ASSESSMENT THROUGH TECHNOLOGY IN THE CHORAL CLASSROOM

by

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Abstract

Teaching a large performing ensemble class, such as choir, can make it difficult to keep a record of each student's individual progress. This report will discuss my philosophy of music education along with ways to incorporate technology into student assessment. Technology can most benefit the educational process when it is easy and efficient. Through personal experience, incorporating technology into student assessment can be done in the four different methods explored in this report. These four methods are: integrating practice file submissions through a virtual interface; using Google Docs Surveys for self-reflection; incorporating audio or video recording students for sight-reading tests; and using YouTube for students to post videos for final projects. Each has the potential to both strengthen and organize the way student assessment is completed.

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Acknowledgements

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CHAPTER 1 - Efficiency of Technology in the 21st Century Classroom

Choral directors often lead hectic and busy lives. Planning how to individually assess a large amount of students can be a daunting task. With the assistance of technology, this process can easily become a part of any program's routine. Once built in, the amount of time saved, along with the valuable information the director receives from each singer, is well worth the investment.

In this report, four different methods incorporating technology into student assessment are explored. The first is integrating practice file submissions through an online grade book such as SchoolLoop. Another approach covers using Google Docs Surveys for self-reflections. The next topic covered is audio or video recording students for sight-reading tests. The final method discussed is using YouTube for students to post videos for final projects.

Using technology for individual assessment can make it easier to know each student on a more individual level. This assessment highlighted the strengths and weaknesses of the individual which made it easier to identify where the ensemble as a whole needed more support. Furthermore, knowing where the choir's strengths lie could help the individual singers make connections to prior knowledge.

Looking ahead, technology will only become more integrated into students' lives. It is often a necessary component in the workplace. Encouraging students to use technology will allow them to become comfortable with accessing digital information for academic use. As a director, incorporating technology can allow the director to deal with each student's needs while storing information digitally. The use of technology often makes a connection between teacher and student in the fact that the student is sometimes more advanced in technological skill and ability than the teacher. It makes the study of music relevant to the current culture of media and technology.

CHAPTER 2 - Philosophy of Music Education

A teacher has many roles to fill in the classroom. Three to consider are: motivation, student accountability, and music literacy. A motivating educator can keep students interested and engaged in the subject matter. Holding the students accountable involves trust and responsibility; these are characteristics that the students will need in college, career, and/or in starting a family. Understanding music literacy will allow for the students to become life-long musicians, either amateur or professional.

Students enter into music programs at various levels. It is important to keep this in mind while assessing a student's individual progress. Encouraging students to make progress, however small, makes the students feel they can succeed. "As in any well-managed classroom, there should be a nurturing environment in which all students are motivated to do their best and focus on the task at hand" (NAfME, 2013). Motivating students in an ensemble class setting, like choir, results in a better sounding group overall. Knowing where the weaknesses lie in a larger ensemble can also help the teacher address areas of need.

In high school students start to understand what life will be like as an adult. Students need to learn how to plan ahead to make sure their schedules have minimal conflicts. "… [One] of the most frequent complaints made by students about their teachers is that they don't have enough time to carry out all the tasks assigned to them in the different academic areas" (García-Ros, Pérez-González, and Hinojosa, 2004). Maintaining a consistent schedule with assignments, tests, and performances will help the students know what to expect. For example, the students have written homework once a week. This assignment is always given out on Mondays and due on Tuesdays. This sense of regularity can help students stay organized with their busy schedules. Holding students accountable to this schedule set forth by the director will allow the students to prove that they are trustworthy and responsible.

Music literacy is a vital component to the future of music education. Teaching the basics of musical notation has the potential to keep students interested in music for life; whether it is as a professional or as a creative outlet they use for fun. "[The] tools and practices utilized to

support the development of particular musical skills will have a direct influence on brain development and subsequently preferred approaches to undertaking musical tasks and the extent to which skills can transfer to other areas" (Hallam, 2010). Additionally, knowing the basics of reading music could be beneficial in the rate and accuracy it takes to learn repertoire. The ability to read music is an important skill for the independent musician. The knowledge of basic reading skills enables the student to interpret what is on the page with minimal assistance from a director.

