LIBERTY UNIVERSITY

The Effect of Video Recording on Self-Assessment of High School Vocal Music Students

A Thesis Submitted to

The Faculty of the School of Music

In Candidacy for the Degree of

Master of Music Education

by

Julia C. Sterba

Lynchburg, Virginia

November 2022

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ABSTRACT

This research project is designed to examine the effects that video recording and evaluation have on the high school choral music students' skill development of tone, dynamics, rhythm, and pitch and provide information about self-assessment as a directional learning tool for singers to increase student achievement through self-regulated learning. Research indicates the power of self-assessment as an evaluation in the classroom. It has provided educators with tools to implement effective self-assessment practices that promote performance and self-efficacy.[1] This research project will define self-assessment, address what skills are being assessed, and specify the methods of assessment that will be implemented. Models of self-assessment and implementation methods for these assessments in the choral music classroom will give music educators practical examples.[2]

[1] Heidi L. Andrade, "A Critical Review of Research on Student Self-Assessment," *Frontiers in Education* Vol. 4:87 (Aug. 2019) 1–13.

[2] Kathleen Keenan-Takagi, "Embedding Assessment in Choral Teaching," *Music Educators Journal,* Vol. 86:4 (Jan. 2000) 42–63.

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CHAPTER ONE: INTRODUCTION

Overview

Assessment in education has become an essential indicator of many benchmarks of student learning and teacher directive. Assessment is a process to improve quality, provide critical lifelong learning skills, and elevate performance in diverse contexts. Assessment is more than grading. Assessment is more than testing. It provides essential data on the breadth and depth of student learning. It measures the progress of student learning through a sequential process and allows the process of gathering student data to gain a deeper understanding of the strengths and weaknesses of student learning.[3] Assessment plays a vital role in the process of learning and motivation. The types of assessment tasks that we ask our students to do determine how students will approach the learning task and what study behaviors they will use. In the words of higher education scholar John Biggs, "What and how students learn depends to a major extent on how they think they will be assessed."[4] Given the importance of assessment for student learning, it is essential to consider how to best measure the learning for student achievement. Assessment should integrate grading, learning, and motivation for students. Well-designed assessment methods provide valuable information about student learning. They tell us what students learned, how well they learned the material, and where they struggled. Assessment becomes a lens for understanding student learning, identifying invisible barriers, and helping improve teaching approaches. The discussions and arguments surrounding assessment are not about whether

[3] Theodore L. Harris and Richard E. Hodges, *The Literacy Dictionary: The Vocabulary of Reading and Writing* (Newark, DE: Pearson Publishing, 1995), 18.

[4] John B. Biggs, "The Relationship Among Casual Attributions, Learning Strategies and Level of Achievement," *Asia Pacific Journal of Education* Vol 19: 1 (Aug. 1999), 47
HTTPS: DOI: 10.1080/0218879990190105.

assessment will work, but rather what methods for implementation and quality control provide the best opportunities for student learning and achievement and the most reliable tools for measuring student achievement.

Background

Assessment is described as "a variety of methods and procedures used to gather information about student learning."[5] Self-assessment is also defined as a "descriptive and evaluative act carried out by the student concerning his or her work and academic abilities."[6] Educators need to understand that assessment and testing are two different practices. A test is a type of assessment strategy or tool used to gather information on whether or not students have achieved the goals of instruction.[7] Pandero describes self-assessment as a "wide variety of mechanisms and techniques through which students describe and possibly assign merit or worth to the qualities of their learning processes and products."[8] Evaluation and assessment are terms frequently used interchangeably in education; however, there is a difference in their meaning and

[5] Robert L. Linn and Edward Gronlund, *Measurement and Assessment in Teaching,* (Upper Saddle River, NJ: Merrill Publishing, 2000), 181–190.

[6] G.T.L. Brown and L.R. Harris, *The Future of Student Self-Assessment*, (Los Angeles, CA: Sage Publishing, 2013), 367-393.

[7] Richard Colwell, "Tools for Music Assessment," *Assessing Student Learning: A Practical Guide* (2000) 12-18.

[8] E. Pandero, A. Jonsson, and J. Botella, "Effects of Self-Assessment on Self-Regulated Learning and Self-Efficacy: Four meta-analyses," *Educational Research Review* Vol. 22 (Fall 2017), 74-98.

the process associated with each of the terms. Evaluation is the act of reflection and the analysis related to the review.[9] In education, evaluation is often seen as feedback from a teacher. Self-assessment strategies use evaluation as a tool to measure learning and point toward areas for growth.[10]

Historical Context

Utilizing assessment to aid students and advance learning has existed for centuries. Early education scholars recognized the need to measure learning and allow that knowledge to direct education. However, the use of assessment for learning as a specialist 'technical' term, which embodies a call to action in educational practice, is more recent. While no one has officially dated the birth of the "assessment movement" in education, it is known that the First National Conference on Assessment in Higher Education was held in Columbia, SC, in the fall of 1985.[11] The National Institute of Education (NIE) and the American Association for Higher Education (AAHE) sponsored the conference. The conference has illustrated the conflicting political and intellectual traditions in the field.[12]

The need for action was brought to light through a report called Involvement in Learning that NIE published in 1984. Three main recommendations formed its centerpiece, strongly informed by research in the student learning tradition. These recommendations included promoting higher levels of student achievement by establishing high expectations for students,

[9] Pandero, Jonsson, and Botella, "Effects of Self-Assessment," 74-98.

[10] Edward P. Amus, "Music Assessment Concepts," *Music Educators Journal* Vol. 86:2 (Sep. 2000), 19–24.

[11] Peter T. Ewell, *An Emerging Scholarship: A Brief History of Assessment*. (San Francisco, CA: Jossey-Bass Publishing Co., (2002), 8.

[12] Ibid., 8.

involving them in active learning environments, and providing them with prompt and valuable feedback.[13] Nevertheless, the report also observed that colleges and universities as institutions could "learn" from feedback on their performances and that research tools were available for them to do so. This observation might have been overlooked were it not consistent with the research and voices of reform in scholarly communities of general education. One support group of assessment as curriculum reform came from within the academy of the Integrity in the College Curriculum, proposed by Bennett in his writings in 1984.[14] His central argument was, "There is a need for coherent curricular experiences which could best be shaped by ongoing monitoring of student learning and development."[15] From the onset of these discussions, learning assessment was presented as a form of scholarship in which educational measurement, when deployed appropriately, could be adapted by all disciplines to further the ongoing inquiry and improvement of all dimensions of education.

Simultaneously, many state education systems were calling for greater accountability of student learning, spurred by the U.S. Department of Education's 1983 report "A Nation at Risk."[16] Education began to have a renewed interest from political leaders and became a powerful economic and workforce development engine. The state legislators needed tangible data on student learning to further promote education within each state and gain control of the development of the K-12 education system.

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[13] Ewell, *An Emerging Scholarship: A Brief History of Assessment*, 9.

[14] William J. Bennett, *To Reclaim a Legacy: A Report on the Humanities in Higher Education*. (Washington, DC: National Endowment for the Humanities, 1984) 141.

[15] Ibid., 141.

[16] National Commission on Excellence in Education. "A Nation at Risk: The Imperative for Educational Reform." *The Elementary School Journal* Vol. 84: 2 (Fall 1983), 113-114.

Social Context

"Assessment cannot be separated from its social context, as it is the social context that often determines how students will react to the information about where they are with where they need to be."[17] The social context of assessment advances the notion that the evaluation, measurement, and production of knowledge, will increasingly need to accommodate the interactions between diverse and multiple contexts and perspectives and the phenomena or subjects being assessed. Students come from varied family situations, incomes, and cultural backgrounds. As a result, schools face unique challenges as they strive to provide equal educational opportunities to all students.[18] Despite the challenges educators face, the responsibility to offer learning opportunities continues to be educators' prime focus. The assessment's social context cannot be ignored during the planning, execution, or response stages.

The quality of relationships built between an educator and student can impact the learning environment and, in turn, the student's response to the assessment. The learning culture that emerges within a classroom and in the context of educator and student can inadvertently affect positively or negatively the assessment results. The measurement of the assessment must acknowledge the limitations of the learning culture that can occur when the authenticity of the student/teacher relationship is jeopardized, or the learning environment does not provide an opportunity for authentic relationships to develop.[19]

[17] N. Zill, "Trends in Family Life and School Performance," *Annual Meeting of the American Sociological Association*, (Pittsburgh, PA: 1992).

[18] Ibid.

[19] Amus, "Music Assessment Concepts," 20–21.

There is a need for a balance between the efficiency and effectiveness of an assessment that maximizes outcomes while also maximizing time. With assessment efficiency, routines and work become sustainable and attainable. “The effectiveness of feedback is measured by whether it elicits a productive response from the subject, so while it may be efficient in identifying the discrepancies in learning for every student, it must be equally effective in responding to the results since the simple gathering of evidence falls short of fulfilling the promise of a balanced assessment system.”[20] An imbalance is not beneficial to the educator or the student and will strain the social context within which the student is being assessed.

The goal of assessments is to show universal mastery of learning. However, there will undoubtedly be less than mastery learning results, and steps will need to be taken by educators to ensure that the assessment does not simply end. It requires a perpetual path to recovery in which students are given feedback on performance and level of proficiency (or lack thereof) and an opportunity to correct work and provide the knowledge to master the learning.[21] A solid social context allows the student's work to be judged while establishing a pathway to recovery. This lets students know that their learning is not based on only a "grade" but is challenged through assessment processes that allow for greater understanding. Creating a thoughtful, learning-centered, decision-based classroom environment allows assessment to be immersed in the social context of teaching and learning.

[20] M.A. Ruiz-Primo and M. Li, *Examining Formative Feedback in the Classroom Context: New Research Perspectives.* (Thousand Oaks, CA: SAGE Publications, 2013) 223.

[21] Ibid., 224.

Purpose

This research study examines the effects of video recording analysis on the skill development of Northeast Ohio high school choral music students' self-assessment and group evaluation of performance assessment. Student participants will answer open-ended questions on their reflection on the sound in the video recordings.[22] Before self-assessment, student participants will complete a survey about their understanding of self-assessment, strategies used to evaluate performance, and monitoring progress toward learning goals.[23] Student participants will use rubrics to conduct self-assessment evaluations of musical skills.[24] The observations from these artifacts will be used to create a theory that explains the phenomenon of self-assessment and achievement.

Problem

The problem is that literature has not fully addressed the effectiveness of high school choral students' self-and performance recording assessments in developing the skills of pitch accuracy, rhythmic accuracy, dynamic performance, and tone quality. Although research has been done on assessment and the effects of video recording, much of the focus has been on higher education. Videotaping and the impact of its use as an assessment tool have been practiced technique in the education departments of many colleges and universities as they

[22] Salvatore Cicciarella, "High School Choirs: Assessing Excellence in Repertoire," *The Choral Journal*, Vol. 42:7 (Feb. 2002) 44-45.

[23] Ibid., 44–45.

[24] John W. and J. David Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches,* (Los Angeles, CA: Sage Publications, 2018), 181–182.

prepare teachers and allow them to use videotapes to self-reflect on the adept teaching skills.[25] Furthermore, higher education music departments frequently use videotaping for assessment practices in conjunction with the conducting methods classes to allow students to self-reflect and professors to offer feedback.[26] In secondary schools, videotaping for assessment is most frequently used by instrumental educators. The research scholars have provided thus far remains inconclusive about the effects videotaping could have on high school choral students. This research project will explore what happens when regular self-assessment practices are conducted. Students will explore repeated monitoring of progress through self-assessment to promote achievement. Students will develop a firm understanding of goals for achievement, analyze skills using criteria, and reflect on performance evaluation.[27] Students will discover the effects of their involvement in evaluating performance toward achievement and development of skills through self-assessment.[28]

Significance

This research is vital for choral music educators to understand the implications of the effects of regular and measured self-assessment and group evaluation in the classroom. Investigating the theory of self-assessment and its impact on choral achievement can provide music educators with practical knowledge that could be applied to help students achieve higher

[25] Steven N. Kelly, "Public School Supervising Teachers' Perceptions of Skills and Behaviors Necessary in the Development of Effective Music Teachers" *Bulletin of the Council for Research in Music Education,*" Vol 185 (Summer 2010) 21-22.

[26] Ibid., 22.

[27] Zi Yan, "Self-Assessment in the Process of Self-Regulated Learning and It's Relationship with Achievement," *Assessment and Evaluation in Higher Education* Vol 45:2 (Spring 2020) 224-238. https://doi.org.10.1080/02602938.2019.1629390

[28] Andrade, "Research on Student Self-Assessment," 7.

levels of thinking, including creating, applying, and analyzing as they strengthen musical skills.[29] The theory could also provide music educators with methods to enhance student engagement and self-regulation of learning.[30]

Research Questions

This qualitative, phenomenological research study will answer the question about how the process of self-assessment of musical skills can be explored for high school choral students at High School "A" and will identify perspectives that have not been documented concerning the effects of evaluation and reflection of choral music techniques by vocal music students through video recording.[31] What is the student perception of self-assessment based on their lived experiences?[32] What are student experiences with each prescribed self-assessment of the musical phenomena regarding pitch, rhythm, dynamics, and tone quality? How would students describe achievement in choral music? What are student perspectives about the implementation of self-regulated learning in the classroom?[33]

[29] Matthew L. Garrett, "An Examination of Critical Thinking Skills in High School Choral Rehearsal," *Journal of Research in Music Education,* Vol. 61:3 (Oct. 2013) 303–317.

[30] Darla Rae Kelberlau. "The Effects of Self-Assessment on Student Learning," *Action Research Projects* Vol. 8 (Fall 2006) 9. https://digitalcommons.unl.edu/mathmidactionresearch/8

[31] Garrett, "Critical Thinking Skills in High School Choral Rehearsal," 304-305.

[32] Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches,* 201.

[33] Margarida Baltazar and Suvi Saarikallio, "Toward a Better Understanding and Conceptualization of Affect Self-Regulation Through Music: A Critical, Integrative Literature Review," *Sempre: Society for Education, Music, and Psychology Research* Vol. 44:6 (Winter 2016) 1500-1521.

