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The Use of Recordings to Assess Individuals in High School Chorus

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Teachers in the 21st century have experienced rapidly changing education policy and teaching techniques. Assessment practices and technology are two quickly developing components of education. Many music teachers use outdated assessment practices, such as grading students primarily on non-achievement. Some music teachers use technology frequently, while others are afraid to use it in their classrooms. With so many changes affecting education, teachers must remember to do what is best for student learning and achievement.

My colleagues and I use recording assignments to assess individual progress of our high school ensemble students. We are fortunate to work at a school at which all students use iPads. Because of the large amount of students and classes we teach, we normally assign one recording assignment per semester. Students must record themselves playing or singing repertoire from the concert and short scales or sight-reading exercises. This past year, my chorus students used the iPad application Voice Record Pro, which allows students to upload recordings to a personal Google Drive folder. I assessed students' performances using a general recording assignment rubric that was shared with the students. I like the idea of using recordings to assess students because of my limited contact time with them. However, I feel like I have been using recording assignments ineffectively. I have researched assessment practices in chorus class and the use of technology, self-recording, and self-assessment in music education. I have learned many new ways to use recording assignments to assess and teach students.

Assessment in the Music Classroom

Many music educators, especially high school ensemble teachers, fail to assess students' achievements. Russell and Austin (2010) stated, "researchers examining assessment practice in

secondary music classrooms found that attendance and attitude were the most common grading

criteria employed by instrumental and choral music teachers" ("Music Assessment Research,"

para. 3). Scott (2012) suggested using assessments to enhance learning in addition to assigning

summative grades. Scott discussed three constructivist ways of learning: assessment of learning

(summative assessment), assessment for learning (formative assessment), and assessment as

learning (self-reflection) (Ideas section, para. 2). Scott suggested students use video-recordings,

portfolios, and rehearsal logs with written self-reflection to self-assess their performance

progress.

Russell and Austin (2010) researched secondary music teachers' assessment and grading

practices. Three hundred and fifty two secondary music teachers participated in the study. The

music teachers taught band (52%), chorus (37%), and orchestra (11%) at the middle school or

high school level. Participants completed the Secondary School Music Assessment

Questionnaire (SSMAQ). Russell and Austin found teachers allocated the greatest grade weights

to performance, attitude, and attendance assessments. Teachers based 60% of grade weight on

non-achievement criteria. Teachers used live, in-class playing exams as the most common

performance assessment. Russell and Austin concluded many music teachers neglect

achievement-based assessments. Researchers urged secondary music teachers to develop

multiple ways to assess students on performance and achievement criteria.

Assessment in the Choral Classroom

Chorus teachers frequently assess at the group level and neglect individual achievement.

Furby (2013) stressed the importance of teachers understanding exactly what they want students

to learn and assessing them individually on these criteria. When teachers focus on individualized

assessment, they demonstrate "to students that [students] are intrinsically valuable to the ensemble and must pull their own weight in rehearsal and performance" (Furby, 2013, "For Whom?"). Furby suggested chorus teachers use part checks in small groups and singing examinations to develop students' singing independence and show individual's progress over time. Furby (2013) suggested regularly assessing students on solfège writing and sight-singing, and using a website to remind students about assessments and post other class information.

Tracy (2002) examined high school chorus teachers' assessment practices of individuals in the large group setting. Two hundred and seventy four high school choral teachers completed a survey. Tracy found choral teachers with smaller ensembles were more likely to give a post-performance assessment. Teachers seemed to use personal philosophy to decide whether or not to assess individuals. In accordance with previous studies, Tracy found most teachers assess students on attendance, attitude, and effort. Tracey attributed this to the "'teach as we are taught' phenomenon" (p. 154). Most participants reported using in-class observations as a form of assessment, but Tracy stated this does not mean teachers know what individuals know and are able to do (Colwell, 1991, as cited in Tracy, 2002). Tracy indicated many chorus teachers lack training in assessment and therefore do not use the best assessment practices.

