then apply the rubrics to

student performance. In their study of authentic assessment tools for fine arts classrooms, Craig and McCormick (2002) concluded that authentic assessment involved much time inside and outside the classroom. They found it to be valuable for middle school and more of a nuisance for elementary school. With regard to the particular challenge of middle school, Demorest (2000) states “Although a good deal of literature has focused on the vocal needs of this age group, there has been comparatively little information about the other unique musical and educational needs of the adolescent singer. Yet it is often the ability to meet those other needs – interpersonal, social and musical – that determines whether or not a teacher will be successful at this level” (p. 21).

According to DeLuca and Bolden (2014), performance rubrics become a valuable learning activity in its own right, whereby students not only learn to recognize and appreciate the subtleties and nuances of music performance but also become familiar with performance assessment and criteria that will be used by teachers, peers and themselves to assess and enable the development of their own musicianship. Scott (2004) contributes to this thread by stating “it is imperative that teachers regularly administer performance assessments to minimize the error of overgeneralization on the basis of one observation (para. 8). He further states the criteria must be balanced with considerations for cost, time, equipment and space. Similarly, NAFME’s current statement on assessment says “Schools should balance large ensemble rehearsals with small group lessons and provide recording devices and other technology to facilitate the collection, management and scoring of student’s music work” (para. 11).

No matter how carefully rubrics are crafted and how high the criteria, they can never capture the full complexity of music performance. By thinking of the rubric as a starting point in learning, it serves to enable rather than constrain the act of assessment (DeLuca & Bolden, 2014). Chiodo sums up the discussion very succinctly with, "It really is not assessment until it is written down" (2001, p. 19). She also offers some hope for this daunting task, "use the simplest grading procedure to get the job done!"

Sightsinging is an enduring skill taught in middle and high school chorus. The individual performance of sightsinging skills demonstrates proficiency in National Music Standards 1a (singing alone) and 5a (reading music notation). According to Hanna (2007), when sightsinging is analyzed within the parameters of the revised taxonomy of Bloom, it can be determined that these complex forms of musicianship use cognitive processes and knowledge domains. Even though sightsinging is taught at the group level, it is not certain that skills improve significantly on an individual level. A study by Demorest (1998) sampling 306 choral students across six high schools, found that individual testing was found to be an effective means of improving individual sightsinging performance in group instructional situations. The testing not only provides information on student progress, it helps students to be better readers, perhaps by motivating them to spend more time practicing sightsinging.

From my research I have found that there is an overwhelming body of work extolling the benefits of authentic performance assessment, but a few caveats surfaced. According to NAFME (2014), music assessment alone cannot create educational excellence in music. According to Randall (2010), performance assessment can tip the scale too far toward

performance at the expense of basic musical knowledge. Keenan-Taguki (2000) counters with “clear analysis of a setback can lead you to a new technique, sequence of instruction or assessment measure” (p. 45).

Barden (2011) sums up the positive expectation of individual performance assessment with “The key to maximizing the performance of an ensemble is to help each student maximize their personal achievement” (p. 4). She further states it another way: “When the performance of each individual singer improves, the performance of the full ensemble will improve” (p. 4).

### **III. Research Design**

The purpose of this intervention was to document what happens when middle school students are individually assessed on their individual sightsinging skills. This intervention took place in a three week period. The class that received the intervention was comprised of 86 seventh grade girls who are in their first year of chorus. The resulting data served as documentation of individual student growth as required by the administration at my school.

Sightsinging is an enduring skill that students attain through the choral curriculum, beginning for some at the elementary level and continuing through high school. The ability to sightsing proficiently encompasses mastery of three National Standards for Music Education. In order to be individually assessed on sightsinging skills, students must demonstrate proficiency of national music standard #1, singing alone and with others. Students further must demonstrate national music standard #5, reading and notating music. Furthermore, students must demonstrate national music standard #6, listening to, analyzing and describing music.



Three learning outcomes were measured. First, individual sightsinging performance of a short musical excerpt which was developmentally appropriate was assessed by a pre and post test. The pre and post tests were submitted via audio recordings. The recordings were assessed through the use of rubrics. Secondly, student attitudes toward individual singing assessment were documented before, during and after the intervention through observation and the administration of a student voice survey. Finally, before and after the intervention, audio recordings of whole group sightsinging were examined to determine growth.