CHAPTER TWO: LITERATURE REVIEW

Indications

In this chapter, theoretical arguments for the use of self-assessment are presented. The definitions of both assessment and evaluation are explained. In addition, several studies on the effectiveness of self-assessment toward increased achievement are analyzed. Suggested techniques for the implementation of self-assessments in the classroom are examined. Challenges to implementing self-assessment effectively are also discussed as methods for overcoming these obstacles. The benefits of using self-assessment are presented using findings from previous research by scholars in psychology, education, and music.

Assessment versus Evaluation

Assessment continues to be a challenging and controversial issue in education. The investigation surrounds ideas about assessment practices and their impact on student development and teacher strategy. From the initiative to implement required minimum competency testing programs in the 1980s to the advent of the Goals 200: Educate American Act approved by the United States Congress in 1994 and the standards-based education movement, educators are becoming increasingly aware of the role of assessments in teaching and learning.[34] As previously noted, assessment and evaluation terms are often used interchangeably; however, there is a difference in their meaning. Assessment is a general term that describes various methods and procedures to gather information about student learning.[35] According to D. Hart, a

[34] M.S. Smith, S.H. Furman, and J. O'Day, "National Curriculum Standards: Are They Desirable and Feasible," *The Governance of Curriculum Association for Supervision and Development,* Vol. 12:4 (Fall 1996) 16.

[35] Linn and Gronlund, *Measurement and Assessment in Teaching*, 63.

test or specific assessment strategy used to collect information on whether students have achieved the goals of instruction and met the objectives for learning can help prove students' response in the measurement of knowledge as the data results provide evidence of the learning against the methods used to obtain the information on student learning.[36] Pandero, Jonsson, and Botella's research findings also support the merit of self-assessment only if the assessment contains evaluative procedures and an emphasis on the analysis of skill concerning goal setting of the student and acknowledgment of areas for growth.[37]

Evaluation involves judgment or decision regarding the worth, quality, or value of experiences, practices, activities, or individual or group performances as they relate to some standard of education. Although this is an essential step in self-assessment, it is not the end goal.[38] Other researchers' views, such as Andrade, support Pandero, Jonsson, and Botella's findings and have issued a call to move away from simple forms of self-assessment where students are merely asked to score or grade themselves, as opposed to making qualitative judgments about their performance.[39] The measurement of knowledge and data results that provide evidence of learning help to direct student achievement and teacher focus. Still, however useful this measurement may be, Boyle and Radocy, much like Andrade, suggest that this is not enough to include these types of assessments without joining the self-regulation principles that promote life-long learning.[40]

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[36] D. Hart, *Authentic Assessment: A Handbook for Educators*, (Menlo Park, CA: Addison-Wesley Publishing Co., 1994), 27.

[37] Pandero, Jonsson, and Botella, "Effects of Self-Assessment," 74-98.

[38] J.D. Boyle, and R.E. Radocy, *Measurement and Evaluation of Musical Experiences*, (New York, NY: Schirmer Publishing Co., 1997), 7-14.

[39] Andrade, "A Critical Review of Research on Student Self-Assessment," 1–32.

[40] Boyle and Radocy, *Measurement and Evaluation of Musical Experiences*, 7-14.

There are several reasons that educational assessment has become a means of collecting student learning data and educator teaching strategies in school systems. First and most obvious is the ability to assign grades relevant to student learning and for the educator to provide feedback to the student based on assessment results and diagnose the student's needs. Assessments also provide educators with valuable information that can help direct, coordinate, and evaluate instruction. Assessments are useful tools within education, and when used as a tool for measurement, they can provide insight into many realms within the teaching and learning system.

Gardner notes that there is a distinct difference between testing culture and assessment culture. He suggests that formal testing measures student achievement in ways that are out of context and produce inaccurate and skewed results.[41] Assessments typically advocate multiple measurement dimensions to observe and document student achievement in environments relevant to real-world applications of knowledge, making them far more reliable sources of student learning.[42] Klenowski suggests, "Self-assessment is the evaluation or judgment of the worth of one's performance and the identification of one's strengths and weaknesses to improve one's learning outcomes."[43] Self-assessment can increase learning ownership and allow for teacher and student collaboration.

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[41] H. Gardner, *Assessment in Context: The Alternative to Standardized Testing*. (Norwell, MA: Kluwer Academic Publishers, 1998), 76-119.

[42] Ibid., 78.

[43] V. Klenowski, "Student Self-Evaluation Processes in Student-Centered Teaching and Learning Contexts of Australia and England," *Assessment in Education*, Vol 2:2 (Nov. 1995) 145-163.

Self-Assessment and Achievement

Research directs us to understand that self-assessment can be an effective means to increase achievement when specific requirements are met relating to the specificity of the self-assessment and the prior knowledge and understanding that the students' have relating to targeted learning goals and achievement.[44] Self-assessments that are too vague may help provide the teacher and student with valuable information about the students learning, yet are far less effective in promoting achievement in student learning than self-assessment of specified skills.[45] Furthermore, research indicates that self-assessments done via video recordings significantly impact achievement because students can connect more easily to visual learning tools and have a more challenging time connecting to only audio recordings.[46]

One topic of study surrounding self-assessment is research that indicates the relationship between self-assessment and task performance for learning.[47] In the study of Pandero, Jonsson, and Botella, the findings suggest that self-assessment can provide quality to processes and products of learning that help students recognize and appreciate the learning process.[48] Andrade's research supports these claims and further states that self-assessment, which provides feedback to students (whether teacher-directed, peer-directed, r self-directed), informs adjustments that deepen learning and enhance performance, hence promoting learning and

[44] Klenowski, "Student Self-Evaluation Processes in Student-Centered Teaching," 69-106.

[45] Lorrie A. Shepard, "Evaluating the Validity of Formative Self-Assessment," *Educational Measurements and Practices* Vol 28:3 (Winter 20008) 32–37.

[46] E. James, Kotora, Jr. "Assessment Practices in the Choral Music Classroom: A Survey of Ohio High School Choral Music Teachers and College Choral Methods Professors," *Contributions to Music Education*, Vol. 32:2 (Nov. 2005) 65-80.

[47]Pandero, Jonsson, and Botella, "Effects of Self-Assessment," 74-98.

[48] Ibid.

achievement through improved skills and performance.[49] Many studies have investigated the relationship between self-assessment and achievement and indicated a positive association between self-assessment and learning.[50] According to Andrade's research, achievement can be directly traced back to the evaluative measures of a student combined with rigorous feedback to direct students toward learning targets and goals for achievement.[51] Pandero, Jonsson, and Botella's research findings also support the merit of self-assessment if the assessment contains evaluative procedures, an emphasis on the analysis of skills about goal setting of the student, and acknowledgment of areas for growth.[52] Sanchez and Atkinson state that even the simplest forms of self-assessment, including assigning a grade to student work or categorizing the targeted learning skill, can effectively allow students to take ownership of their goals and direct learning targets.[53] Research by Ross and Starling also indicates that self-assessment can increase student achievement and is a reliable assessment technique that can provide valid evidence about student learning goals and motivation development.[54] According to Ross and Starling, "When students evaluate their performance, students are encouraged to set higher goals and commit more

[49] Andrade, "A Critical Review of Research on Student Self-Assessment," 1–32.

[50] C.E. Sanchez and K.M. Atkinson, "Self-Grading and Peer-Grading for Assessment in 3rd through 12th Grade Classrooms: A Meta-Analysis," *Journal of Education* (Spring 2017) 1049-1066. doi: 10.1037/edu0000190

[51] Andrade, "A Critical Review of Research on Student Self-Assessment," 1–32.

[52] Pandero, Jonsson, and Botella, "Effects of Self-Assessment," 74-98.

[53] Sanchez and Atkinson, "Self-Grading and Peer-Grading for Assessment," 1049-1066.

[54] J.A. Ross and M. Starling, "Self-Assessment in a Technology Supported Environment," *Assess education* (2008) 183-199. Doi:10.1080/09695940802164218

personal effort.[55] Furthermore, the combination of goal setting and increased effort equals achievement, which impacts a student's perception of education and learning in a positive manner."[56]

Other research literature has indicated only a modest relationship between individuals' self-assessments and their level of performance, which could be related to flawed self-assessment strategies, incorrect perceptions of student self-competence, and younger students' lack of ability to analyze and evaluate skills.[57] Dunning, Heath, and Suls present research findings implying that assessment methods, in general, need many improvements to benefit students.[58] They state that the disconnect between students and the evaluation of performance results is called "illusory superiority" or "unrealistic optimism."[59] According to Dunning and his co-authors, several factors can influence individuals' inflated perceptions of their competence.[60] A lack of skill or expertise in evaluating the skill, incorrect or unknown standards about the skill, and preconceived notions about one's skills all contribute to what Dunning, Johnson, Ehrlinger, and Kruger call "ignorance of incompetence."[61] There appears to be a linear relationship between one's ability to accurately assess social and intellectual tasks and level of expertise. In other

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[55] Ross and Starling, "Self-Assessment in a Technology Supported Environment," 183-199.

[56] Ibid.

[57] D. Dunning, C. Heath, and J.M. Suls, "Flawed Assessment: Implications for Health, Education, and the Workplace," *Psychological Science in the Public Interest,* Vol 5:3 (Dec. 2004) 69–106.

[58] Ibid.

[59] V. Hoorens, "Self-Enhancement and Superiority Biases in Social Comparison," *European Review of Social Psychology*, Vol 4:1 (Aug. 1993) 113-139.

[60] Dunning, Heath, and Suls, "Flawed Assessment," 69-106.

[61] D. Dunning, K. Johnson, J. Ehrlinger, and J. Kruger, "Why People Fail to Recognize Their Own Incompetence," *Current Directions in Psychological Science*, Vol 12:3 (June 2003) 83-87.

words, poor performers are not as accurate in determining themselves because the lack of knowledge surrounding the skill is ultimately low.[62] Rolheiser and Ross state, "Students must be taught how to evaluate their work accurately; requiring self-evaluation is unlikely to affect achievement otherwise."[63] Black, Harrison, Lee, Marshall, and Williams identify three main problems with assessment: grading practices emphasize competition rather than personal improvement, feedback often has a negative impact on students who are led to believe that they lack in ability, and flaws within the methods of assessment that teachers promote.[64]

Research indicates that self-assessments done via video recordings significantly impact achievement because students can connect more easily to visual learning tools and have a more challenging time connecting to only audio recordings.[65] Kotora's research provides evidence that video recording and playback is the most successful self-assessment strategy and tool to use compared to twelve other procedures like written tests, singing tests, audiotape recordings, study projects, and portfolios because of the ease of use and lack of frustration around the strategy for both the student and teacher.[66] Kotora also notes that it was easier for teachers to find time to implement this practice in large classrooms than more singular assessment methods.[67]

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[62]Dunning, Johnson, Ehrlinger, and Kruger, "Why People Fail to Recognize Their Own Incompetence," 86.

[63] C. Rolheiser and J.A.Ross, "Student Self-Evaluation: What Research Says and What Practice Shows," *Journal of Children's Psychology,* Vol 42:3, (May 2001) 43-57.

[64] P. Black, C. Harrison, C. Lee, B. Marshall and D. William, "Working Inside the Black Box: Assessment for Learning in the Classroom," *Phi Delta Kappan Journal,* Vol 86:1, (Sep. 2004) 9-22.

[65] Kotora, "Assessment Practices in the Choral Music Classroom," 65-80.

[66] Ibid.

[67] Ibid.

Effects of Assessment on Self-Regulation

According to Hallam and his studies, some effects on student learning perceptions have been observed due to the implementation of self-assessment strategies because of the importance of learning autonomy and metacognition.[68] His research shows that higher-level thinking skills work when students self-assess because they analyze, evaluate, and create through the process.[69] Brown and Harris state, "The educational gains from self-assessment are related to enhancing ownership of learning and self-regulated learning strategies."[70] According to Brown and Harris, this means that self-assessment contributes to student learning by enhancing the clarity of the learning goals, involving students in monitoring the learning process, and facilitating reflection about the final product or learning outcome.[71] Based on the research of Stiggins, it can be said that self-assessment is "an organic competence for self-regulation which allows learners to set goals and monitor progress to correlate with high achievement."[72] Increasing students' intrinsic motivation is an aspect of self-regulation which is necessary, so students desire to achieve for the sake of improving themselves.[73]

Interpersonal interactions between teacher and student have also been shown to enhance the efficacy of self-regulation when those relationships are positive.[74] In the research of Creech

[68] S. Hallam, "The Development of Metacognition in Musicians: Implications for Education," *British Journal of Music Education*, Vol. 18:1 (Summer 2001) 27-39.

[69] Wendall Hanna, "The New Bloom's Taxonomy: Implications for Music Education," *Arts Education Policy Review*, Vol 108:4 (June 2007) 7-16. doi:10.3200/AEPR.108.4.7-16

[70] Ross and Starling, "Self-Assessment in a Technology Supported Environment," 183-199.

[71] Brown and Harris, *The Future of Student Self-Assessment*, 367-393.

[72] Richard Stiggins, *An Introduction to Student-Involved Assessment for Learning*. (Upper Saddle River, NJ: Pearson Publishing, 2008), 311-346.

[73] Zimmerman, *Attaining Self-Regulation: A Social Cognitive Perspective*, 13-40.

and Hallam, the conclusion was made that when communication of the learning targets was clear and concise, and students had opportunities to evaluate and reflect verbally on their work with *positive feedback* from the teacher, students were far more likely to continue with self-assessment strategies and continue to evaluate and reflect on their own.[75] Furthermore, creating a positive atmosphere surrounding self-assessment proves necessary for achievement. One can easily provide suggestions and critiques once students have established a positive environment surrounding self-assessment procedures.[76]

Self-Assessment in Music Education

Within the field of music education, self-assessment has been used in a variety of contexts. It has examined creativity, conducting skills, and teacher preparation, especially at the collegiate level.[77] Lopez and Kossak pose a question in their research, "Since it is common to successfully use video recording technology to enhance student's perceptions of the understanding of the material and the ability to conceptualize that learning into movement directed by skill in college-level courses, we can also assume that using these methods, (with specific guidelines in place), can effectively provide improvements to teaching and learning in high school and even middle school classrooms."[78] Self-assessment has also been researched within the domain of music performance. Findings suggest that instruction in self-regulation

[74] A. Creech and S. Hallam, "Learning a Musical Instrument: The Influence of Interpersonal Interaction on Outcomes for School-aged Pupils," *Psychology of Music*, Vol. 39:1 (Jan. 2011) 102-122.