Demorest (1998) studied the effect of individual testing and group-instruction on students' sight-singing skills. Three hundred and six high school students from beginning and advanced choirs participated. Researchers individually tested participants in the experimental group in addition to the participants' regular group instruction on sight-singing. Participants in the experimental group's major melody sight-singing significantly improved. Participants' minor melody sight-singing did not improve, most likely because researchers tested students on major

melodies only. Both beginning and advanced singers improved significantly with individual

testing. Demorest suggested teachers use individual testing to track student progress and help

students become better sight-singers.

Kotora (2005) studied assessment practices of high school chorus teachers in Ohio.

Kotora gave surveys to 246 high school choral music teachers and 20 college choral methods

professors. Kotora found teachers most frequently assessed students on concert performances,

participation, and attendance. Many teachers also assessed students using singing tests, written

tests, attitude, audiotape recordings, and individual performances. Only some teachers assessed

students using videotape recording, independent study projects, rubrics, and portfolios. Kotora

found most college professors taught future educators to use videotape recordings, written tests,

concert performances, and student attendance. Many professors taught future educators to use

singing tests, individual performances, student participation, and audiotape recordings. Only

some professors taught future educators to use independent study/written projects, student

portfolios, rubrics, and attitude. Both high school teachers and college professors used personal

choice to determine which assessment methods to use and teach. Kotora informed teachers,

"assessment based on curricular objectives is important if music education is to be perceived as a

legitimate subject" (Shuler, 1990, as cited in Kotora, 2005, p. 73). Many teachers justified the

lack of individual performance assessments by claiming teachers do not have time to assess each

student during class time. Kotora suggested researchers look into teachers' use of computer,

audio, and video technology to assess individual students in chorus.

Technology in the Choral Classroom

Many rapid technological advances in the 21st century have impacted education significantly. Music teachers use iPads, iPhones, and computers to enhance teaching and student learning. Teachers and students can easily record themselves and others and instantly share the recording. Students can use technology to self-assess and improve their singing. Computer-based music recognition software, such as SmartMusic™ (MakeMusic™, 2011, as cited in Henry, 2015), is a popular tool in instrumental assessment. The latest version of SmartMusic™ includes capabilities for vocal sight-reading (Henry, 2015).

Henry (2015) studied choral students' comfort level with the use of computer-based voice recognition software (SmartMusic™ 2012) for sight-reading assessment. High school choral students at a music summer camp ($N = 138$) participated. Intermediate and advanced sight-readers used the SmartMusic™ program in their sight-singing class. Students reflected on their experiences with the software. Many students (60%) reported feeling more anxious during computer-based testing than during live testing in front of a teacher or through recording. However, students preferred computer-based testing to testing in front of peers. Many students did not like that they could not set their own tempo for recordings when using the software. Some students did not like the click track and visual tempo and large deductions from their score when they strayed from the pulse. Henry reminded music teachers to take the time to explore and explain any new technology, especially SmartMusic™, to students before holding students accountable for its use.

Criswell (2012) described the uses of audio and visual recording in the music classroom. Criswell suggested recording performances for future class evaluation. Criswell suggested teachers use video recordings for immediate reinforcement by projecting the video for the class.

Criswell suggested teachers use videos to self-reflect on their own teaching. Criswell suggested students record self-assessment videos and create portfolios and evaluation records. Criswell stated teachers could easily share concert videos and recordings with students and parents.

Riley (2013) explored the uses of iPads in teaching, particularly from the viewpoint of college music education majors. Riley states "tablet computers offer students the opportunity to listen to lectures, hear course-related music, and transport large quantities of information just about anywhere they go" ("Appealing Technology," para. 2). Riley interviewed William Bauer, technology specialist and associate professor of music education at Case Western Reserve University in Cleveland, Ohio, who stated iPads are great for music students who do not have a musical background (Riley, 2013, "Appealing Technology," para. 5-6). Riley stated college music education majors used iPads for rehearsal/performance assistance, creating music, teaching instruments, providing virtual instruments, audio/video recording, listening resources, and organizational support. Riley suggested teachers use the following applications to help student achieve in music: Cleartune (chromatic tuner), PitchMe (chromatic tuner that transcribes detected pitches to staff notation), Metronome, forScore (music reader), Pocketscore, Do-Re-Mi Ear Training (portable solfège practice tool), LaDiDa (creates an accompaniment to match singing), Vocal Training (provides voice lessons and tips), Songify (turns speech into music), Talkapella (turns talking into a cappella harmony), and QuickVoice Recorder. Riley emphasized the ease of recording audio and visual on the iPad for individual assessments and creating a portfolio to show improvement across time.