CHAPTER 3 - The Benefits of Incorporating Technology

Individual assessment is often a burden for choral directors. "Many talented music teachers have never been fully comfortable with assessment and feel unsure of what methods are available and how to implement them with the large number of students they have" (Smith, 2005). Oftentimes assessment in the choral classroom is based on class participation and performances since the majority of rehearsal time is typically spent learning repertoire for a concert or competition. The thought of assessing large groups of students as individuals can seem like a daunting and time consuming task. "However, today, with the emphasis on academic performance in such core subjects as math and reading, the competition has shifted from the gridiron and the stage to the classroom" (Madeja, Dorn, and Sabol, 2004). While class participation is certainly an important factor to students' learning, basing a grade solely on attendance is not an accurate reflection of the individual student's ability. Frequently the stronger singers will be supporting the weaker, less experienced singers during rehearsals; thus giving an inaccurate display of what each individual student is capable of. In addition, concerts and competitions are often difficult to assess since the teacher is also a part of the performance. A teacher cannot be expected to make an accurate assessment of each individual student when the entire class is performing simultaneously. In addition, conducting the choir during a performance requires concentration on balance, vowel placement, diction, phrasing, etc. The director doesn't have the ability to assess students while also focusing on leading the performance. "It's difficult to apply generic standards to a unique situation, to rate the quality of a musical performance in objective terms, or to weigh an individual's solo performance against work within an ensemble" (Randall, 2010). Individual assessment is essential to giving each student a fair grade based on his or her contributions to the choir. Students in choir often have varying levels of prior experience. A student who has little to no prior knowledge of music and singing shouldn't be compared to a student who is more advanced. "Greater emphasis on formative assessment, where feedback is given in time to make a difference, can also help learning for *all students*, particularly those who require the most support" (Ravitz, 2002). With technology, the director gains insight on each singer's individual progress without taking time out of daily rehearsals.

"Consequently, it is difficult to use standardized measures as the only assessment of student performance and progress in a given subject area. Technologies are now available that could be used as the basis for sophisticated and relatively economical instrumentation for assessing knowledge in all subject areas, including the arts" (Madeja, Dorn, and Sabol, 2004). Directors who take advantage of these types of programs could have the potential to assess students more authentically.

Integrating technology into learning has become much simpler since it is already a large part of the 21ˢᵗ century student's life. "All children do not learn in the same way, and adding technology to the palette of teaching strategies is necessary to provide for all types of learning" (Forest, 1995). Students are often given opportunities in their other classes to do their own online research for a topic or find an educational clip on YouTube. Occasionally, the teacher will give the students class time in a computer lab or computer station in the classroom. "Over the past decade, the federal government has invested heavily in numerous initiatives to assure that schools keep pace with technology developments" (Lawless and Pellegrino, 2007). Taking this into consideration, using technology in the choral classroom could help students make connections between subjects if they are using the same medium of technology. Furthermore, teaching students how to approach research could prove useful in their other classes as well as in college.

Since choral directors are often taking on extra rehearsals and/or performances outside of class time, efficiency is crucial to a successful program. "Technology can play an important role in making assessment manageable and comprehensive, particularly when we are managing large numbers of students" (Smith, 2005). Technology can allow for directors to organize large amounts of information and access it from multiple devices. "Bulky paper is *so* twentieth century; there are many possible technological aids for this problem, including both synchronous tools (such as chat, instant messaging, virtual blackboard) and asynchronous ones (digital drop boxes, Web logs or blogs, course Web sites, Web-based bulletin boards, e-mail" (Longhurst and Sandage, 2004). This eliminates the need for copying hundreds of papers, distributing them to the students, collecting them, correcting them, and then returning them to the students. Using a digital interface takes up much less physical space and saves paper. "Technology, as a tool, increases the flexibility and power of the artist" (Peters, 1993). Directors have the ability to know each singer's strengths and weaknesses more completely through technology.

CHAPTER 4 - Types of Student Assessment

Unit I. Singing/Part Tests and Practice Files

A. Pros

It is often necessary to test the singers on their individual parts to ensure mastery. This is typically most effective when a short passage is assigned then assessed. Normally, choral directors will test students in small groups with one or two singers to a part. Additionally, this test is often completed during class in front of the rest of the choir. The purpose of these tests is often to show which singers know their parts for that specific section and which do not. This knowledge may help the director identify which singers need additional assistance or which parts of the assigned passage are particularly difficult for the choir as a whole.

Directors can also request students to practice their music at home. Often, a practice file outlining their part is made available to the singers. Students can use these files to help drill specific parts of the music that are particularly difficult. In addition, the practice file can contain pronunciation for the students to practice speaking through text in a foreign language. Utilizing these files has the potential to help students retain their parts more accurately, which ultimately could save rehearsal time.

B. Cons

Parts testing, while useful for the director, can be embarrassing and demoralizing for the weaker, less experienced singers. Furthermore, the setting in which the singers are expected to perform could cause other mistakes that the student wasn't anticipating due to distractions and/or nervousness. This can produce an inaccurate picture of what the individual student is actually capable of. If the students don't know their parts well enough, it could cause the other students in their group to make mistakes. This type of assessment may not be an effective use of rehearsal time since many factors can create an inaccurate display of what each student actually knows or is capable of.

Instrumental students are often assigned a practice log to practice their music at home. While this may have initially been a good idea to ensure that students are practicing at home, it

doesn't offer enough proof that the right kind of practicing is being done, if any at all. Singers are rarely asked to submit a practice log or proof that they have practiced at home. Occasionally, practice files are made and students are asked to practice them. Without some type of assessment being done on this practicing, the director has no way of knowing which students are actually practicing outside of class time.