[75] Ibid.

[76] Ibid.

[77] R. Lopez and S. Kossak, "Effects of Recurring Use of Self-Assessment in University Courses," *International Journal of Learning*, Vol 14:2, (Winter 2007) 203-216.

[78] Ibid.

strategies can improve performance and effectiveness in practice sessions.[79] Miksza provides research that indicates that when learners set goals and monitor and manage their thoughts, feelings, and actions to reach those goals, students develop an understanding of the musical skills and, therefore, relationship to music learning that is not otherwise present.[80]

Aitchison explains that creating self-assessment as the driving force for grades in music performance classrooms emphasizes practice and performance quality instead of mere participation or attendance.[81] "Traditionally, assessment of student achievement in the music performance classroom has consisted of grading students based on concert attendance and classroom participation which relies on non-musical criteria and does not feature any acknowledgment of the learning of actual music skills."[82] Grading based on non-musical criteria gives students, teachers, and administrators the idea that music performance classes lack a rigorous approach to teaching and learning. Furthermore, this creates a perpetual cycle of music teachers feeling frustrated that their courses are not regarded as important as the core classes like math, science, language arts, and social studies. "Music teachers must base their grading of students learning on the music standards that are available, just as all other content teachers use standards for grading, to enrich the validity of grading based on learning."[83]

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[79] P. Miksza, "The Effect of Self-Regulation Instruction on the Performance Achievement, Musical Self-Efficacy, and Practicing of Advanced Wind Players," *Psychology of Music*, Vol 43:3 (Oct. 2013) 219-243.

[80] Ibid.

[81] R.E. Aitchison, "The Effects of Self-Evaluation Techniques on the Musical Performance, Self-Evaluation Accuracy, Motivation, and Self-Esteem of Middle School Instrumental Music Students," *Journal of Doctoral Dissertations at The University of Iowa*, Vol 68:1, (Summer 1995) 1-12.

[82] Ibid.

[83] Salvatore Cicciarella, "High School Choirs: Assessing Excellence in Repertoire," 44–45.

Previous research has mixed findings regarding the relationship among expert, self, and peer-evaluation methods. Regarding music performance, some research indicates that self-evaluation scores tend to be higher than instructor evaluation scores and that self-evaluation scores were predominantly lower than scores provided by experts.[84] Middle school-age students generally score themselves higher than experts, whereas high school-age students evaluate their work generally lower on the scale than experts.[85] Hewitt states several reasons for this phenomenon. First, evaluative knowledge becomes more defined as students get older and develop a better understanding of concepts, which correlates to research of Dunning. Middle school students also tend to have lower expectations for themselves. They grade themselves higher, while high school students grade themselves lower because their work quality expectations have grown.[86] While some researchers, like Hewitt, have documented poor correlations between student self-evaluation scores and those of peers and experts, others, like Miksza, have provided evidence to the contrary.[87] Miksza provides evidence that consistency is the key to solid correlations between expert and self-assessment.[88] "If students are to self-evaluate musical skill and concepts accurately, they must regularly practice evaluation

[84] M.P. Hewitt, "Self-Evaluation Accuracy Among High School and Middle School Instrumentalists," *Journal of Research in Music Education*, Vol 53:1 (Summer 2005) 148-161.

[85] Ibid.

[86] Ibid.

[87] Ibid., 153.

[88] Miksza, "The Effect of Self-Regulation Instruction on the Performance Achievement," 219-243.

techniques with evaluative tools such as rubrics to help define their strategies of assessment…when this is accomplished, the consistency between expert and self-assessment grows increasingly stronger."[89]

Suppose music educators truly wish for adults to become independent music practitioners throughout their lives. In that case, methods that help students develop self-regulation abilities (including self-evaluation) must be incorporated regularly into the curriculum of school music programs. Activities to help develop evaluative skills in musicians should be developed and nurtured throughout students' secondary-level education. Furthermore, research should be undertaken into the most effective methods and curricular materials for teaching these skills. This may then enable students to develop a more remarkable ability to self-evaluate and, therefore, attain the ability to regulate their musical progress and growth.

Extension

Scholars have studied and discussed assessment in music education; however, a plan for implementing regular and recurring assessment practices has yet to be determined. The purpose and types of evaluation used to ascertain student achievement in choral music education should be documented and contributed to music education. Choral music teachers have expressed concern over developing better ways of assessing students in choral music performance courses. Nevertheless, it is not clear what specific assessment practices are being utilized in choral music teaching and learning.[90] Music educators can build on the knowledge that research has provided us to effectively use self-assessment strategies in choral music classrooms. Research directs us to

[89] Miksza, "The Effect of Self-Regulation Instruction on the Performance Achievement," 219-243.

[90] J.M. Cooksey, "Developing an Objective Approach to Evaluating Music Performance," *Colwell Symposium in Music Education: A Festschrift for Charles Leonhard*, Urbana, Illinois. (1982) 197-229.

be transparent with students about self-assessment methods for reliability and validity.[91] Music educators need to have guidelines specific for the self-assessment and the skill being observed. They should allow for exemplary work in the skill-specific areas being assessed.[92] This research study will offer data results and findings about self-assessment when regularly applied to vocal music with specific skills and clear and concise learning targets. The strategy of student self-monitoring toward goals can help strengthen their ability to self-regulate student learning and can benefit the implementation of self-assessment.[93]

[91] Zimmerman, *Attaining Self-Regulation: A Social Cognitive Perspective*, 13-40.

[92] Cynthia Bayt Bradford, "Sound Assessment Practices in the Standards-Based Choral Curriculum," *The Choral Journal* Vol 43:9 (April 2003) 21-27.

[93] Zimmerman, *Attaining Self-Regulation: A Social Cognitive Perspective*, 13-40.

CHAPTER THREE: METHODOLOGY

Perspectives

Qualitative research explores behaviors and develops theories about those behaviors through a design of inquiry.[94] This phenomenological study seeks to describe students' lived experiences with the phenomenon of self-assessment.[95] The research design will be emergent as the data collection process will guide the research's direction and the findings associated with the phenomenon of self-assessment.[96] The constructivist worldview guides the approach of this study as the research will rely on the participants' views on the situation of self-assessment in the choral classroom.[97]

The researcher will act as a critical instrument throughout the study by collecting and examining the survey data. The observation of student participants as evaluation processes occur, and the data is collected through open-ended questions written in participant journals.[98] The researcher will look inductively at patterns that emerge from observed behaviors and draw conclusions about the phenomena of those behaviors. The data will be collected, and behaviors will be observed in the natural setting of the high school choral classroom during the regular school day. Student participants will be observed during the choir class they are currently enrolled in and will also meet on Mondays during the study hall period at High School "A."

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[94] C. Marshall and G.B. Rossman, *Designing qualitative research (5th ed.)*. (Thousand Oaks, CA: Sage Publications, 2010), 55-59.

[95] Frank Eychaner, "Ten Keys to Unlocking Artistic Choral Performances," *The Choral Journal*, Vol. 56:3 (Oct. 2015) 91-97.

[96] Marshall and Rossman, *Designing Qualitative Research*, 55-59.

[97] Ibid., 58.

[98] Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 181-182.

Self-assessment of student musical skills of rhythmic and pitch accuracy will be completed using criterion-based rubrics and implemented as part of choral rehearsals on a routine. Self-assessment of dynamic performance and tone quality will be evaluated using reflective journaling and open-ended questioning.[99] Using a rubric, students will self-assess individual skills via video recordings of the whole group and smaller sections according to the division of voice parts in the choir. Students will reflect on video recordings of entire group rehearsals to evaluate group performance and the effectiveness of choral sound using journaling as an instrument for data collection.[100]

Data Collection Procedures

Multiple procedures will be used to validate the findings of the research study. One strategy to ensure validity will include the explanation of the researcher in the process of the research and will clarify any bias the researcher may have toward the study. This consists of the previous interactions between the researcher and participant and the researcher's background as a teacher in the research setting. Another strategy to validate findings will be to use member checking. Participants will read a final report on the results and determine if they feel the research accurately represents the process.[101] An external auditor will review the research project to ensure the study will resonate with a community of scholars.

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[99] Bradford, "Sound Assessment Practices in Choral Curriculum," 21-27.

[100] Pandero, Jonsson, and Botella, "Effects of Self-Assessment," 74-98.

[101] Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 201.

Limitations

This research will be completed within a regular school day and fit within the limitations of that time frame. The twelve students participating in this research project are chosen from a limited number of students currently enrolled in the high school choir. The twelve participants are all juniors and seniors between the ages of 16-18. The study will only assess four music skills; pitch accuracy, rhythmic accuracy, dynamic performance, and tone quality.[102]

Considerations

All participants will receive the same treatment throughout the process of the study. At all times, students' confidentiality will be of the utmost importance. Ethical issues concerning the treatment of participants include making sure students feel comfortable and understand that the research is separate from all student grades and participation neither benefits nor hinders a student's status in the choir.[103] Other issues that could affect the research are student absences and changes to the school day, which could eliminate the Monday study hall where the researcher would meet with participants. The quality of the recording equipment could present issues with the reliability of the student evaluation of sound.[104] Student understandings based on lived experiences of self-assessment, evaluation, self-regulated learning, and achievement must be addressed and definitions established. Hence, students perceive the meaning of the words related to this study before any evaluation or assessment procedures.[105]

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[102] Connie L. Hale and Susan K. Green, "Six Key Principles for Music Assessment," *Music Educators Journal*, Vol 95:4 (June 2009) 27–31.

[103] Judith A. Jellison and Ellary A. Draper, "Research in Inclusive School Settings: 1975 to 2013" *Journal of Research in Music Education,* Vol. 62:4 (Jan. 2015) 325-331.

[104] Ibid., 325–331.

[105]Amus, "Music Assessment Concepts," 19-24.

Findings

Findings from the data will allow the researcher to develop a theory about self-assessment in the choral classroom and methods for implementation.[106] Using criterion-based evaluation techniques and reflective journaling will offer specific skill-driven results and open-ended theoretical beliefs from participants about the process of evaluation and self-assessment.[107] Through observation of behavior and data evaluation, the researcher will determine if a theory could be made about the relationship between self-assessment and achievement relating to choral music skills.[108] The researcher will use previous ideas developed by scholars about self-assessment and achievement related to instrumental music to guide the theories surrounding vocal music.[109]

Implications

This research intends to indicate what effects can be made on student achievement via video recording, reflecting on the recordings, and evaluating skills.[110] Adding to pre-existing research about higher student achievement through self-regulated learning, this research will examine how the process of self-assessment can also boost achievement in the choral music classroom by stimulating higher-level thinking strategies in evaluation practices to explain and

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[106] Victoria J. Furby, "Idea Bank: Individualized Assessment in the Choral Ensemble," *Music Educators Journal,* Vol 100:4 (Dec. 2013) 25–29.

[107] Emily Mason. "Reflective Practice and the Choral Director," *American Choral Directors Association,* Vol. 59:11 (April 2019) 63–70.

[108] Kotora, "Assessment Practices in the Choral Music Classroom," 65-80.

[109] Jason M. Silveira and Russell Gavin, "The Effect of Audio Recording and Playback on Self-Assessment Among Middle School Instrumental Music Students," *Sempre: Society for Education, Music, and Psychology Research* Vol. 44:4 (July 2016) 880–892.

[110] Ibid., 880–892.

conceptualize what is heard in music and adjusting the sound and mechanics of singing to achieve the desired effect.[111] As a performer, adjudicator, and music educator, assessing music performances is an essential skill. This specific ability has been the subject of many studies spanning the past several decades and featuring a variety of musical conditions and subjects.[112] Music educators are tasked with providing students with the content knowledge necessary to understand music and the skills necessary to perform music competently.[113] Music teachers and students must assess performance quality to improve musical skills and facility. Therefore, self-assessment of a young musician's skills becomes a critical tool in the educational process and the students learning and performance of music. The self-regulation of the process of evaluation allows students to guide and focus the learning toward specific skills and components of music.

Conclusion

Research studies attempt to add to the literature base and offer information, findings, data results, and theories that are significant for the field of study professionals.[114] This study aims to provide choral music educators with an idea about self-assessment relating to choral achievement. With a goal of student achievement in the classroom and a mission to provide meaningful music education, choral educators can find purpose in self-assessment and evaluation

[111] Silveira and Gavin, "The Effect of Audio Recording and Playback on Self-Assessment," 880–892.

[112] Ibid.

[113] Ibid.

[114] Amus, "Music Assessment Concepts," 19-24.

of performance assessment to help strengthen the students' development and achievement of skills.[115] The theory developed in this research project can provide choral music educators with a foundation of knowledge to begin the process of self-assessment in the choral music classroom.

[115] Kelly, "Public School Supervising Teachers' Perceptions," 21-32.

CHAPTER FOUR: RESEARCH PROJECT IMPLEMENTATION

Stages and Procedures

The research project was designed to follow specific stages during the implementation process. Twelve choral music students were observed and videotaped during the research and were asked to analyze the video playback of their videotaped choral rehearsal sessions. These twelve students met daily, Monday through Friday, for 50-minute sessions. During this time, students did vocal warm-ups and rehearsed six pieces of choral literature. The choral literature was chosen to fit within a range of difficulty appropriate for high school choral students and included pieces rated 3-5 on the 0-6 difficulty degree scale determined by choral arrangers and J.W. Pepper choral music retailer.

Students went through the process of learning the music and polishing the sound with special attention given to the four components of musical sound chosen for the study. The students were given one new piece each week to build the choral repertoire of the choir so that the pieces of music were in various stages of the learning process during the six-week sessions. Students listened to the videos and analyzed specific elements of choral sound using rubrics to help determine the sound of the pieces at various stages in the learning process. The process of self-analysis throughout the six-week sessions focused on four components of music, including tone, pitch accuracy, rhythmic accuracy, and dynamic effect. These aspects were chosen based on the four factors extracted from Bergee's 27-item performance rating scale: tone quality/intonation, technique, rhythm/tempo, and interpretation/musical effect.[116]

[116] M.J. Bergee, and L. Cecconi-Roberts, "Effects of small-Group Peer Interaction on Self-Evaluation on Music Performance," *Journal of Research in Music Education*, Vol. 50:1 (March 2002) 256-268.