The intervention ~~will~~ included a series of seven lessons. A 15-20 minute sightsinging component was planned for the beginning of every choral rehearsal. The lessons consisted of whole group practice of sightsinging examples including some from previous KMEA (Kentucky Music Educators Association) sanctioned events. These examples are typically in 4/4 time, in the key of C Major and no more than 8 measures in length. They may include whole notes, half notes and quarter notes, along with quarter and half rests. The range of pitch is a minor ninth from ti to do. The examples are mostly stepwise with skips of no more than a major third. The selected example was projected onto the screens in front of the class. Students completed a sequence of steps in order to master the example. First students articulated the rhythm on “da” while keeping the steady quarter note beat by physically touching their fist to their leg. Then students then added the correct solfege syllables with the correct rhythm while physically keeping the quarter note beat. Finally, students sang a scale using solfege (do, re, mi, fa, sol, la, ti, do) as well as an arpeggio (do, mi, so, do, so, mi, do) to assure that they had the tonal center in their ear and voice. Finally, as a large 86 member class, students performed the sightsinging

phrase using correct solfege syllables, pitch and rhythm. Students also practiced sightsinging performance in their sections of approximately 30 students each.

To reinforce their command and understanding of rhythm, students used their ipads with earbuds to individually practice with the free ipad application *Rhythm Cat*. This application turns practice into a game as students progress through increasingly difficult levels of rhythm by successfully reading and tapping the correct rhythm on the ipad. There are 15 possible levels, using combinations of whole, half, quarter, eighth, sixteenth notes and corresponding rests. Each new level has its own musical accompaniment and as an added bonus, students are exposed to music styles from around the world. Students who take their ipads home were encouraged to practice (play) *Rhythm Cat* at home.

Further use of technology involved the use of *Smartmusic* as a whole group activity. This application provides instant feedback for pitch and rhythm, and is adaptable for friendly games of competition between groups of students. Observations were made on student behavior and attitude throughout the intervention. A checklist of expected behaviors assisted in documenting these observations. The checklist contained items such as “actively participates”, “silent when appropriate” and “good singing posture”. There was space on the form to record other observed behaviors or student comments. Students continued with group practice of new sightsinging examples and the final lessons offered opportunities for students to voluntarily demonstrate their skill in front of their peers as part of a small group, with a partner, or even as a soloist.

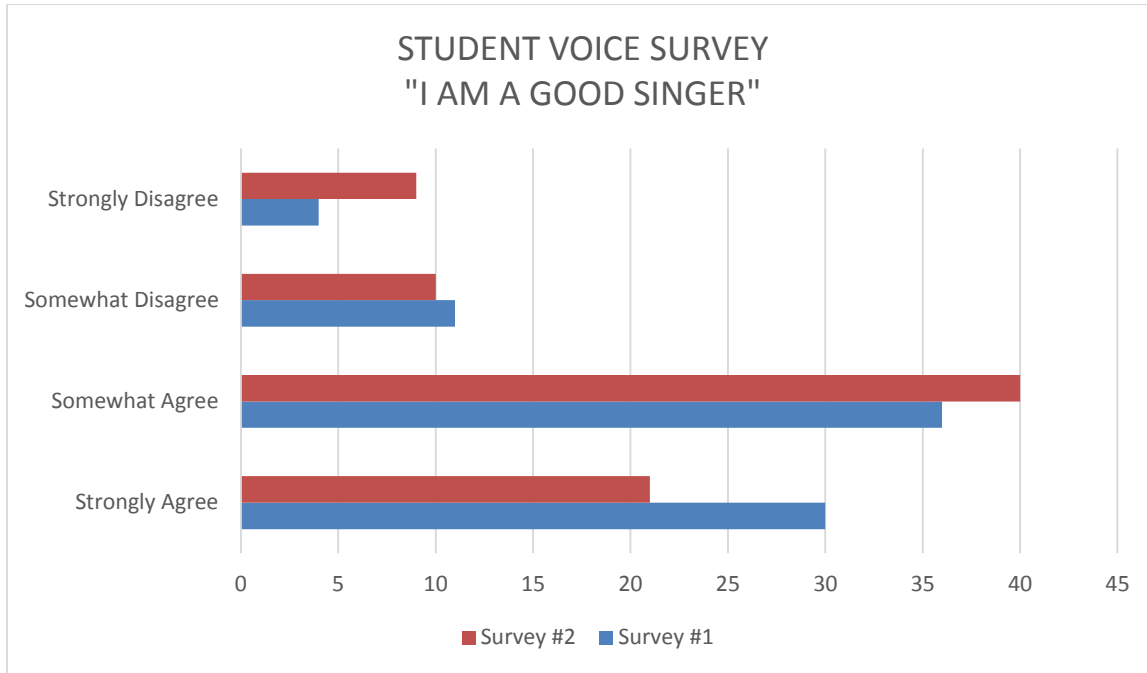
By implementing a variety of engaging sightsinging activities, comprehension and performance of sightsinging was enhanced. Students gained confidence in the performance of sightsinging and demonstrated growth on the sightsinging posttest.