Unit II. Sight-Reading

A. Pros

Sight-reading is a national standard that choral educators often teach on a daily basis. The National Association for Music Educators requires that students be able to "read and notate music" (NAfME, 2013). Most of this teaching is done in an ensemble setting either with a sight-reading book/excerpts or repertoire. In a typical choral rehearsal, the director may spend approximately ten minutes teaching sight-singing skills. This usually occurs after vocal/physical warm ups. At the high school level, many state competitions judge each choir's sight-reading abilities. The California Music Educators Association adjudicates sight-reading in six areas: accuracy of rhythm, accuracy of notes, accuracy of stylistic details, response to conductor/others, musicality, and discipline (CMEA Bay Section, 2011). Many choral directors use the adjudication rubrics to figure out where their choir needs improvement. In addition, more time is usually spent on sight-reading skills in the weeks leading up to these festivals.

B. Cons

Although sight-reading is an essential component to a great choir, tests are rarely given to ensure individual learning of sight-reading skills. Students' sight-reading skills are often assessed in conjunction with the rest of the ensemble. In doing so, the director may have a difficult time identifying where each student is struggling. Furthermore, most directors treat sight-reading as a type of vocal or academic exercise since it is often practiced after vocal warm-ups. "The director committed to teaching music reading has a responsibility to integrate reading challenges in the teaching of a new piece, so sight-singing is presented not as an isolated academic exercise, but as a skill central to good choral singing" (Demorest, 1998). When the director is able to incorporate more sight-reading skills into the core of daily rehearsals, singers can make greater improvements on their abilities to sight-read.

Unit III. Self Reflection

A. Pros

Students are often asked to reflect upon their experience in choir, whether it is a single rehearsal, a performance, or a long-term reflection. Reflections can either be done informally or formally. Teachers can ask the choir how they felt they performed on a particular rehearsal with thumbs up or thumbs down rating system. This type of assessment can be beneficial for the teacher since it requires the students to give instant feedback about the flow of the rehearsal. Another method of receiving immediate responses from students is a web-based program called Poll Everywhere. Teachers can create multiple-choice surveys or other open-ended questions for students to respond via cell phones, tablets, or laptops. The results can be displayed for the whole class to see. Utilizing this can be more efficient than counting raised hands. Reflections can also be completed through a written response. The results of reading these reflections can point out the most enjoyable and least enjoyable parts of learning. Occasionally, something unexpected can surface as being fun for the students. In addition, self-reflection gives the students a moment to critically assess their progress of learning in choir. "Researchers have found that students who participate in self-evaluation become more interested in applying the criteria and improving than in the specific grade they get on an assignment" (Hale and Green, 2009). Students will want to be part of a good choral ensemble. In having the students complete a reflection, it enables them to evaluate their strengths and weaknesses. "As instructors, we must teach students to function autonomously when they leave school and no longer have our guidance" (Hale and Green, 2009). Self-reflecting can translate into the workplace once the students graduate. For many students, pointing out their flaws is much easier than pointing out their strengths. In asking the students to find both, it helps them recognize that they have strengths as well as weaknesses. "As students eventually understand and internalize the standard, they will not be as dependent on authorities to make corrections or judgments concerning their work" (Hale and Green, 2009). Students are learning to self-diagnose their mistakes. This skill can easily translate over to other academic subjects and eventually lead to the work place.

B. Cons

Self-Reflections might produce biased results if done informally in class. Occasionally, teachers may ask their class to give thumbs up or thumbs down to show their understanding of a

particular topic. Students may feel pressured by their peers to give thumbs up just to fit in. Additionally, the teacher will have to take time to count or survey the amount of student responses. This could potentially waste precious rehearsal time as well as give inaccurate results.

Unit IV. Final Projects

A. Pros

Oftentimes, the purpose of a final project is for students to demonstrate comprehensive learning. It can frequently incorporate multiple standards used for music education. It also allows for the student to use creativity in presenting a project to the teacher or to the class. Occasionally, a final project will consist of students teaching their peers about a specific topic or skill they learned. Bloom's Taxonomy shows creation shows the highest level of understanding (figure 4.1). The lower levels of Bloom's Taxonomy must be achieved before the student is able to progress onto the higher, more complex levels. Students who grasp the information fully are able to teach the concept to others. "Now new kinds of assessment… are breaking away from multiple-choice tests, especially the strictures imposed by machine-scoring of student answers. These assessments are asking students to demonstrate and document their deep understanding of subject matter… and their actual ability to solve complex problems… and to work in groups or teams. These assessments are characterized by longer periods of engagements, multiple steps, and far different cognitive demands elicited from students" (Baker and O'Neil, 1995). When students present a project demonstrating what they have learned throughout the year, it often requires the usage of multiple levels of cognition; thus verifying that the subject matter has been learned. "Because curriculum and assessment are closely intertwined, there is a need to either completely reconsider the assessment approaches when technology is integrated into the school curriculum, or consider more carefully how the use of technology can meet the demands of standards-based accountability" (Hew and Brush, 2007). Encouraging students to create a final project using technology can display the different levels of Bloom's Taxonomy from each individual student. Oftentimes, final projects require that students recall information they have learned throughout the academic year, or even a cumulative project if they are putting together some type of senior portfolio. The comprehension or understanding of this information is needed in order for the student to express their knowledge required for a final project. Students will typically have to describe concepts in their own words, which will demonstrate their

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understanding. Final projects often require an implementation of this knowledge through visual or written means. Organization of the material presented and making judgments on which information is relevant is often needed for demonstrating cumulative learning. Finally, putting all these elements together in an artistic or creative way can demonstrate the highest level of learning according to Bloom's Taxonomy.