Beginning Phase

Before any evaluation or self-assessment, students were involved in discussions and lessons about the four components or skills of vocal music that the research is based on. Students and researcher developed a definition and context surrounding each of the terms. They clarified any language associated with the skills that could cause confusion to the students and result in skewed assessments and evaluations. Students and researcher explored a rubric guide for evaluations incorporating language agreed upon and the definition and context surrounding the terms. Based on previous research, it is known that for self-assessment to be a valid evaluation and a valuable learning tool for students, the clarity of the research components is essential. Unless the student is very confident in their understanding of each skill and how to listen for that skill and evaluate the correctness or incorrectness of the skill in music that is in motion, the assessment data will not successfully direct or inform the learning. The students must be taught what they should listen for in a high-quality choral performance. By discussing the specific characteristics of high-quality performance and listening to examples of qualities that are being discussed, there is a greater probability that students will be able to successfully evaluate performance and gain a better understanding of what they should be listening for and working towards as musicians.

Tonal Preferences

One of the major problems confronting all vocalists is the general preference for what constitutes a desirable tonal quality. The cultural conditioning one is immersed in helps determine the thought and feeling one has toward music.[117] For this research, the Western music

[117] Clifton Ware. *Basics of Vocal Pedagogy: The Foundations and Process of Singing*. (New York, NY: McGraw Hill Pulishers, (1998). 5-13.

culture will direct the qualities for all musical skills. Western music has traditionally placed great emphasis on the proper physical treatment and adjustment of the body. The ideal tone is a complex product of breath control, vocal fold function, larynx position, tongue, nose, soft palate, and head and throat cavities. Beyond these basics, there are many other nuances and intricacies of tone, such as color, quality, and registration.[118]

To achieve the desired tone quality, a vocalist should be standing with shoulders relaxed, back and sternum raised, and chin down so that all resonating cavities of the vocal tract are free from any tension or constriction in the throat or neck while singing.[119] The vocalist should breathe a low, deep breath and establish a sufficient amount of air free-flowing and steady air support and sustain the vocalist's sound. The vocalist should maintain an energized and supported sound that can carry the musical phrase to its total value. Vowels should be shaped vertically with roundness and depth to create resonance and warmth.[120] The sound should be pure and never pushed or unnatural. The presence of overtones in the sound will create a rich vocal quality to the sound where resonance and natural ring exist. When these physical adjustments are made, freedom of breath support occurs, unhampered laryngeal response and resonator configurations are in accord with each other, and desirable tonal quality can exist.[121]

Rhythmic Accuracy

Music is an art form that exists in time, and rhythmic accuracy depends on a student's conceptual ability to read and understand written music while creating the written sound in time

[118] Ware, "Basics of Vocal Pedagogy," 46-55.

[119] Ibid.

[120] Ibid., 92-154.

[121] Ibid.

with specific recurrence of note and rest length and measurement of sound.[122] Rhythm is the pattern of sound and silence in music in time, including the elements of beat, accent, and tempo. Rhythm is an indispensable element of all music. Rhythm in music indicates when notes are played and stipulates how long they are played and with what intensity. Rhythm can exist without melody, but melody cannot exist without rhythm.[123] The beat in rhythm describes the regular pulsation of the unit of length of musical time. Accents in rhythm emphasize specific notes to make them louder or longer than those around them, creating a shape to the rhythm. Different rhythms may share a time signature and tempo, but they stand out by the accent of different notes within the pattern.[124] Rhythm combines strong beats and weak beats to create patterns of sound. Strong beats include the first beat of each measure (the downbeat) and other heavily accented beats. Syncopated rhythms do not align with the downbeats of individual measures, and the syncopated beat will emphasize traditionally weak beats. Tempo indicates the rate of speed or pace of the musical pulse that is desired for the rhythm. Rhythm functions as a piece of music's propulsive engine and give a composition structure.[125] When evaluating for rhythmic accuracy, one must account for all elements of rhythm, including beat, accent, and tempo.

Pitch Accuracy

The pitch accuracy depends on a vocalist's success in intervallic placement within a key signature, within a scale, and in a specific voice range. Pitch accuracy is often described as

[122] H.C. Longuet-Higgins and C.S. Lee, "The Perception of Musical Rhythms," *Sage Journal*, Vol. 11:2, (July 1982) 115–128.

[123] Ibid., 120-121.

[124] Ibid.

[125] Ibid.

singing "in tune" or "out of tune."[126] Singing in tune is critical to a singer's ability to create an expressive melodic line free from intonation problems. Pitch accuracy is also critical for singers to build chords and harmonize with other singers. The precision of intonation is an important factor associated with the perception of singing talent in Western music culture.[127] Pitch accuracy in terms of the precision of performed music intervals can be measured by observing the pitch and measuring and checking the intervallic relationships between notes on another instrument, like the piano. Although the instrument's timbre will not match the voice, the singer's ability to create the correct pitch in the melodic line will be evident upon observation of the instrument. Evaluating pitch accuracy includes a general knowledge of the aural image of the melodic line being assessed and an ability to conceptualize and check pitches against each other.

Dynamic Effect

By definition, dynamics are simply the loudness or softness of music.[128] Deciding how loud or quiet to play a piece of music can completely change the overall sound. Therefore, dynamics are one of the essential parts of playing music. Expression and emotion are directly tied to dynamic movement in music.[129] Markings can indicate static dynamics in a specific section of music that do not change. Changing dynamics suggest that the volume will change and either increase or decrease in volume throughout a section or phrase of music.[130] To fully

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[126] Pauline Larrouy-Maestri, David Magis and Dominique Morsomme, "The Evaluation of Vocal Pitch Accuracy: The Case of Operatic Singing Voices," *Music Perception: An Interdisciplinary Journal*, Vol. 32:1, (Sep. 2014) 1-10. HTTPS://www.jstor.org/stable/10.1525/mp.2014.32.1.1

[127] Ibid., 2.

[128] Rudolf Arnheim, "Perceptual Dynamics in Musical Expression," *The Musical Quarterly,* Vol. 70:3, (Summer S1984) 295- 309. HTTP://www.jstor.com/stable/742040.

[129] Arnheim, "Perceptual Dynamics in Musical Expression," 297.

[130] Ibid., 299-300.

understand dynamics, a singer must also understand phrasing. Phrasing is the structure of the musical line, much like a sentence in language arts. The phrase should have an objective and a purpose for the song. Dynamics give forward momentum to the phrase and effectively tell the story of the music. The shape of the dynamics can be evaluated objectively through listening. Still, the observer must first have criteria in place for each of the levels of dynamics one can create, from pianissimo to fortissimo. This can create discrepancies among evaluators as each may have their idea of dynamic volume. Consideration must be made for this occurrence, and time must be spent training observers to listen to dynamics and accurately evaluate the effect.

Videotaping Procedures

With technological improvements and continued ease of playback, video-based observation is a promising method of instruction and evaluation in music classrooms. Video observation provides concrete information for students to evaluate and is not biased because of the transfer of information. Video analysis allows students to observe what the teacher or director observes daily in the classroom. Still, videotaping continues to be under-utilized in classrooms. Perhaps videotaping has been under-utilized partially because of confidentiality and privacy issues.[131] Obtaining proper permission from a school district to do recordings is a necessary step in the process of video recording students, and teachers may feel overwhelmed or not understand the process and the steps involved in receiving the permission. Another drawback of video observation is the time it takes to playback and analyzes the videotape.[132] Choral directors often find it hard to teach all necessary skills, manage effective group rehearsal, and

[131] Elaine K. Yakura, "Learning to See: Enhancing Student Learning Through Videotaped Feedback," *College Teaching*, Vol. 57:3, (Summer 2009) 177-183. HTTPS://www.jstor.org/stable/25763388.

[132] Ibid., 179.

prepare the music for all the required performances, so allowing time for regular and regimented video analysis can seem daunting. Lastly, video observation can only be effective if the students understand precisely what they are watching and listening for during evaluation.[133] Without these parameters in place, video evaluation can appear to have little or no effect on student-specific skills and learning, and teachers may disregard the process entirely. However, videotaping can offer an opportunity for heightened awareness of student success and allow students to hear the choral sessions as an audience or director hears the choral rehearsals, making students more capable of controlling their progress toward specific skills.

The recorded sessions will be videotaped using a Zoom H2 Handy Portable Video/Stereo Recorder using built-in stereophonic microphones. The digital recording device allows recordings in MP3 format to 320kbps. The microphone positioning allows for signal processing and polar patterns to control and adjust the type of ensemble recording that will occur. For this research, the 'Rear 120-degree Cardioid' design will be used for singers allowing the entire ensemble to be blended as the recording takes place.[134] The recording device will be positioned in front of the singers at the front of the room on a podium, allowing the correct degree positioning for audio and visual recording.

The video recordings will highlight the physical positioning of the students. This will allow for the evaluation of the preferred posture and stance of the singers, which will directly affect the intonation or tone quality. The audio will allow observation of the specific skills evaluated during the video observation sessions. Students used these video observations to

[133] Yakura, "Enhancing Student Learning Through Videotaped Feedback," 177-183.

[134] Silveira and Russell. "The Effect of Audio Recording on Self-Assessment," 880-892.

complete the self-assessment rubric and determine their success at each skill based on the knowledge of the skill and the observation of the video/audio recordings.

Assessment for Learning

Assessment for learning represents a constructivist perspective in which students are active learners who use assessment feedback to extend their current levels of understanding.[135] Unlike assessment of learning, in which teachers use information gained through evaluation to instruct teaching and to guide student development, assessment for learning guides students to participate in the educational experience actively. Therefore, the assessment for learning becomes a collaborative process between teacher and student. "Criteria-based self-assessment is a process during which students collect information about their performance or progress; compare it to explicitly state criteria, goals, or standards; and revise accordingly."[136] Self-assessment aims to identify areas of strength and weakness in one's work to foster improvements and promote learning. Scholars have cited that criteria-based self-assessment has been shown to promote achievement.[137] Involving students in developing or understanding these criteria, learning targets, and tools for evaluation can be an effective way to engage the students actively.[138] Rather than being presented with a ready-made assessment tool that the student does not fully understand, including students in the various criteria by which the performance could

[135] Sheila J. Scott, "Rethinking the Roles of Assessment in Music Education," *Music Educators Journal*, Vol. 98:3 (March 2012) 31-35.

[136] Ibid.

[137] Heidi L. Andrade and Anna Valtcheva, "Promoting Learning and Achievement Through Self-Assessment," *Theory Into Practice*, Vol 48:1, (Aug. 2009) 12-19.

[138] Ibid. 33

be assessed, the teacher creates a more holistic experience for the students.[139] Students and teacher should discuss the criteria by which the performance could be evaluated and choose learning targets for a particular assessment type. Together they define performance standards and various proficiency levels, providing performance models.[140] Through this process, students learn what aspects of performance they must attend to in preparing for the assessment and understand what they may need to accomplish to extend their current knowledge and proficiency in that area.

Students actively engage in the assessment process by assessing model work. They understand how the assessment criteria are used to describe musical performances and learn how their performance could be compared to the levels of performance defined in the assessment.[141] Most important, active engagement in self-assessment prompts students to experience forward-thinking and make inferences about ways they could improve future performances and further develop skills. Assessment for learning is self-reflective and allows students to monitor their learning. It integrates assessment and instruction with the primary purpose of helping students learn. As students become increasingly adept at assessing their work and using the resulting feedback to improve their performance, they become less dependent on assessment information obtained from others.[142] Students will need to be guided as they learn how to assess work accurately and to use the assessment information to influence future progress. Assessment for

[139] Klenowski, "Student Self-Evaluation Processes," 145-163.

[140] Ibid. 152-153.

[141] Scott, "Rethinking the Roles of Assessment," 34.

[142] Ibid.

learning requires students to constantly engage in learning and understand the foundations and criteria upon which skill evaluation will be assessed.[143]

Self-assessment develops a student's awareness of which metacognitive strategies to use and when to use them. Teachers and students learn these skills when they establish clear learning goals and articulate evaluative criteria enabling students to assess their work.[144] Those practices engage students as they actively participate in the learning process and become more connected and committed to the learning outcomes.

Evaluation

Evaluation is the act of measuring one's performance against some standard of criteria. Whereas self-assessment is the process of generating views and beliefs about one's work and its relation to the achievement of goals and objectives, evaluation provides a judgment about the accomplishment of the objectives, learning targets, and skill-specific criteria.[145] When students understand the goals and standards to be assessed, they must also have an opportunity to practice evaluating learning targets and skills. Evaluation helps improve accountability and link understanding to goals for mastery of learning. Student self-evaluation in the classroom should establish clear learning targets, define evaluative criteria, and provide tools for assessment that allow time for reflection.[146]

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[143] Klenowski, "Student Self-Evaluation Processes," 153.

[144] James H. McMillen and Jessica Hearn, "Student Self-Assessment: The Key to Stronger Student Motivation and Higher Achievement," *Educational Horizons,* Vol 87:1, (Fall 2008) 40-49.

[145] Yan, "Self-Assessment in the Process of Self-Regulated Learning," 224-225.

[146] Ibid.

Reflection

Reflection is a critical part of the self-assessment process and helps students think about what they have learned while identifying areas where skills could continue to grow. The reflection allows time for students to set new goals or to organize thoughts about how to achieve the learning targets or skills intended. After students have evaluated their performance, taking time to reflect on the performance as it relates to learning targets and skill-specific criteria allows students to further their understanding of the skill or learning target and the steps that must be taken to achieve mastery. Reflection can clarify learning targets and promote forward thinking about the next steps for student learning and goals for future performance. Students ultimately benefit significantly from in-depth reflective thought and specifically when explaining their work and their evaluation of the work through reflection and reflective activities.[147]

Self-Regulation

Assessment for learning is self-reflective and allows students to monitor their learning. It integrates assessment and instruction with the primary purpose of helping students learn. As students become increasingly adept at assessing their work and using the resulting feedback to improve their performance, they become less dependent on assessment information obtained from others. Throughout this process, students are empowered to take ownership of their education as they develop skills as independent learners, resulting in self-regulation.[148] Self-regulation can be defined as a student's competence to monitor and regulate one's learning using

[147] Baltazar, "Conceptualization of Affect Self-Regulation Through Music," 1511.