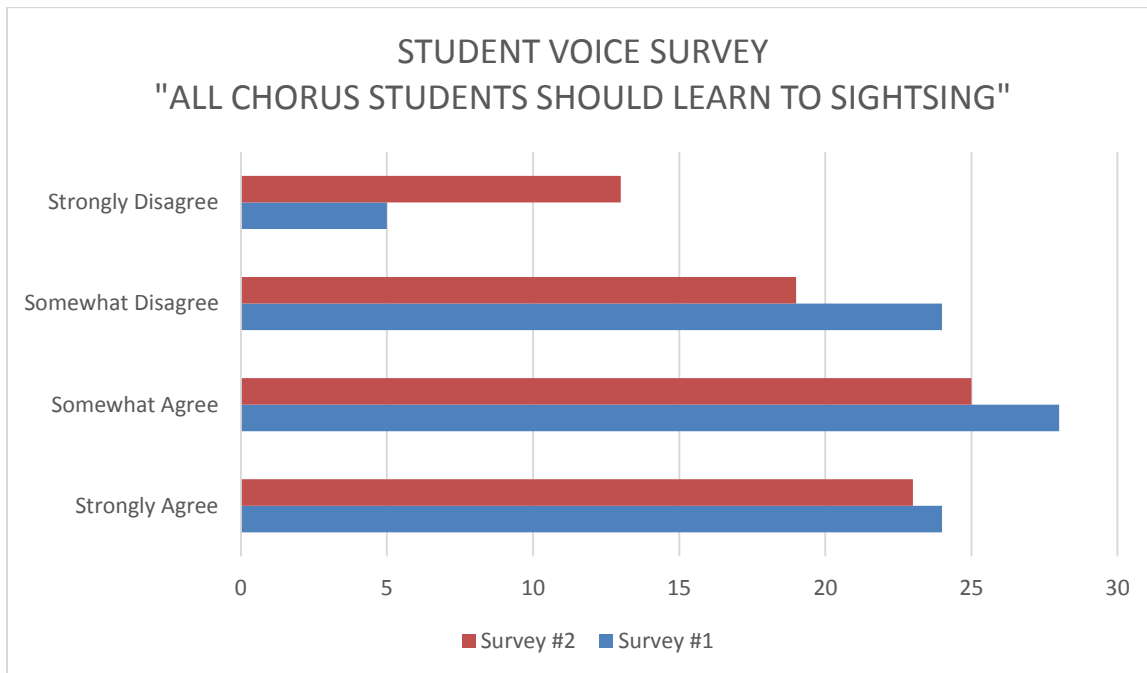
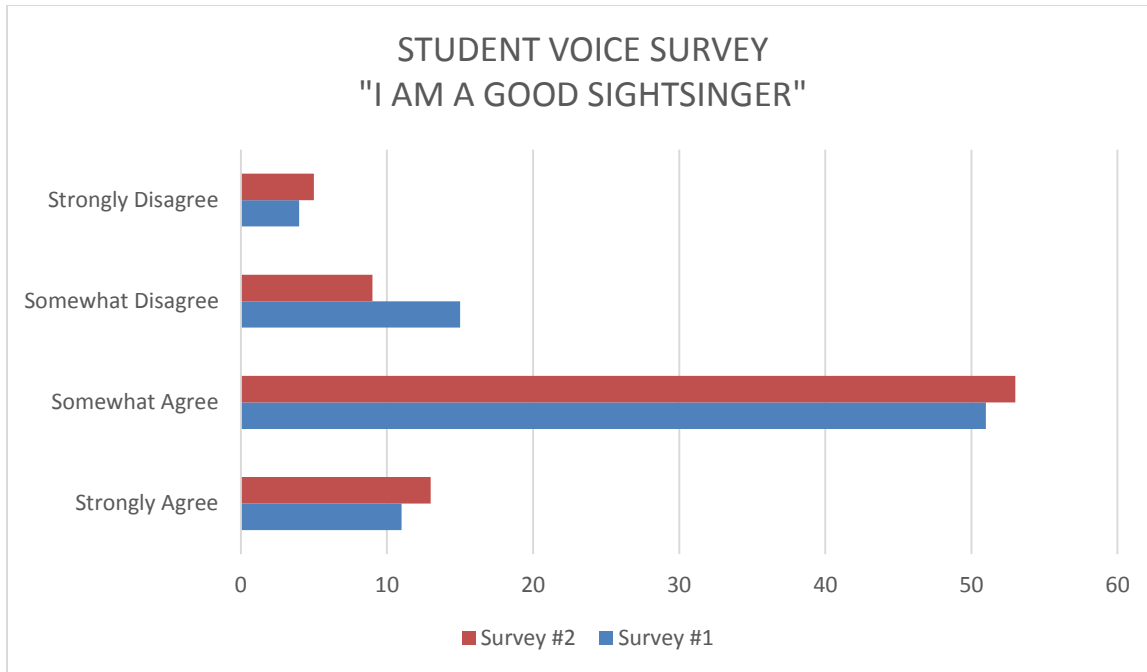
Data of individual student growth was collected by careful examination of each student recording as guided by the rubric. The rubric allowed me as the teacher to objectively assess the skills demonstrated by each student. The criteria on the rubric were pitch, rhythm and fluidity. The levels of mastery ranged from “distinguished” to “novice” with a number value assigned to each level of mastery. Data was also collected by anecdotal evidence as observed in the classroom setting with the use of the behavior checklist. Data collected via the use of a pre and post student voice survey determined change in student attitudes toward the task of individually singing. Finally, the performance of whole group sightsinging was analyzed prior to and following the intervention. As this class is co-taught by myself and a colleague, we both collected anecdotal and observable evidence throughout the intervention.