B. Cons

Typically, a final project will consume a large portion of time both in and out of the classroom. If the educator does not prepare the students properly with instructions and time to work on the project, the end result may not be up to the educator's expectations. Furthermore, final projects tend to be complex and cumulative of the learning done for that academic year. Students who have added the class late may not have the same academic experience as those who were enrolled since the beginning of the year.

Figures and Tables

Figure 4.1 Bloom's Taxonomy (revised)
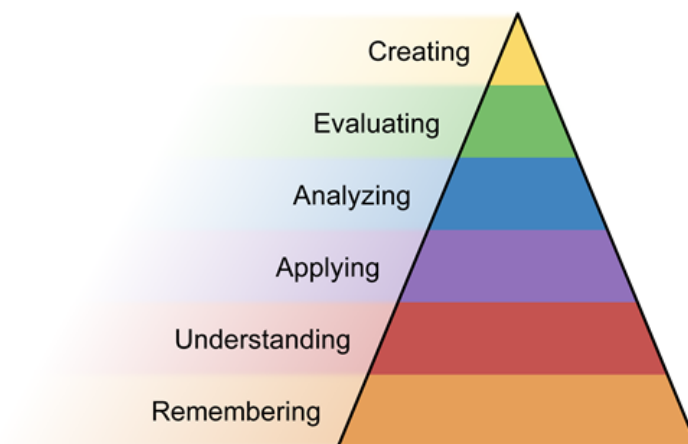
CHAPTER 5 - Incorporating Technology into Assessment

Unit I. Singing/Part Tests and Practice Files

Through the usage of technology, assessing individual practice can be easily integrated into any choral ensemble with a few necessary elements. Many students and teachers have access to a smart phone, tablet, or computer. By using free applications to audio and/or video record, students can create files of themselves singing a particular excerpt in the repertoire that needs additional at home practice. If the singers need further support, a music file outlining their part can also be used to have the students sing with as they record (figure 5.1). This is especially useful for students that don't play piano or have access to a piano at home. "The Internet, for example, allows students of all ages to practice and compose at home, away from their limited time in the classroom" (Hershenson, 2001). Another benefit to using the pre-recorded practice file outlining a specific part ensures the students singing in the correct key/range and the correct tempo. Additionally, the director can also include accompaniment and/or the other parts so the singer can hear how they fit into the overall composition.

This pre-recorded file is what the students should use to practice their part before they record themselves. The students can either upload the files to an online grade book (figure 5.2), a website such as Dropbox or simply email them to their teacher. It could also be helpful for the teacher if a separate email account is made specifically for this purpose. If a director is dealing with multiple choirs that have high enrollment, asking each student to submit a practice file to their personal or work email could create issues with their inbox. Using Gmail or Yahoo to create a free account such as SCHSMusic@gmail.com could help keep personal and work email accounts less cluttered.

The amount of time it takes for a director to listen to each of these files may seem daunting, but the process can be very rapid. Oftentimes, the director should be able to tell within the first ten or fifteen seconds if the music is learned or not. This should help the director anticipate how the rest of the practice file will sound. It is important to keep the assignments of practice files brief and meaningful for the singer as well as the director. Simply assigning a huge passage just for the sake of assigning homework won't be as significant as a concise eight-measure phrase that the ensemble was struggling with in rehearsal. "Almost every director can

use recording technology, typically for an audition, rehearsal, or concert recording. Recordings give us an objective view of out ensemble and help us correct and mold our choirs" (Bryant, 2009). Giving feedback to the students on how they performed on the assignment should help eliminate any errors made. This is also an opportunity for the director to hear and comment upon vowel placement, diction, tone, and pitch matching. In a large ensemble setting, it is often difficult to hear which singers understand these concepts. By listening to each singer individually, these issues are brought forth more clearly. It can also allow for the director to determine if some singers need additional one-on-one support without having to single them out during a rehearsal. The director can also easily identify if a large number of students are struggling with a particular passage in the music. Listening to the practice files can allow for the director to re-teach the information during a rehearsal. This process allows for the singer to present the best possible presentation of himself or herself to the director. "When the assessment task is presented within a context that is familiar to the student, it should not cause undue anxiety or concern" (NAfME, 2013). If they make a mistake, the students can just re-record themselves. It eliminates the stress and embarrassment of making a mistake in front of their peers when this process is done in class. Singers should be encouraged to edit or re-record themselves before submitting their recording to their director. The recording should be the best representation of their singing.

Auditions for solos can also be done through this method. Accompaniment practice files can be used in place of part-highlighted files for singers to record themselves. This also allows the student to present the best possible version of them, and it eliminates the need to use rehearsal time for solo auditions. In addition, the director can listen multiple times to the different submissions instead of asking the student auditioning to sing again.