[148] Hoi Kwan Ning and Kevin Downing, "Influence of Student Learning Experience on Academic Performance: The Mediator and Moderator Effects of Self-Regulation and Motivation," *British Educational Research Journal*, Vol 38:2, (April 2012) 219-237.

strategies, goal setting, planning, organizing, and monitoring.[149] Ideally, intrinsic motivation of students, or doing something out of inherent interest, would promote self-regulation as students desire to learn to acquire knowledge.[150] However, extrinsic motivation, or doing something because it leads to an external outcome, can promote self-regulated learning.[151] Despite the different motivators, self-regulated learning can impact a student's educational experience. Ideally, students will sustain this emphasis on self-regulated learning beyond school, leading to life-long learning.

Implementation

The first week of research project implementation involved laying the groundwork for the project and establishing the processes and guidelines with students participating in the research. Students and teacher discussed the process length of six weeks. The teacher explained that the regimen for each daily rehearsal consists of 30 minutes of recorded rehearsal sessions and 30 minutes of group assessment sessions in which the recording would be played back, and students would listen to evaluate their work. The teacher also described the processes of evaluation and self-assessment to be used during the group assessment sessions. Students were taught the differences between assessment for learning and evaluation and how reflection upon learning can impact self-regulation. Articles were provided to the students and read in class rehearsals during the first week of research implementation to give the students a more holistic understanding of the goals for this research and their role within the research project.

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[149] Zimmerman, *Attaining Self-Regulation,* 17.

[150] Ning and Downing, "Influence of Student Learning Experience," 222.

[151] R.M. Ryan and E.L. Deci, "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions," *Contemporary Educational Psychology,* Vol 25:1, (Summer 2000) 54-67.

The first week included the beginning phase of research and discussions about each of the four skills that would be evaluated. Time was taken to ensure students understood each skill and what mastery of the skill looks and sounds like. Students listened and watched examples of solo and choral singing that highlighted knowledge of the skills and concepts to observe and evaluate to understand better how mastery of each skill sounds and to practice describing the skill. Students also listened and watched examples of soloists and choirs who were not performing at a mastery level on the skills. Students practiced using the rubric to evaluate their performance and how to critique each skill.

Students were given five pieces of choral music in folders to be used during the research project and hard copies of the self-assessment rubric and the terminology sheet for assessment that had been devised and organized together. Students were assigned a voice part according to their previous placements in choir, consisting of either soprano, alto, tenor, or bass, in which they would learn each of the pieces. Students were also given assigned spots on the risers correlating to their voice part.

Students received packets that contained warm-ups to be done in the first 10 minutes of the choral rehearsal sessions. The teacher chose these warm-ups to practice and work on the four skills that would be assessed. Students learned the importance of warming up the voice and the benefits of doing so. Benefits include: establishing focus, preparing the voice for singing, allowing singers to hear themselves and each other, establishing physical readiness, establishing proper breathing habits, and establishing a connection with the music to be sung in the rehearsal.[152] The warm-up packets included unison, two-part, and three-part examples to work on

[152] Russell Robinson and Jay Althouse, *The Complete Choral Warm-Up Book: A Sourcebook for Choral Directors*. (Los Angeles, CA: Alfred Publishing Company, 1998) 26-47.

tone quality, get the choir singing, and listen as a group instead of as individuals.[153] Rhythmic exercises included Rollo Dilworth's calisthenics used as preparation for warm-ups.[154] These rhythmic calisthenics facilitate controlled breathing, rhythmic accuracy, and stability while promoting good diction, including attacks, sustained vowels, and releases and activation of the head voice.[155] Rhythmic-specific warm-ups written by Bolkavac and Johnson were incorporated into the warm-up routine to combine the vocalization of the pitch while working on rhythmic accuracy.[156] Michael Jothen's melodic intervallic warm-ups, in which students would concentrate specifically on the pitch, were included in the warm-up packets to help define students' aural skills in memorizing intervals, therefore improving the pitch accuracy of the singers.[157] Lastly, chorales were included to work on tone and dynamics and for students to practice listening to the choral ensemble sound and blending and balancing voices.[158]

Tone Quality

The piece chosen to work tone quality was "Bright Morning Stars," arranged by Jay Althouse in 20006 for three-part choir (Soprano, Alto, and Baritone). "Bright Morning Stars" is a traditional American folk tune taken from the Appalachian region. The folk melody is natural and incorporates both repetition and an antecedent-consequent feel. The piece is written in B-flat

[153] Robinson and Althouse, *The Complete Choral Warm-Up Book,* 26-47.

[154] Rollo Dilworth, *Choir Builders: Fundamental Vocal Techniques for Classroom and General Use*. (Milwaukee, WI: Hal Leonard Publishing Company, 2006) iii-45.

[155] Ibid., iii.

[156] Edward Bolkovac and Judith Johnson, *150 Rounds For Singing and Teaching*. (New York, NY: Boosey & Hawkes, 1997) 56-96.

[157] Michael Jothen, *Master Strategies for Choir: The Ready-To-Use Resource Material Book For Choral Rehearsals*. (Milwaukee, WI: Hal Leonard Publishing Company, 2005) 9-26.

[158] Ibid.

Major and does not use any accidentals in the vocal parts, which helps to keep the voice parts simple. The singer's melodic and harmonic lines are set in a comfortable range for each voice part and allow for concentration on the tone quality of the voice without too much of a physical challenge for the singers. Most cadences bring the voice parts together in unison or at the third. The final cadence uses more than two pitches to align the voices into a major chord.[159]

Most of the harmonic color in the piece is found within the extended chords found in the piano accompaniment. Even when the music for the piano is more intricate, the voices are still supported with the highest-sounding note. The composition is easy because the vocal texture is only one or two lines at any given point, and only three and four-part chords are found in the final cadential movement. The diatonic melody moves around the fifth scale degree predominantly. Practice was taken to ensure the singers' technique of the ascending fourth interval found at the beginning of the melody. Most of the piece is written in a 4/4 time signature. However, the use of mixed meter in several measures of the piece provides a slight challenge for singers rhythmically. This mixed meter offers a light and joyous dancing feeling to the piece.[160]

This piece was explicitly chosen to allow students to focus on tone quality. Because of the ease of the piece and octave singing found throughout the music, singers can concentrate on tuning to each other and the fundamentals of singing technique. Students could focus on airflow and breathing through the shaping of the long phrases. Singers could maintain a low breath while allowing the soft palate to relax and shape the vowels vertically. Careful consideration was taken

[159] Jo-Michael Scheibe, *Teaching Music Through Performance in Choir Volume 4*. (Chicago, IL: GIA Publications, Inc., 2017) 274-278.

[160] Ibid.

to clarify vowels for consistency and integrity throughout the choir. A schwa was used to modify the American "r" sound in words "fathers, mothers, brothers, sisters." The dynamic indications allowed for a straightforward interpretation of the music throughout the piece without being too challenging to enable singers to focus on creating a rich tone while allowing the sound to resonate and ring.

Students were asked to use kinesthetic movements during rehearsal this week to help them experience what they hear and feel but cannot see in music. Kinesthetic movement is a technique in which we transfer verbal metaphors to physical movement, enabling our singers to experience non-visual and non-tangible music descriptions personally and physically, thus connecting with and understanding the music at a deeper level.[161] Students started with hands on their shoulders, and as they took a breath, the hands dropped down and out to the side, careful not to create tension in the neck or shoulders. This movement encouraged low breathing and controlled airflow for breath support.[162] Without proper breath support, the desired tone quality cannot be attained. Students also mimicked the ringing of the tone by rolling their hands during the long tone durations.[163] Students used kinesthetic movements during both warm-ups and choral rehearsal.

Students worked and rehearsed with the desire to create a tone that made an energized sound that had depth, resonance, and warmth. They worked to create a pure sound that was not pushed and was free to ring.[164] The analysis of student work confirmed that students could hear

[161] Kathryn E. Briggs, "Chor-Teach Reprint: How and Why To Incorporate Movement Into Choral Rehearsals," *The Choral Journal*, Vol 60:7, (Feb. 2020) 77-86.

[162] Ibid.

[163] Briggs, "How and Why To Incorporate Movement Into Choral Rehearsals," 77-86.

[164] Ware, "Basics of Vocal Pedagogy," 46-55.

differences in tone qualities and use wording to express their thoughts about the investigation and study quality and sound. Students' comfort level in creating the desired tone quality increased throughout the research project. Students were able to more intentionally and consistently produce a quality tone. However, it may be impossible to separate the findings about the effect of video recording and playback from the effect of simple rehearsal with a focus on tone. Future studies may attempt to create a group that provides feedback and rehearsal and another group that uses video recordings and playback for self-assessment to determine if the effects of video recording and playback are valid and reliable for increasing student knowledge. Because of the director's previous knowledge about student work and their ability to create consistently good tone, the observation is that the video recording and playback did boost students' evaluative skills about tone, which created a wider breadth of effort taken to manipulate techniques to create the desired tone quality. Instead of reminders given by the director to adjust the sound, students became more actively engaged in tone production and shaping the sound to create the optimum tone quality.

Rhythmic Accuracy

Rhythmic accuracy deals with the ability to correctly analyze and produce music in time with consideration of beat. The piece chosen to highlight rhythmic accuracy was "Follow the Drinking Gourd," arranged in 2001 by Greg Gilpin for a three-part choir. The piece is recognized for its connection to the Underground Railroad by signaling the direction north. This arrangement offers exciting rhythm patterns and syncopated rhythms. However, the repetition of parts makes this piece accessible.[165] Although the syncopations are challenging, most of the

[165] Scheibe, *Teaching Music Through Performance in Choir,* 279-282.

rhythms utilized in the entire arrangement are found in the first thirty measures of the work. The verses and chorus parts are recognizable from the original folk tune. However, this arrangement's eighth note and syncopations give the composition a new feel.[166]

As the choir rehearsed "Follow the Drinking Gourd," attention was given to rhythmic competencies to encourage rhythmic accuracy during rehearsal and performance. First, the choir practiced reading the rhythmic patterns and aurally expressing the rhythms notated in the written music parts.[167] During the performance, the students must be able to decipher the rhythmic patterns found in the printed score and continually evaluate and mentally reconstruct what is experienced aurally.[168] This process requires feedback as to the accuracy of the performers by the choir director. Additionally, the students practiced constructing the rhythmic patterns in time with a knowledge of pulse and tempo within the piece. By watching the conducting pattern of the director, the choir practiced their ability to synchronize the durational patterns with an established pulse. Rhythmic precision can occur throughout the ensemble when these fundamental steps are established.

Students assessed the occurrence of rhythmic precision as they listened to the playback of the video recording. They evaluated the skills described above and the overall accuracy of the rhythms in time. Students' evaluations included observations about needing to feel a better pulse as a group and getting to a place where rhythms can occur naturally in time and have become memorized to allow oneself to be fully enveloped in the music and feel of pulse with the director.

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[166] Scheibe, *Teaching Music Through Performance in Choir,* 279-282.

[167] Rupert Thackray, "Rhythmic Abilities and Their Measurement: Papers of the International Seminal on Experimental Research in Music Education," *Journal of Research in Music Education,* Vol 17:1, (Winter 1969) 144-148.

[168] James E. Major, "The Effect of Subdivision Activity on Rhythmic Performance Skills in High School Mixed Choirs," *Journal of Research in Music Education,* Vol 30:1 (Spring 1982) 31-47.

The more the students acted individually to fix and adjust rhythms, the less accurate the choir was as an ensemble. Students could identify, evaluate, and adjust rhythmic patterns in the score to create focus and precision of rhythms. The accuracy of the rhythmic patterns improved significantly over the course of the research, and the practice of listening to the playback of video-recorded rehearsals aided the process of students hearing the rhythms that the ensemble created and being able to make changes to those to create improved accuracy effectively. This skill was more manageable to assess and evaluate for the students and more meaningfully improved by this self-assessment process than the tone quality skill that was earlier assessed.

Pitch Accuracy

Accuracy of pitch is the ability to create notes with the correct intervallic relationship to those around it while creating music within a specific key signature using the corresponding scale. "How Can I Keep from Singing?" arranged by Jay Althouse in 2012, is set for a three-part choir. The piece was chosen to highlight the ability to move correctly throughout the work and produce accurate intervals between pitches. The piece was originally written by Robert Lowry in 1869 and reflected the spiritual life of the Quaker people. This arrangement features a melody line with scale passages and harmonies that move in steps or small skips. This piece consists mainly of homophonic writing and simple rhythms, so students have many opportunities to accurately maintain pitch and move throughout scale segments and phrases, including fragments of arpeggios.[169]

Students assessed the pitch accuracy as they listened to the playback of the video recording. They evaluated the skills described above and the overall accuracy of the notes in time. Students' evaluations included observations about the group's ability to successfully sing

[169] Scheibe, *Teaching Music Through Performance in Choir,* 289-295.

the intervals in ascending passages but the frequency of the intervals falling flat as the phrases descend. Students noted this phenomenon, and the choir went back and rehearsed the song while using kinesthetic motions of hands raising slowly as notes descend in the music.[170] The students then watched and listened to the video again and noted the significant change in pitch accuracy through the use of kinesthetic motions in rehearsal.[171]

Students also observed the general struggle to keep the melodic interval of la to sol and fa to mi in tune during the piece. These intervals were significantly better when singing a scale passage that was ascending, yet still, these intervals required additional practice for the ensemble to sing accurately. The use of video recording and playback aided the students in their ability to determine the accuracy of the pitches of the ensemble. This skill was easier for students to evaluate overall than tone quality, yet harder to detect errors than rhythmic accuracy.

Dynamic Effect

The contemporary work of "Agnus Dei" by Audrey Snyder is a composition for three-part choir that is melodically driven and features simple lines that require many dynamic changes to create movement and life for the piece. The music includes dynamics ranging from *pianissimo* to *forte* and features many crescendos and diminuendos within the legato melodic line. The piece's expression is felt through the dramatic and full choral sound on a neutral vowel to highlight the text and emotion of the music.[172] The ensemble worked on creating aural imagery of sound for the various dynamic ranges from fortissimo to pianissimo. The choir also worked

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[170] Briggs, "How and Why to Incorporate Movement Into Choral Rehearsals," 77-86.

[171] Ibid.