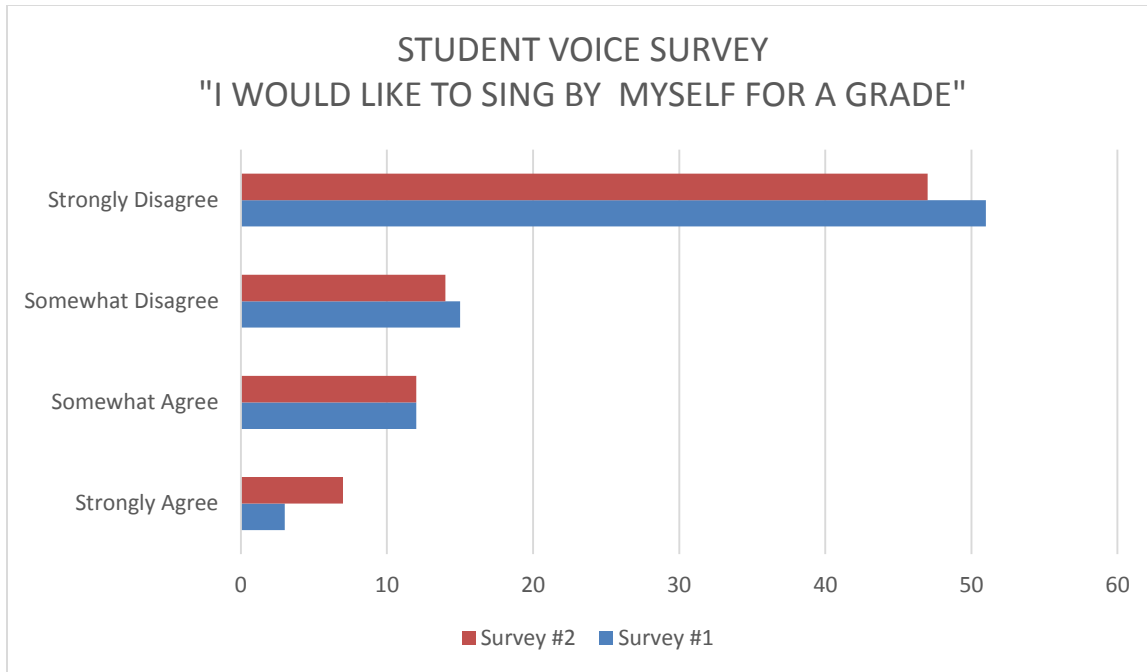
#### **IV. Analysis of Data**

To determine what happens when middle school students are individually assessed on their sightsinging skills, an initial student survey was given to determine student attitudes toward their singing ability, their sightsinging ability, the necessity of sightsinging, and singing individually for a grade. The same survey was given after the intervention to see if student attitudes had changed. The results showed that more students now think that they are good sightsingers, but fewer students think they are good singers. This is interesting because I think that perhaps some student learned that there are skills to develop on the journey to becoming

a good singer. There were less students who believe it necessary to sightsing, although most of them “somewhat agree” that they should. Encouragingly, there was some growth in the number of students who indicated that they would like to sightsing alone for a grade.







The intervention took place over a three week period. The activities were intended to have “something for everyone” and further the desired outcome of improved sightsinging. Whole group practice was employed