Figures and Tables

Figure 5.1 Performing Arts Department Website with Practice Files

Figure 5.2 Students upload their practice file submissions to SchoolLoop, an online grade book

Unit II. Sight-Reading Tests

Sight-reading is a vital skill for students to learn repertoire quickly and accurately. "Technology will continue to impact the speed, fluency, and connectivity of the choral process" (Arnold, 2008). Easy ways to individually assess students on their sight-reading skills are to audio or video record the student performing a sight-reading excerpt. This process can be done during class time if the director has access to a separate room for the recording to be done. This allows the students privacy when demonstrating their sight-reading skills. If a separate room is not available, students can submit their test via voicemail or arrange a time after school to meet with the director. "In fact, [technology] appears to open up a wealth of opportunities both for

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music teachers and their students - energizing students while allowing teachers to offer more individualized attention in the classroom" (Hershenson, 2001). Testing students' sight-reading abilities can guide the topics covered during any given rehearsal or even the repertoire chosen for the choir. If the director notices that the students are struggling with a particular interval or rhythmic gesture, a musical excerpt or exercise can be chosen to strengthen that specific concept. In addition to improving musicianship, testing students on their sight-reading skills can also help the director identify the stronger singers in the choir. This can help with seating or standing arrangements as well as choosing student leaders. The director can choose the frequency at which to administer these tests. This is also an excellent way to have a record of each student's progress throughout the year. These records could prove useful at parent-teacher conferences, IEP/504 meetings, or as documentation to the strength and quality of a music program for administrators.

Unit III. Self-Reflection

Self-Reflection could be practiced more frequently if moved to an online source. "Improving student performance without increasing instructor workload is a difficult task. Services now available via the Web can help" (Crippen, 2003). Google Docs have a plethora of uses to a choral director. This free, cloud-based program incorporates document creation and storage. One of the most beneficial aspects of Google Docs is the Forms application. This program can be modified to serve a variety of functions such as: collecting information, signing up for various activities like a fundraiser, and surveys (figure 5.3). This information is stored online and can be retrieved from anywhere with Internet access. The forms can be developed to have multiple types of responses: short answer, paragraph, multiple choice, check boxes, choose from a list, scale, and grid. The director can create the form with the proper information and then email or share the public link to the form for students to access. Once students complete the form, their responses are recorded into a spreadsheet (figure 5.4). It is easily organized and prevents taking away rehearsal time from singing since students can complete it outside of class time. Since the responses are stored online, it doesn't take up any physical space and also eliminates the need for the director to make copies of a response form. Students can also have access to the online form to complete directly after a concert instead of the next day during class. Additionally, students can feel more comfortable reflecting upon a particular experience outside

the classroom. The director can choose to share the ensemble's responses by either emailing a PDF or adding the students as viewers of the document. The students' individual responses can be kept anonymous by deleting or hiding the columns for names. If the students are allowed to read each other's reflections, it could allow for multiple insights to the same experience. This could be beneficial in getting students to view a performance or rehearsal in different ways. In addition, the students could begin to notice different aspects on their own instead of being prompted by the director.

Figures and Tables

Figure 5.3 Using Google Docs to complete reflections (what students see)

Concert Reflection

Fill out the responses below. You will receive 20 points upon completion.
* Required

Last Name *

[   ]

First Name *

[   ]

On a scale from 1-5, how do you think you personally performed at the concert? *

☐ 5- perfect!

☐ 4- pretty good.

☐ 3- just ok.

☐ 2- not so great.

☐ 1- horrible.

On a scale from 1-5, how do you think the choir as a whole performed at the concert? *

☐ 5- perfect!

☐ 4- pretty good.

☐ 3- just ok.

☐ 2- not so great.

☐ 1- horrible.

List below 3 things you executed well on the concert. *
Try to be as specific as possible.

[   ]

List below 3 things you need to improve on for next time. *
Try to be as specific as possible.

[   ]

What was your favorite part of the concert? *
Try to be as specific as possible.

[   ]

Submit

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Figure 5.4 Using Google Docs to complete reflections (what the director sees)

Winter Concert Reflection Choir
File Edit View Insert Format Data Tools Form (31) Help   Last edit was on December 30, 2012