[172] Scheibe, *Teaching Music Through Performance in Choir,* 289-295.

diligently to practice and perform crescendos and diminuendos together in time, practicing different durations of those dynamic effects. Students adapted dynamics to the piece by Snyder ad rehearsed the successful movement together through the music with an awareness of dynamic connectedness.

In terms of evaluation, students had the most challenging time overall detecting the effectiveness of the dynamics, as opposed to the three other skills that were assessed. This could be due to the subjectivity of loud and quiet sounds and the movement through the range from loud to soft. Students' feedback indicated that they could tell dynamics were added to the piece and when they occurred, but they did not feel comfortable judging whether the dynamics were effective. Furthermore, students stated that listening to the video recording as an audience was a different sensation than singing the music as a part of the ensemble. When creating the dynamics as a choir and hearing the sound within the choir, students felt that they could perform the dynamics effectively. However, the sensation was foreign to them when they only listened to the sound. Because of the difference in feeling and sound when listening and not singing, students felt confused about the sense of creating the dynamics was the same as the translated listening to the dynamic.

Results and Findings

The study's primary purpose was to examine the use of video recording and playback on the self-assessment of high school choral students. The intent was to determine what effect the use of a recording would have on listeners' self-assessment of the four musical elements of tone quality, pitch accuracy, rhythmic accuracy, and dynamic effect. Students used rubrics to evaluate their performance qualities, and points were based on the categories of accuracy listed on the rubric ranging from 0 points (poor) to 4 points (excellent). Students assessed the performance

using the rubric at the beginning and the end of the week. The results in the increase of point scores were used to determine the effectiveness of improving the skill by utilizing this strategy. Results revealed that for all four categories of self-assessment, means increased over time as students evaluated each of the qualities of sound. However, similar to the previous research by Silveira and Gavin, the increase in average scoring via the self-assessments was generally low (from a slight increase of .5 points to 1.5 points).[173] Given the small time frame allotted for this research, any increase in average scoring indicates that video recording and playback for self-assessment can help students quantify and organize their thoughts about musical characteristics while improving the singer's technique to garner desired results. Based on the findings of this study, it can be assumed that a more extended study would provide opportunities for more growth of student skills, and scores would reflect this with an even more significant increase.

The results of the average scores of point increases may be misleading due to students' initially having higher ratings overall during the self-assessment at the beginning of the research. As students practiced their evaluative skills and improved at assessing work for quality, they also developed a more rigorous evaluation. Therefore, they judged the performance with more stringent criteria. Thus, although the singer's skills could have improved in quality, the score was not showing improvement. These findings are consistent with previous research by Dunning, who also noted that participants rated themselves higher earlier in the research study when they were not as 'skilled' at self-assessment.[174] In opposition to these findings is research literature by D. A. Sheldon, who found no significant difference in evaluations of error detection through

[173] Silveira and Gavin, "The Effect of Audio Recording on Self-Assessment," 884-885.

[174] Dunning, Heath, and Suls, "Flawed Assessment," 69–106.

listening by those who had practiced assessment and those who had not.[175] Sheldon's theory pronounces that the performer's skill level has much more to do with one's ability to evaluate and detect errors in music than the amount of practice at evaluation or assessment techniques could offer.[176]

Even with the knowledge of this phenomenon occurring during the research study, students' scores increased with an average of a 1-point increase. One can assume from these results that if students were already comfortable with evaluation and self-assessment techniques prior to the study, students' scores would have shown a more noticeable increase in mean scoring. These results are similar to other research literature like that of R. Lopez and S. Kossak. They provide evidence that improved student self-assessment is associated with a consistent increase in students' knowledge of self-assessment skills and students' ability to become evaluators of quality work.[177] Findings indicate a consistent increase in students' scores over time if there is consistency in the evaluation strategy, practice, and use of self-assessment tools.[178]

The results of pitch accuracy indicated an overall increase of 1 point. Rhythmic accuracy findings indicate an overall increase of 2 points, while tone quality and dynamic effect showed an average increase of only .5 points. This research found that rhythmic accuracy seemed to be the most accessible skill for students to evaluate, in conjunction with Byo's studies

[175] D.A. Sheldon, "Effects of Multiple Listenings on Error-Detection Acuity in Multi-Voice, Multi-Timbral Music Examples," *Journal of Research in Music Education*, Vol 52:1, (April 2004) 102-115.

[176] Ibid.

[177] Lopez and Kossak, "Effects of Recurring Use of Self-Assessment," 203-216.

[178] T. Priest, "Self-Evaluation, Creativity, and Musical Achievement," 47-61.

objectively.[179] The students felt comfortable in their ability to understand and perform the rhythms accurately and therefore assess the accuracy of the ensemble successfully. Students actively performed the rhythms and could listen and judge the ensemble's success in performing the rhythms throughout the piece. Compared to the teacher's assessment of the student's skills, the student's self-assessment scores were similar to the teacher's and within a range of .5 points. This data shows that high school students can successfully use self-assessment strategies to evaluate rhythm accuracy. The overall average increase was 2 points gained from the first rehearsal to the last rehearsal, making it the most significant increase of the four skills assessed.

Average Scores of Assessments

Skill	First Assessment	Second Assessment	Increase
Tone Quality	2	2.5	+.5
Rhythmic Accuracy	1.7	3.7	+2
Pitch Accuracy	2	3	+1
Dynamic Effect	2	2.5	+.5

In this study, the rhythm was combined with pitch through music. Still, for further studies, it would be interesting to see a non-pitched assessment of rhythms to see if the addition of the pitch skews data results and adds an additional layer to the skill which could be assessed better alone. Additionally, research could be done on how the texture of the music being written for a three-part choir affects the data results or rhythmic accuracy and error detection. The

[179] J.L. Byo and D.A. Sheldon, "The Effect of Singing While Listening on Undergraduate Music Majors' Ability to Detect Pitch and Rhythm Errors," *Journal of Band Research*, Vol 36:1, (Spring 2000) 26-46.

research of Sheldon affirms that errors (both rhythmic and pitch) in the two-part and three-part music examples were found less frequently than those of one melodic line in unison.[180] Furthermore, additional research could be built on evaluating and assessing musical skills given different musical textures. To what extent does the texture of the music contribute or hinder a student's ability to detect musical errors? Byo and Sheldon's research provides insight into this question and the effects of textural differences. However, these findings are based on undergraduate students and based on assessment of others' performances instead of self-assessment.[181]

The research study is not without its limitations. While careful planning and considerations were made in selecting the music, as with any study examining a performance task, the students' musical history and maturation of the singers remain a possible threat to the validity of the research. While participants were instructed to only study and rehearse the music during the group sessions, one cannot be sure that participants did not review the music outside of the study and listen to excerpts that would change their opinion on the desired sound of the piece. Additionally, there was no way to know the students' familiarity with any pieces outside of class or their history of performing these selections before the research study. Furthermore, any number of variables may have been present that could have influenced self-assessment ratings. For example, students' attendance in class, health and wellness of the student while participating in group sessions, and distractions within the school such as bells, announcements over the PA system, and guests interrupting class could all lead to potential threats to the validity of the project or skewed data results.

[180] Sheldon, "Effects of Multiple Listenings on Error-Detection," 102-115.

[181] Byo and Sheldon, "The Effect of Singing While Listening," 26-46.

While the primary focus of the research study was on students' perceptions of their performance, future research might incorporate experts' assessments of students' performances to compare the results. A great deal of research has compared assessments between novice and expert music performers/teachers, revealing that novices tend to be more positive in their evaluations when compared to experts' assessments of the same task.[182] Because of this, it may be helpful to replicate the study with experts' rating performances with the four musical skills assessed in this study. Aitchison (1995) found that when teachers or other experts were involved with the student's assessment, student and teacher scores were more highly correlated.[183] Additional methods could consider the effect of repeated self-assessments or self-assessment instruction on novice music students' self-assessment accuracy.

Technology is growing and changing daily and determining how students can use technology to improve their performance quality through self-assessment is undoubtedly an essential topic of study in music education.[184] The ease of technology, such as video recorders, has made it a valuable tool for assessment in education. It has allowed for the opportunity to increase student engagement and boost student achievement as they become active learners. Throughout education at all levels and in all areas, technology continues to be studied, and the effects of its implementation in classrooms continue to interest researchers and educators.[185] As music educators progress through the 21st century, it will become increasingly important to

[182] J.T. Fitzgerald and C.B. White, "A Longitudinal Study of Self-Assessment Accuracy," *Review of Educational Research*, Vol 70:3, (Mar. 2000) 287-322.

[183] Aitchison, "The Effects of Self-Evaluation Techniques on the Musical Performance," 1-12.

[184] Lopez and Kossak, "Effects of Recurring Use of Self-Assessment," 203-216.

[185] C. E. Spearman, "How Will Societal and Technological Changes Affect the Teaching of Music?" *Vision 2020: The Housewright Symposium on the Future of Music Education*, (2012) 71-79. HTTP://musiced.nafme.org/files/2012/06/.

utilize technology successfully for music students' continued advancement and development.[186] It is suggested that further research be done to continue to explore to what degree the use of recording technology can impact music teaching and learning, both collectively and individually.[187]

Conclusion

Self-assessment to measure achievement, monitor progress, and motivate student learning continues to be a hot topic in education at all levels. A student needs to have opportunities to judge their skill level and investigate ways to enhance their performance. Although there is still much research to be done on this topic, the evidence in this research project strongly suggests that self-assessment benefits students in terms of both achievement and self-regulated learning when supported by thoughtful and organized training before assessment. Development of critical thinking evaluative skills can help students have meaningful involvement in self-assessments within the choral music classroom. Furthermore, these skills give students independence as musicians to participate in ensembles or musical settings throughout life as either amateurs or professionals. Because lifelong opportunities for aesthetic experiences in music contribute to the overall quality of life, this seems to be a fundamental goal. Continued research in self-assessment in music education will have lasting implications for pedagogy that will significantly contribute to our field.

[186] Spearman, "How Will Societal and Technological Changes Affect the Teaching of Music?" 71-79.

[187] Silveira and Gavin, "The Effect of Audio Recording on Self-Assessment," 884-885.

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Performance Self-Assessment Rubric

Requirements	0 pts- Poor	1 pt- Fair	2 pts-Good	3 pts-Excellent	4 pts- Superior
Rhythms	No check-off attempted, no evidence of knowledge	Performed with many wrong rhythms, many mistakes were made	Performed with some correct rhythms, several mistakes were made	Performed with mostly correct rhythms, only a few mistakes were made	Performed with near perfect rhythms, very minor mistakes were made
Pitches	No check-off attempted, no evidence of knowledge	Performed with many wrong pitches, many mistakes were made	Performed with some correct pitches, several mistakes were made	Performed with mostly correct pitches, only a few mistakes were made	Performed with near perfect pitches, very minor mistakes were made
Tone Quality	No check-off attempted, no evidence of tone when singing	Tone Quality is not strong, unable to hear rich and rounded vowels and clear tone	Tone Quality is okay overall, but there are several spots where tone quality is not successful	Tone Quality is good overall, and there are only a few sports where we hear the tone quality fall flat	Tone Quality is excellent, singer exudes rich and rounded vowels with clear tone
Dynamics	No assessment No evidence of dynamics and musicality	Student performed few of the dynamics that would make the piece musical	Some of the dynamics were observed, making the piece overall weak in musicality	Usually, the dynamics were observed, making the piece overall strong in musicality	Students observed all dynamics while performing, making the piece overall excellent in musicality

Choral Music Interview Guide
(To be used by the researcher)

1. What is your knowledge surrounding self-assessment?
2. Have you had practice self-assessing? If so, where have you used self-assessment?
3. What do you think it means to 'achieve' in a choir?
4. What specific learning components would lead you to believe you have achieved?
5. What do you believe is the difference between evaluating and self-assessment?
6. What are goals you set for yourself as a vocal musician?
7. Why do you take vocal music in school?
8. Do you think it would help you to be more or less "successful" in the choir and reach achievement if you were involved in evaluating your singing and learning? Why?

Student Survey

(Used to measure students' lived experiences)

Research in Music Education

1. How much experience do you have with choir? (middle school and high school)
    - None, this is my first experience
    - 1-2 years
    - 3-4 years
    - 5-6 years

2. Do you know what skills you are trying to develop an overall understanding of in choir?
    - Yes
    - No
    - Do not understand the question

3. Do you understand what skills you're working on each time you rehearse music in the choir?
    - Yes
    - No
    - Do not understand the question

4. Are learning targets clearly defined to you? (Either on the board/smartboard, verbal announcement)
    - Yes
    - No
    - Do not understand the question

5. Do you know, and could you explain, the difference between evaluation and assessment?
    - Yes
    - No
    - Do not understand the question

6. Do you know, and could you explain, the difference between assessment and testing?
    - Yes
    - No
    - Do not understand the question

7. Could you explain the term self-assessment if someone asked you?
    - Yes
    - No
    - Do not understand the question

8. Have you ever used a rubric to grade your work in a class?
    - Yes
    - No
    - Do not understand the question

9. Are you asked to set learning goals for yourself in other classes?
    - Yes
    - No
    - Do not understand the question

10. Have you ever monitored your progress toward achieving a goal in other classes?
    - Yes
    - No
    - Do not understand the question

Informed Consent for Student Participants

Julia Sterba

"The Effect of Video Recording on Self-Assessment of High School Vocal Music Students"

Introduction

Julia Sterba, a graduate researcher in the Music Education Program at Liberty University, wishes to conduct a research study to determine the effect that the evaluation of video recording has on achievement in choir through the practice of self-assessment of performance. Approval from our high school's administration was obtained prior to this announcement. All data will be used to develop a theory about regular self-assessment of skills in the choir. Participants will take a survey to see what the students already know about self-assessment strategies, evaluation, and achievement. Student participants will also be interviewed to gain a broader view of what students understand about these concepts based on their lived experiences. Student participants will then apply self-assessment strategies to observe if patterns emerge so that a theory can be made about implementing self-assessment.

Description of the Project

This research project is designed to examine the effects that video recording and evaluation have on the high school choral music students' skill development of tone, dynamics, rhythm, and pitch and provide information about self-assessment as a directional learning tool for singers to increase student achievement through self-regulated learning. Research indicates the power of self-assessment as an evaluation in the classroom. It has provided educators with tools to implement effective self-assessment practices that promote performance and self-efficacy. This research project will define self-assessment, address what skills are being assessed, and specify the methods of assessment that will be implemented. Models of self-assessment and implementation methods for these assessments in the choral music classroom will give music educators practical self-assessment examples for implementation.