daily. Some days included individual practice that was self-guided and individually paced through the ipad app, Rhythm Cat. The information was presented verbally, logically, musically, kinesthetically and visually. The use of the *SmartMusic* computer software was a new and novel platform for whole group singing, small group singing and even a few trios.

Throughout the intervention students were engaged and improvement was noted each day. A few informal surveys were taken along the way and the majority of students raised their hand to indicate they are more comfortable with sightsinging and understand it more. Students volunteered to sing in small groups more often than previously, and even asked to do so. I

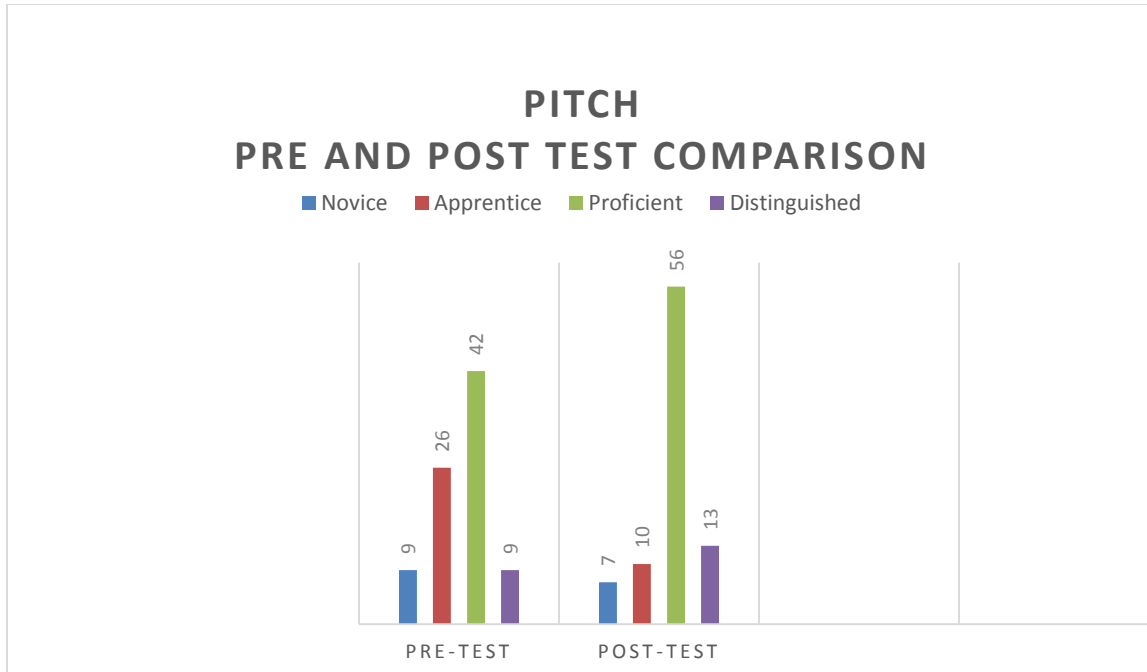
would like to note that the intervention had been limited to sightreading examples in the key of C major. Inadvertently, *SmartMusic* presented a sample in the key of F major. After looking at me quizzically, I explained that the principle was the same and that the starting note was just higher on the staff. To my surprise, they sightread it with very little error the first time, transferring their knowledge and applying it to a new situation!