Self-Recording and Self-Evaluation

Music students must reflect on their skills in order to improve. Hewitt (2001) claimed, "musicians' ability to effectively evaluate their own performances while using various practice strategies is an essential skill to acquire if independent musicianship is to be achieved" (p. 308). Hewitt (2001) studied the effects that modeling, self-listening, and self-evaluation have on junior high school instrumentalists' music performance and practice attitude. Band students ($N = 82$) in grades seven, eight, and nine participated. Hewitt assigned participants to one of eight research groups that covered the three-way interactions of two model conditions, two self-evaluation conditions, and two self-listening conditions. Students who listened to a model increased their performance scores in all areas except intonation and melodic accuracy. Hewitt concluded listening to a model can help students learn an unfamiliar piece of music. Additionally, students who listened to a model and self-evaluated showed a significant increase in performance scores. Students who self-evaluated but did not listen to a model did not significantly improve. Students who only self-listened did not improve. Hewitt (2001) concluded that self-evaluation is only effective when an ideal model is provided.

Zimmerman (2005) studied the impact of self-recording, self-listening, and self-evaluation on students' music self-esteem and motivation. Ninety-three high school instrumental students participated. Zimmerman assigned participants to the listeners' group, the non-listeners' group, or the control group. Participants in the listeners' group self-recorded, self-listened, and self-evaluated during 10 consecutive private lessons. Participants in both experimental groups listened to their recordings at the end of the 10 weeks and self-reflected. Participants in the listeners' group had significantly increased mean scores on the Arts Self-Perception Inventory at the end of 10 weeks. Zimmerman concluded "systematic self-listening and self-evaluation

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created a positive enhancement of student perception of progress and musical ability" (p. 98).

Recording, self-listening, and self-evaluation positively influenced students' perceptions about

achievement in music. Zimmerman suggested teachers use self-recording and self-assessment to

help students learn and to identify students who have low music self-esteem.

Conclusion

Researchers have hypothesized that students become more independent musicians with

regular use of self-recording and self-assessment. Although many teachers assess chorus

students primarily on non-achievement measures, teachers should assess students on

achievement of criteria by using multiple formative and summative assessments (Russell &

Austin, 2010). In the 21st century, teachers should use readily available technology to assess

students and help them grow as musicians.

I plan to restructure my recording assignments so that students record many more than

one each semester. I plan to assign a recording assignment after each rehearsal. The students

will upload their recordings to Google Drive folders and create digital portfolios to track their

progress throughout the year. Some recording assessments will be formative, some will be

summative, and some will be self-assessed. I will grade the writing component of self-assessed

recordings (see Appendix). Students will write their self-reflections in Google Documents in

their Google Drive chorus folders. I plan to require some recordings to be video and some to be

audio depending on the skill I am assessing. I will assess vocal exercises, concert repertoire

progress, and sight-singing in these recordings. I will provide a model for concert repertoire to

support Hewitt (2001)'s hypothesis that self-reflection is only successful when students are

presented with a model. I will create checklists and rubrics for the different types of assessments (see Appendix).

In addition to these homework assignments, students will periodically record themselves during class. If each student places his or her iPad directly in front of him or her, I can assess how students sing in the context of the whole ensemble. This hybrid of individual and group testing will help me understand differences that appear when a student sings alone as opposed to in a group. Finally, I plan to explore the iPad applications suggested by Riley (2013), especially DoReMi Ear Training and PitchMe. Though I have used iPads to some extent in my classroom, I would like to find new and innovative ways to use them. I will have a TV with Apple TV in my classroom this fall, so I can wirelessly project my iPad to the class. This will be a valuable tool in teaching sight-singing and other musical concepts. I plan to share my new knowledge with my colleagues so they can incorporate better self-recording and self-assessment practices into their teaching.

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