Benefits and Risks of the Study

Student participants may feel anxious about participating in a formal research study and may worry that their performance during the study may alter their grades in the choir. Students should understand that this study will have no impact on the student's grades in class, and students should not feel that participation will either hinder or benefit their standing in the choir. All anticipated risks for the involvement in this study are minimal and no more significant than those typically encountered in a daily school activity. Additionally, participation will take place in a familiar setting, during the regular school day, with peers with whom participants have collaborated all year to ease anxiety. Participants' individual information will not be cited in this research study; instead, all data will be aggregated to display whole group data trends and emergent patterns based on data collection.

Possible benefits to this study for participants may include learning more deeply about achievement in vocal music and what skills need to be fully developed for that achievement to take place. The study may also help students to feel more connected to their learning process and to learn how to self-regulate their learning in the choir and other classes.

Confidentiality

The data gathered from this study will be private and confidential. Data will be collected through secure Google Form surveys, and email addresses will not be collected to ensure personal identifiers in responses are removed. Any raw data will be seen by the researcher only, and no student names will be used in the study. Once the study has concluded, all data will be stored in a secure file for fidelity's sake, but no personal or identifiable information will be kept from any student participant.

Questions, Rights, and Complaints

Participants have the right to view the results of this research. If you have questions about this study, contact me (Julia Sterba) at [redacted] ext. 1401 by phone or email at [redacted]edu

Consent Statement

By signing this document, you agree to participate (or allow your child to participate) in the study and have answered your study participation questions.

_____

Designated Official Signature

Beth Coleman- Building Principal

[redacted]

[redacted]

_____

Student Printed Name

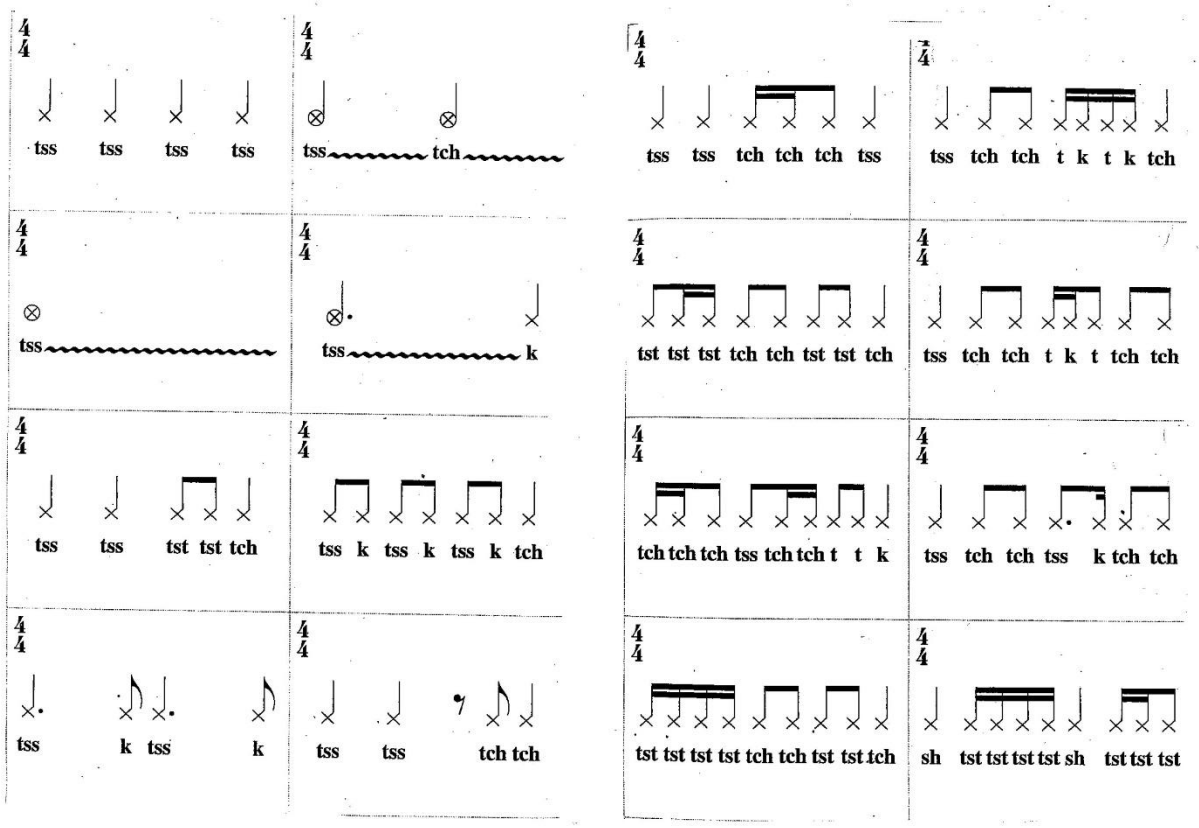
_____

Parent/Guardian Signature (student only if 18 years of age)

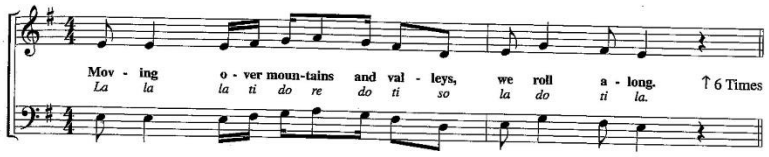
_____

Date

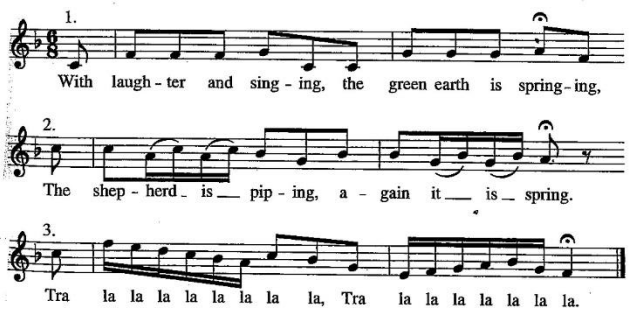
Warm-up Packet **RHYTHM**



Warm-up Packet **RHYTHM**



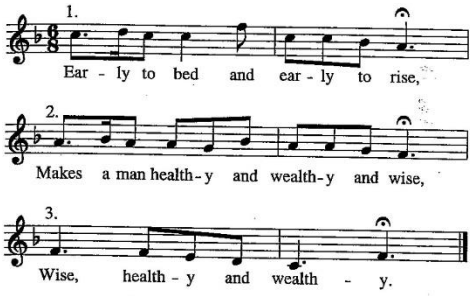
With Laughter and Singing



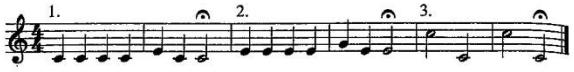
3. Early to Bed

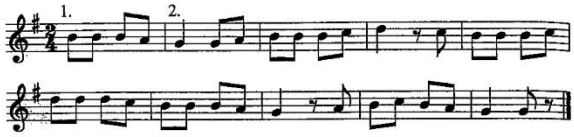
Attributed to Benjamin Franklin

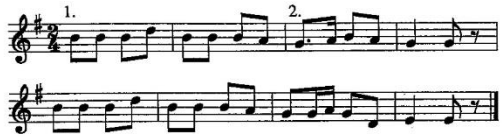
The School Round Book, 1852



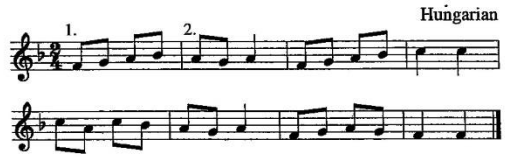
Warm-up Packet



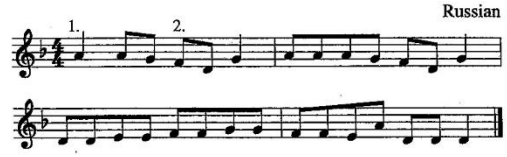




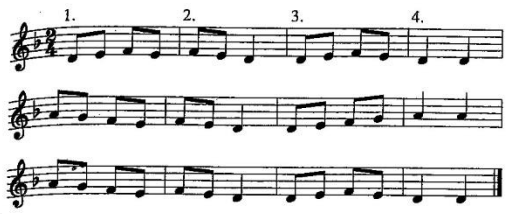
Hungarian



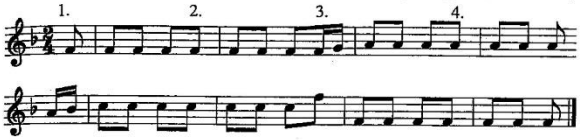
Russian



PITCH



Franz Joseph Haydn (1732–1809)



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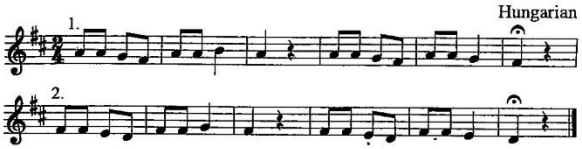
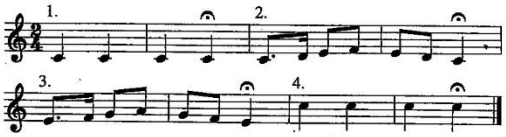
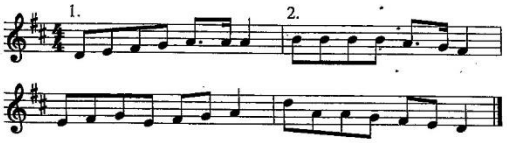
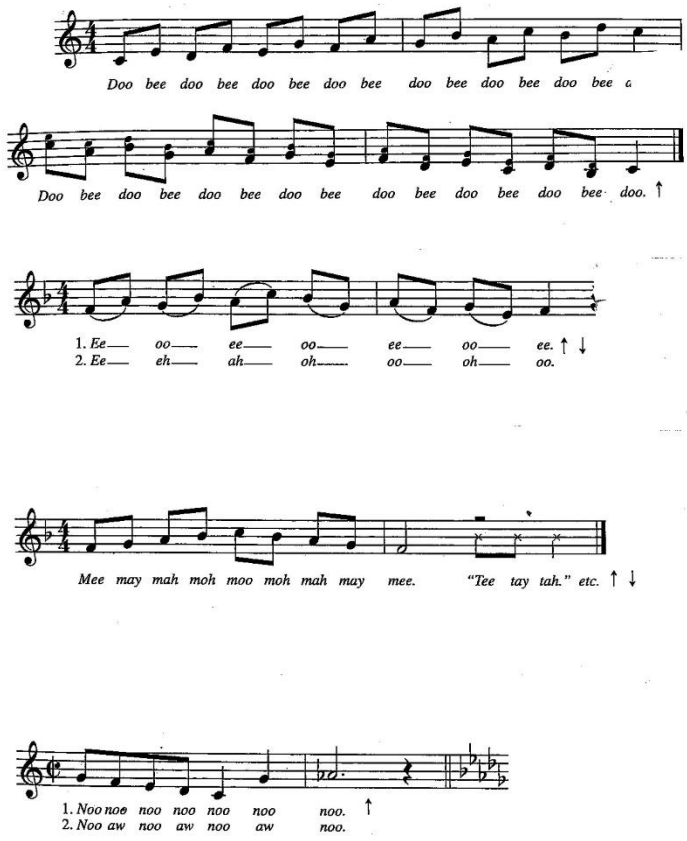