Timestamp	Last Name	First Name	On a scale from 1-5, how do you think you personally performed at the concert?	On a scale from 1-5, how do you think the choir as a whole performed at the concert?	List below 3 things you did well on.	List below 3 things you need to improve on for next time.	What was your favorite part of the concert?
11/30/2012 16:09:07			4- pretty good.	5- perfect!	looking at the teacher, looking at the boys in "are you gonna marry me honey?", and remembering the piece "morning song"	singing clearer, smiling and getting off the stands in time.	the last piece.
11/29/2012 22:03:30			4- pretty good.	5- perfect!	My expressions were matching the meaning to the song. I sang with round vowels when suppose to. Dynamics were on point.	Memorize the songs. Don't stare at the soloists, stare at Miss Dixon. Always smile even after the piece is done.	When we sang to the guys for American Folk Suite since we had a little acting involved.
11/30/2012 10:01:35			4- pretty good.	4- pretty good.	Remember all the the stage directions. I knew all of my parts, & had the 4 last pieces almost all the way memorized.	Look up more often. Have the lyrics to memorized pieces engraved into my mind. Sing more confidently.	We did really good on the last 4 pieces of the concert. And the audience seemed to enjoy it as well.
11/29/2012 20:38:23			4- pretty good.	4- pretty good.	I carried out the notes. I smiled. I sang loud when It was necessary . I stressed the	Next Time I need to find my clothes ahead of time . Next time I need to memorize the songs a little better. Next time I need to go to rehearsal for more time.	My favorite part of the concert was singing by the audience, and singing Shenandoah.
11/30/2012 21:04:06			3- just ok	4- pretty good.	In the morning song's solo part,i never have mistake. I sing loudly all the time. I am smiling, when i was singing.	I need more confidence. I need to do more practice. I need to listen carefully to the beat.	My favorite part of the concert is the last five song. I very like the song, I hear America Singing. when we sing this song, we are very exciting and i feel very happy. I very like the atmosphere of this song. It's sound amazing
11/30/2012 22:19:59			4- pretty good.	5- perfect!	I usually sing quietly and softly, but during the performance I sang confidently and didn't feel shy or scared. Also, I was able to hold out certain notes for the right amount of time. The third thing I felt I did well on was that I didn't mess up. I usually forget the words when I'm nervous but this time I didn't.	Next time, I hope I won't be distracted by the audience and feel the need to start laughing. I'd also try to sing the right notes, because at times I felt as if I couldn't do it. Last, I would need to improve on enunciating the consonants in the words.	I don't really have one favorite part. I really enjoyed the American Folk Suite because it was fun and silly. I also liked the songs Treble Choir sang. Ruben Ruben was very cheery and silly. He's Gone Away was very pretty, even though it's sad.
11/30/2012 15:59:43			3- just ok	4- pretty good.	I knew when to get on and off stage. I knew how long to hold the notes. I was being quiet while men & treble choir performed.	I need to remember the song order. I need to remember some lyrics. I need to look up more.	My favorite part of the concert was when treble choir sang their songs and when we sang American Folk Suite.
11/30/2012 17:31:01			4- pretty good.	4- pretty good.	I sing well I sing loud enough I don't do any movement will I'm singing	I need to improve my actions I need to smile I need to memorize the song well cause some parts of the songs i forgot some words	My favorite par of the concert was wen we the American Folks Suite
12/1/2012 22:43:41			4- pretty good.	4- pretty good.	I think I did well on singing as confidently as I could on all of the pieces I sang, looking up at Miss Dixon more than looking at my music for most pieces, and memorizing the pieces assigned to be memorized.	Next time I will need to improve on looking happy while singing "positive" songs, remembering what is next to do/song to sing after a piece, and holding out specific notes for the right duration.	My favorite part of the concert was the end of the closing piece, "I Hear America Singing." After we finished I was genuinely happy because I felt like we did so well on all of the other pieces even if we did mess up. It sounded nice to close the concert.
					1. I felt like my timing for everything was pretty spot on.	1. Facial Expression. I did alot, but I really didn't know	I really loved American Folk Suite, I think that had to be

Unit IV. Final Projects

Final projects are an excellent way to sum up the learning completed during the academic year. "The use of technology in the classroom can give all students a learning environment that allows discovery and creativity..." (Kimmel and Deek, 1996). Students can present the information they have learned in various formats. Creating a music video or skit is an excellent way for students to use their performing experience to teach their peers. "The use of YouTube and other similar websites allow numerous possibilities for developing a broader view of music

from quality to diversity" (Whiteley, 2010). In addition to using YouTube for research or exploration in music, students can post their own clips to share a type of final project (figure 5.5). The director can compile the videos into a playlist to share with the class (figure 5.6) and possibly share the best examples with future classes of students. Utilizing YouTube can be beneficial since it can easily be linked to a Google Docs account, which can store many of the previous methods mentioned in this report. In addition, storing video files can take up storage space on a computer or physical space if it is DVD format. YouTube can store the files digitally. The links can be embedded into websites or shared via email or Facebook.

Encouraging students to create a music video or skit can allow for creativity. In addition, creating a video usually requires students to plan out what they hope to capture in advance. After they have recorded the video portion, many times, students spend additional time editing their film before submitting their final product. This same process can transfer to other projects, such as writing an essay. Utilizing organizational skills and teamwork can also be transferred to the workplace. Final projects can also incorporate many of the national standards of music education.