The students were individually assessed on their sightsinging prior to the intervention and again after three weeks of the intervention. The sightsinging assessments were comprised of eight measures of music in the key of C major, beginning and ending on “do”, including half, whole and quarter notes, half and quarter rests, and skips of no more than a major third. The tonal center was set by singing the scale and an arpeggio and a tempo was set. Students recorded themselves on their ipads and submitted the recordings electronically via Edmodo. I listened to them and scored them after school and through the evening as objectively as possible using a rubric. The categories examined included pitch, rhythm and fluidity. The levels of achievement were novice, apprentice, proficient and distinguished. When comparing the differences in the pre and post assessments, there were sixteen students who moved from the novice/apprentice levels upward to proficient/distinguished.

### NUMBER OF STUDENTS SCORING AT EACH LEVEL

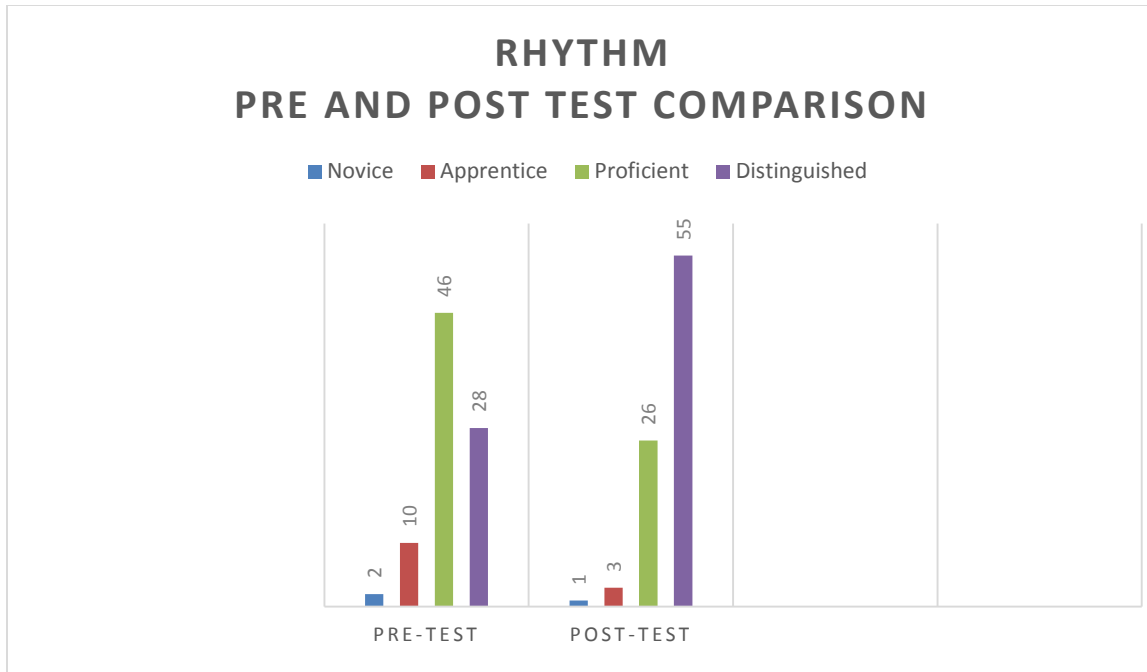
	Novice	Apprentice	Proficient	Distinguished
Pre-test	11	24	45	6
Post-test	3	16	55	12