Figures and Tables

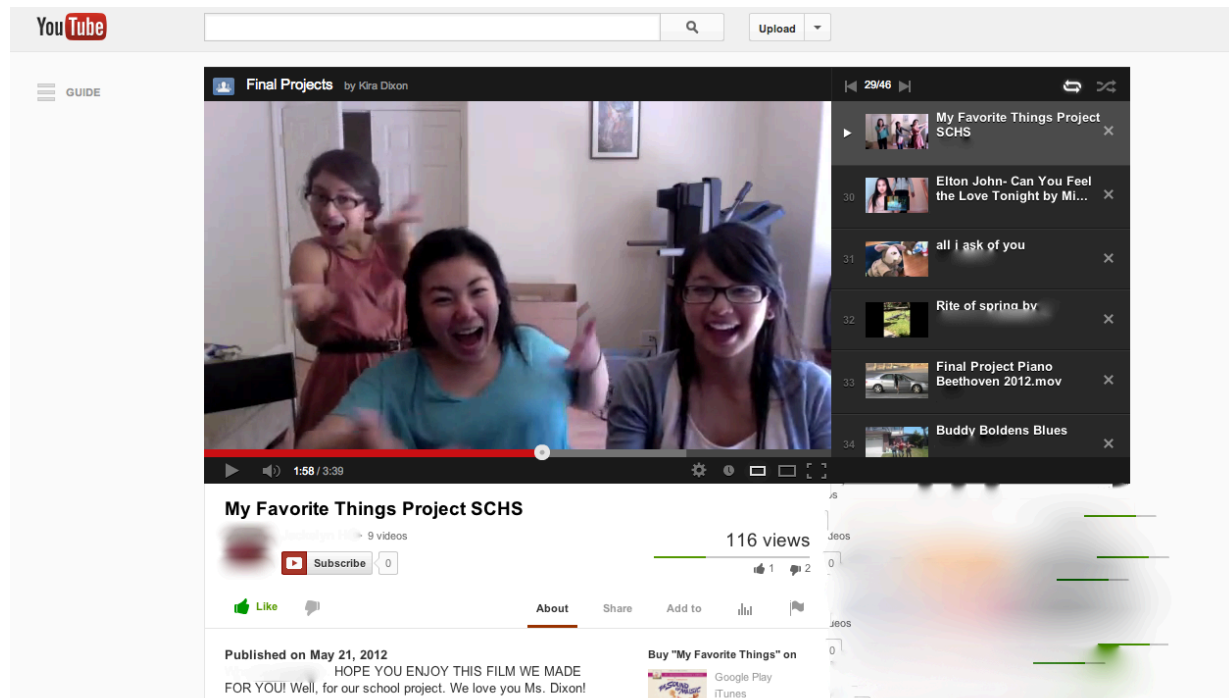**Figure 5.5 Example of a Final Project posted to YouTube**

Figure 5.6 YouTube Playlist of Final Projects

CHAPTER 6 - Extension

Unit I. Things To Consider

Technology has the potential to simplify individualized assessment. It can allow directors to acknowledge each student's strengths and weaknesses. Furthermore, students can have opportunities to demonstrate their own knowledge, as opposed to listening to the ensemble as a whole. Technology also has the capability to be incorporated into many different kinds of programs. With this flexibility, directors can decide how and when to implement different kinds of student assessment.

Although technology has the capabilities to extend the learning process outside the classroom, ultimately, it cannot replace the teacher-student relationship. "(Technology) can provide another means for us to communicate about the art of feeling, but we must remember that it is not the actual act itself" (Miller, 2008). If technology is used as a supplementary tool to assist directors in knowing more about each individual student, it can prove its usefulness.

Unit II. Conclusion

Incorporating technology into student assessment can provide choral directors the opportunity to have a better understanding of what each student in their ensemble is capable of. With this information, the teacher could be more effective in addressing areas of need. Directors can find that technology-based assessment has the potential to save rehearsal time as well as taking up less physical space. Additionally, encouraging students to use technology for educational purposes can help them differentiate the use of technology for social and personal reasons.

The one difficulty directors may face in using technology in the choral classroom is the seemingly constant evolution of what technology is capable of. Educators who expect to use technology as an effective instructional tool must also be willing to learn and adapt to newer and more efficient technologies. Those who do so can have the potential to become resourceful and effective educators to their entire population of students.

References

Ale, C. L., & Green, S. K. (2009). Six Key Principles for Music Assessment. *Music Educators Journal, 95*(4). Retrieved from http://search.proquest.com.er.lib.k-state.edu/docview/1110636?accountid=11789.

Baker, E. L., & O'Neil, H. Jr. (1995) Computer Technology Futures for the Improvement of Assessment. *Journal of Science Education and Technology, 4*(1). Retrieved from http://www.jstor.org/stable/40188494.

Bryant, C. B. (2009). Recording Your Choir: Technology for the Choral Director. *The Choral Journal, 50*(3). Retrieved from http://search.proquest.com.er.lib.k-state.edu/docview/1035127?accountid=11789.

California Music Educator's Association: Bay Section. (n.d.) Sight Reading Rubric. *CMEA Bay Section.* Retrieved from http://cmeabaysection.org/documents/adjudicator-information/sightreadingrubrics.pdf.

Chriswell, C. (2007). Technology: Student Assessment for the Digital Age. *Teaching Music, 15*(3). Retrieved from http://search.proquest.com.er.lib.k-state.edu/docview/1520489?accountid=11789.