Breaking down the results according to the categories of pitch, rhythm and fluidity, students improved in all areas as the charts below illustrate:

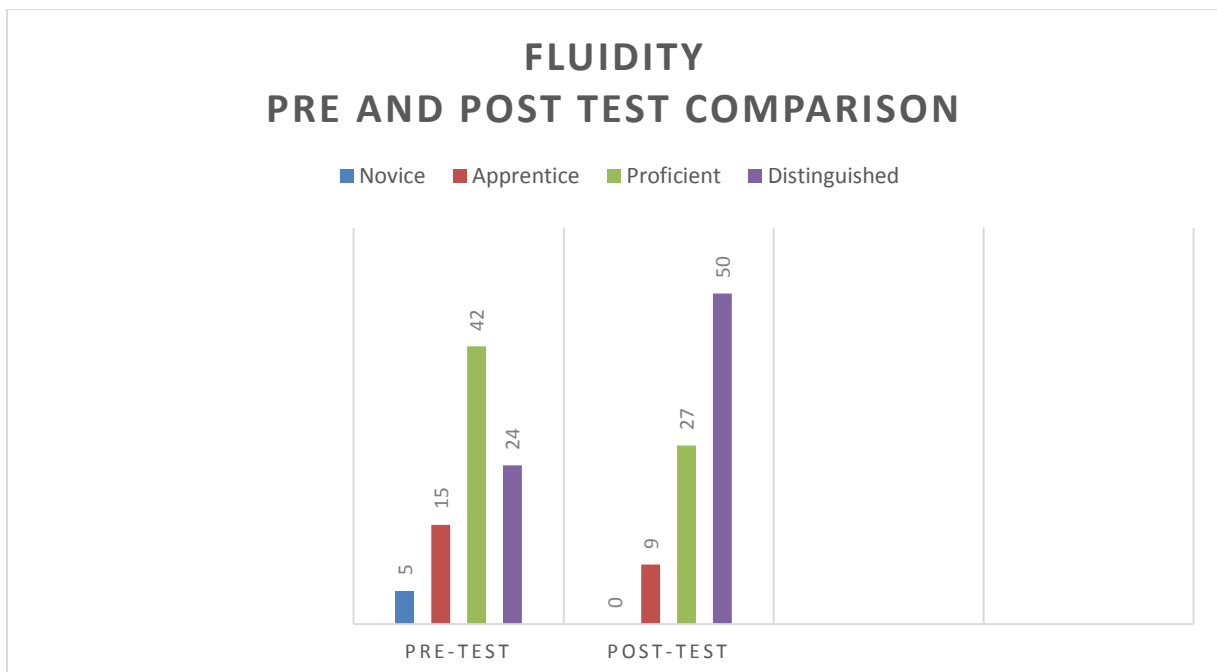


In the category of pitch, for the pre-test 51 of the 86 students were scored in the proficient or distinguished range. For the post-test, 69 students reached these levels.





In the area of rhythm, 74 students scored at the proficient/distinguished level. For the post test, 81 students scored proficient/distinguished.



In the area of fluidity, 66 students scored proficient/distinguished on the pre-test. For the post-test, 77 students scored proficient/distinguished.

Does the choir sightsing on a higher level as a result of this intervention? Absolutely.

Observations and recordings show that whole group sightsinging has improved. Another observation is that in comparison to the other two middle school choirs that we teach, this choir has the best rehearsal behaviors and is the most advanced in the preparation of their concert repertoire. They will be assessed on their sightsinging skills and their performance of concert repertoire on April 2<sup>nd</sup>, and I feel confident that they will excel at both tasks.

### **V. Reflection of Study and Action Plan**

In order to determine the results of assessing middle school students individually on their sightsinging skills, students were given a student-voice survey on their attitudes toward this endeavor. Students then recorded and submitted a pre-test audio recording which was scored on a rubric. Additionally, whole class sightsinging was evaluated by myself and my co-teacher as being on the level of “proficient”.

A three week intervention then took place involving learning strategies designed to increase skills in the area of pitch, rhythm and fluidity. Approximately one month after the pre-tests, the post-assessments were administered. These consisted of the identical student voice survey, a comparable sight-singing assessment, and an evaluation of whole group sightsinging. The expectation was that the whole group sightsinging will improve when the performance of each individual singer improves (Barden, 2011, p. 4).

After analyzing and reviewing the intervention results, it is apparent that sightsinging skills improved. The component witnessing the most growth was rhythm. Students exhibited increased skill in rhythmic execution which translated to gains in the area of fluidity. In the area

of pitch execution, there was also a solid gain, though not as pronounced as rhythm and fluidity. As for the student voice survey, there was a slight gain the number of students who considered themselves good sightsingers, and a corresponding loss in the number of students who considered themselves good singers. The largest gain was in the amount of students who indicated they would like to sightsing alone for a grade!

During the intervention time, full participation was encouraged by proximity control, modeling and formatively assessing. Student behavior was exemplary for the most part and participation was at a high level. Students especially enjoyed competition between groups when practicing with the *SmartMusic* computer program.

Even though the implementation went very well, there were a few challenges. Technology is wonderful when it works! With 88 student ipads in one room, there will always be about 7-8 that freeze up, lose power or were left at home. For these students my teaching partner and I loaned our ipads for the class period, let them use the two classroom desk computers, or let them work with a buddy. Another technology issue that I did not anticipate was the softness of the individual student recordings. The use of ipads for individual recordings was intended to save class time and help any shy students who might be reticent to sing alone in front of me. As a result, I spent many after school hours in a dark and very quiet room in order to listen and score the recordings on a rubric. Even so, some of the recordings were inaudible, and I asked these students to sing live for me one at a time (not in front of the class). To my surprise, they did not seem to mind at all and it was very efficient. This is the method I will use from now on.

I am fortunate to have a co-teacher that will keep the whole class rehearsal going on while I pull students one by one for periodic testing in the future.

Another challenge that I faced with this group of 7<sup>th</sup> grade girls has been evident since the first day of school and was still evident when I viewed the video of my teaching. I did a nice job of delivering instruction and encouraging participation, but I did a poor job of using student's names when calling on them. I believe this can be helped in the future by individually assessing sight-singing skills in a live format instead of an audio recording. The one on one component will be beneficial for me as well as for the student. I think learning student names and being familiar with their individual voices is something every choir teacher should aspire to, even with more than 400 students.

There is very little diversity in my school with regard to culture. There is economic diversity as well as diversity of learning styles. Through examination of the data, there is a small percentage of students that have not reached the proficient level. These students will have small group instruction with me or perhaps with one or two of our students who achieved a perfect score on the post-test. Seating in the classroom can also be adjusted to maximize the effect of group practice. Singing takes practice and some students simply require more time and more practice to reach proficiency. They will be placed near the front or paired with a student who routinely uses scaffolding (such as Curwen Solfege hand signs) to achieve desired results. I will research iPad games that they can download and practice with at home. For those that do not take their iPads home due to the required fee involved, will be given worksheets to help learn solfege and pitch with the help of familiar songs.

Conversations with a classmate who teaches theatre to middle schoolers have revealed that we share similar concerns with individually assessing performance skills. Craig and McCormick (2002) concluded that authentic assessment involved much time inside and outside the classroom. We shared some rubrics and ideas, working toward simplifying in order to facilitate the gathering of data. As Chiodo says “use the simplest grading procedure to get the job done!” (2001, p. 19).

Throughout this process I have been sharing my ideas and strategies for tracking individual learning with my co-teacher and with the band teachers who also have large classes. We have had some discussions toward the creation of summer professional development in which we collaborate with the elementary music teachers at our feeder schools. Should this event materialize, I will offer to present my strategies regarding the tracking of student growth. I will also share the results of each student’s individual growth with my administrator as part of the PGES teacher evaluation framework.

I plan to individually assess sightsinging skills in this class one more time this school year. A benefit to having this data at hand is to encourage the “proficient/distinguished” students to continue in choir for their eighth grade year and beyond. As these students continue through to high school choir, they will be very successful and ensure that the high school choirs perform at a very high level. As for next year, I will continue to assess the sightsinging skills of these girls as members of the eighth grade choir, and will additionally assess the sightsinging skills of the students who enroll in seventh grade choir.

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