Copeland, P. L. (2011). Digital Natives and Immigrant Choral Directors. *The Choral Journal, 51*(8). Retrieved from http://search.proquest.com.er.lib.k-state.edu/docview/868607524/139591F37197CAD739D/5?accountid=11789.

Copeland, P. (2009). Technology for the 21st Century Choir. *The Choral Journal, 50*(5). Retrieved from http://search.proquest.com.er.lib.k-state.edu/docview/753557730?accountid=11789.

Crippen, K. J. (2003). Rethinking Course Assessment: Creating Accountability with Web-Based

    Tools. *Journal of Science Education and Technology, 12*(4). Retrieved from

    http://www.jstor.org/stable/40188747.

Demorest, S. M. (1998). Integrating Sight-Singing into the High School Choral Rehearsal.

    Choral Journal, 39(5). Retrieved from http://acda.org/files/choral_journals/CJ%20-

    %20December%201998.pdf.

Forest, J. (1995). Music Technology Helps Students Succeed. *Music Educators Journal, 81*(5).

    Retrieved from http://www.jstor.org/stable/3398854.

García-Ros, R., Pérez-González, F., & Hinojosa, E. (2004). Assessing Time Management Skills

    as an Important Aspect of Student Learning: The Construction and Evaluation of a Time

    Management Scale with Spanish High School Students. *School Psychology International*,

    25(2). Retrieved from http://spi.sagepub.com/content/25/2/167.

Hallam, S. (2010). The power of music: its impact on the intellectual, social and personal

    development of children and young people. *International Journal of Music Education,*

    28(3). Retrieved from http://ijim.sagepub.com/content/28/3/269.

Hershenson, R. (2001). Note Worthy. *Family PC*, *8*(2). Retrieved from

    http://search.ebscohost.com.er.lib.k-

    state.edu/login.aspx?direct=true&db=cph&AN=3953701&site=ehost-live.

Hew, K. F., & Brusch, Thomas. (2007). Integrating Technology into K-12 Teaching and

    Learning: Current Knowledge Gaps and Recommendations for Future Research.

    Educational Technology Research and Development, 55(3). Retrieved from

    http://www.jstor.org/stable/30221244.

Kimmel, H., & Deek, F. (1996). Instructional Technology: A Tool or a Panacea? *Journal of*

Science Education and Technology, 5(1). Retrieved from

    http://www.jstor.org/stable/40186380.

Klingenstein, B. B. G. (2005). Using Technology to Provide Alternate Methods of Assessment in

    the Music Classroom. *Journal of Technology in Music Learning, 3*, 79-85.

Lawless, K. A., & Pellegrino, J. W. (2007). Professional Development in Integrating Technology

    into Teaching and Learning: Knowns, Unknowns, and Ways to Pursue Better Questions

    and Answers. *Review of Educational Research, 77*(4). Retrieved from

    http://www.jstor.org/stable/4624911.

Longhurst, J., & Sandage, S. A. (2004). Appropriate Technology and Journal Writing: Structured

    Dialogues That Enhance Leaning. *College Teaching*, *52*(2). Retrieved from

    http://www.jstor.org/stable/27559182.

Madeja, S. S., Dorn, C. M., & Sabol, F. R. (2004). Alternative Assessment Strategies for

    Schools. *Arts Education Policy Review, 105*(5). Retrieved from

    http://search.proquest.com.er.lib.k-state.edu/docview/756581903?accountid=11789.

National Association for Music Education. (n.d.) Performance Standards for Music: Assessment

    Strategies for Music. *NAfME.* Retrieved from

    http://musiced.nafme.org/resources/performance-standards-for-music/assessment-

    strategies-for-music.

Peters, G. D. (1993). Computer-Based Music Skills Assessment Project: A Portal to Artistic

    Innovation. *Bulletin of the Council for Research in Music Education, 117*. Retrieved from

    http://www.jstor.org/stable/40318571.

Randall, M. (2010). Beyound The Grade. *Teaching Music, 17*(6). Retrieved from

    http://search.ebscohost.com.er.lib.k-

state.edu/login.aspx?direct=true&db=aph&AN=50460400&site=ehost-live.

Ravitz, J. (2002). CILT2000: Using Technology to Support Ongoing Formative Assessment in

the Classroom. *Journal of Science Education and Technology, 11*(3). Retrieved from

http://www.jstor.org/stable/40186553.

Saliu, S. (2005). Constrained Subjective Assessment of Student Learning. *Journal of Science*

Education and Technology, 14(3). Retrieved from http://www.jstor.org/stable/40188689.

Smith, N. (2005). Technology Education. *Illinois Music Educator, 66*(1). Retrieved from

http://search.ebscohost.com.er.lib.k-

state.edu/login.aspx?direct=true&db=aph&AN=18511475&site=ehost-live.

Ulrich, J. (2008). Engaging the iPod Generation: Perspectives from a New Generation of

Conductors. *The Choral Journal, 48*(8). Retrieved from

http://search.proquest.com.er.lib.k-state.edu/docview/1034330?accountid=11789.

Whiteley, D. F. (2010). *Online Enhancement for the Choral Classroom.* Retrieved from

http://hdl.handle.net/2097/4630.