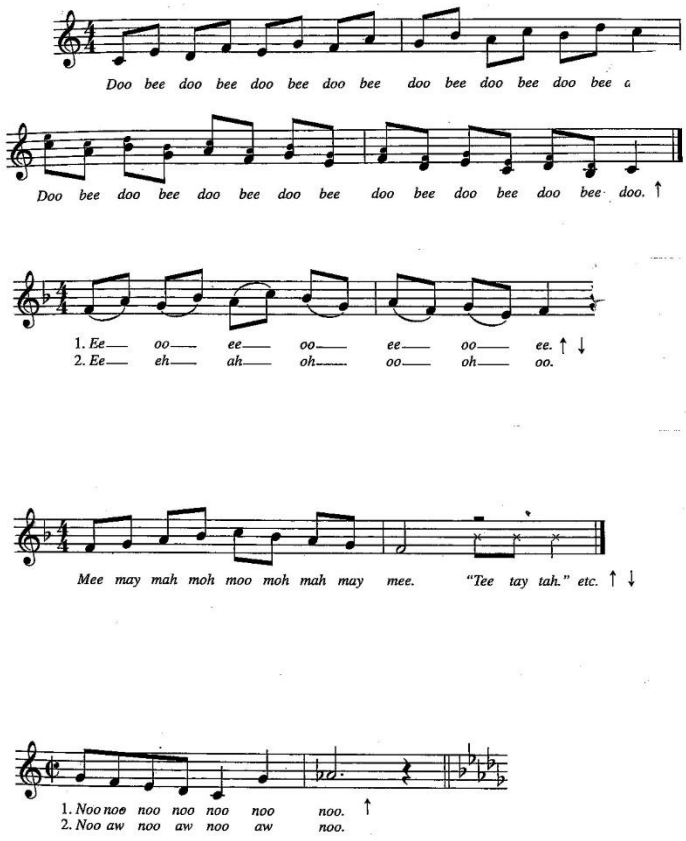


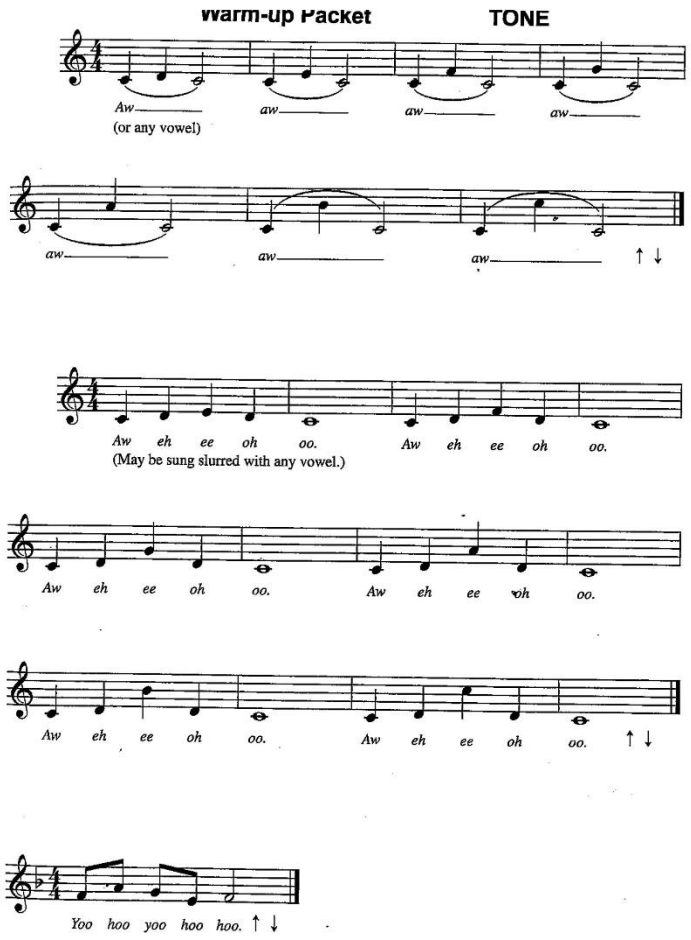


Warm-up Packet **PITCH**

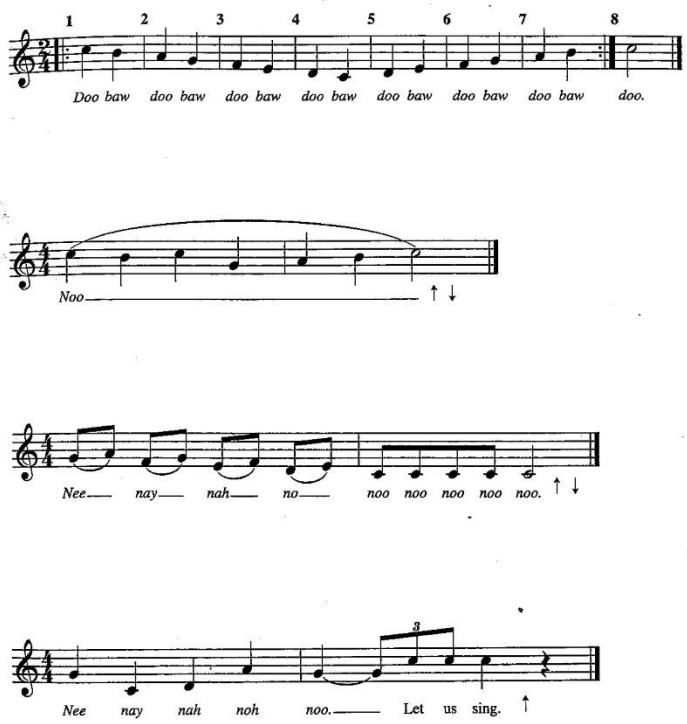


Warm-up Packet **PITCH**

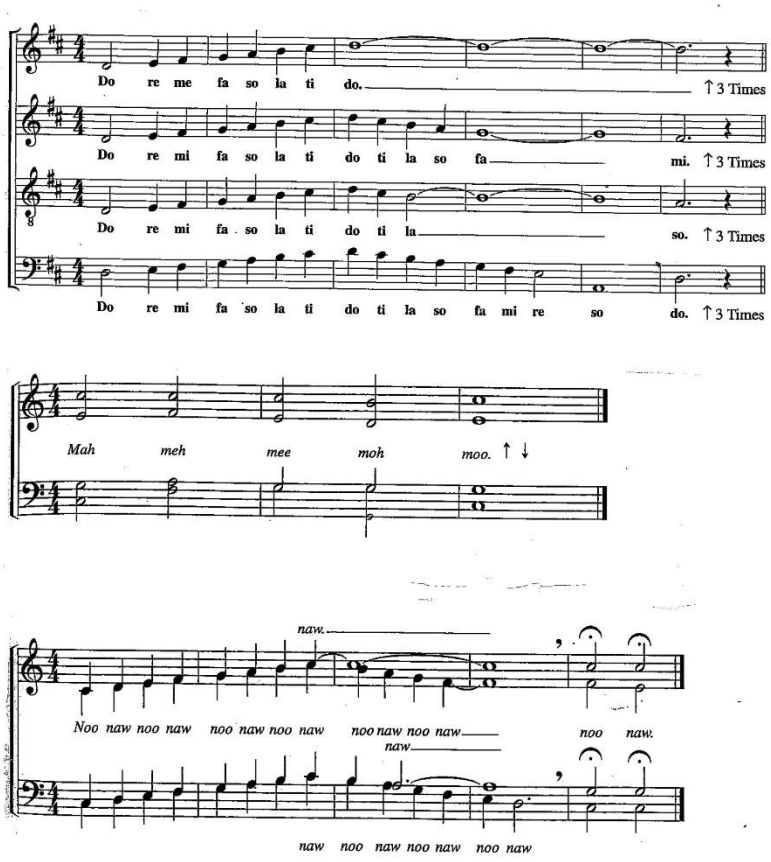



Warm-up Packet
TONE
Aw aw aw aw
(or any vowel)
aw aw aw
Aw eh ee oh oo. Aw eh ee oh oo.
(May be sung slurred with any vowel.)
Aw eh ee oh oo. Aw eh ee oh oo.
Aw eh ee oh oo. Aw eh ee oh oo.
Yoo hoo yoo hoo hoo.

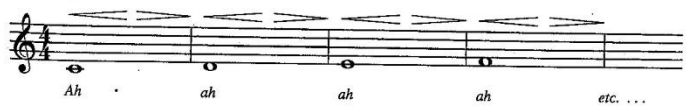
Warm-up Packet **TONE**

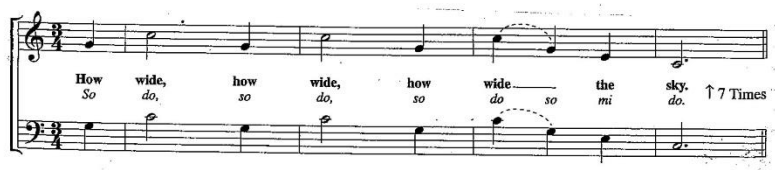


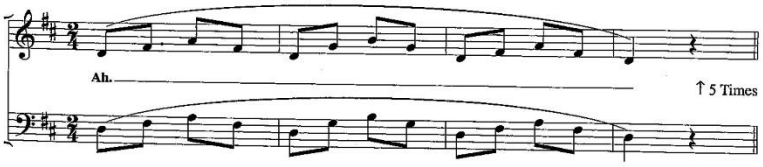
Warm-up Packet **TONE**

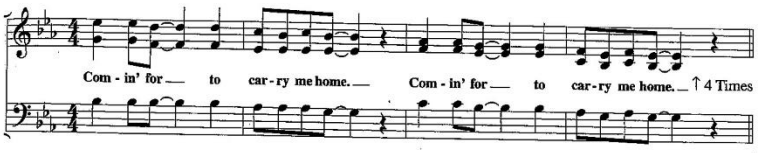


Warm-up Packet **DYNAMICS**

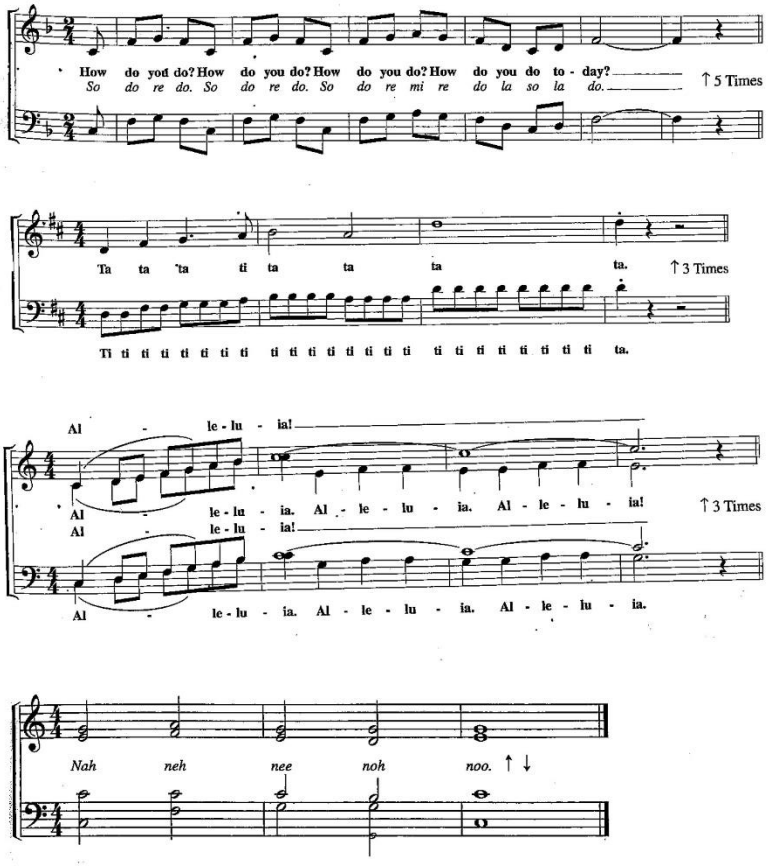








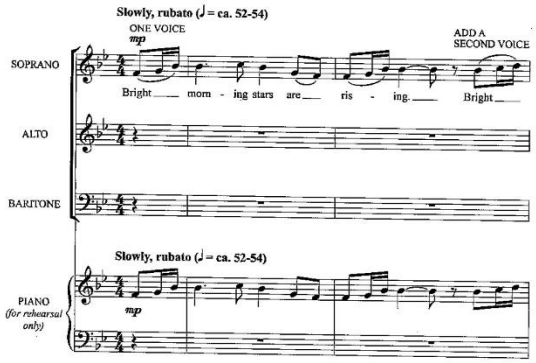
Warm-up Packet **DYNAMICS**



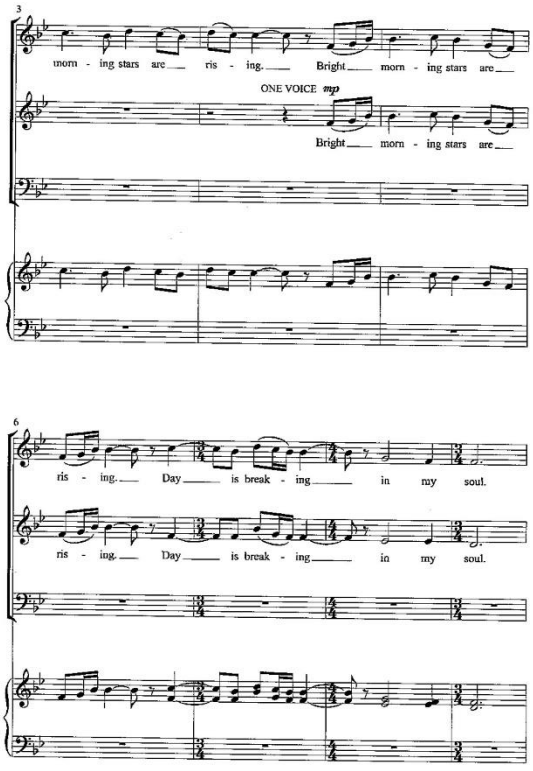
BRIGHT MORNING STARS

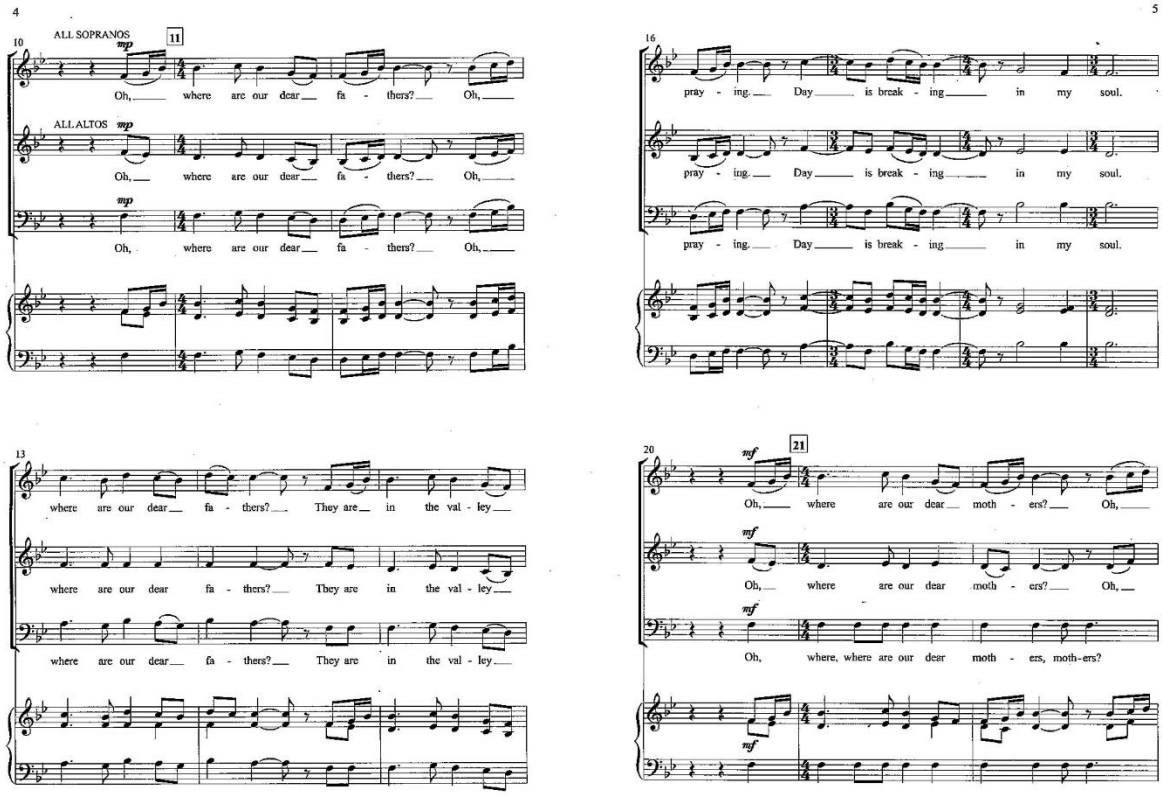
for S.A.B. voices, a cappella*

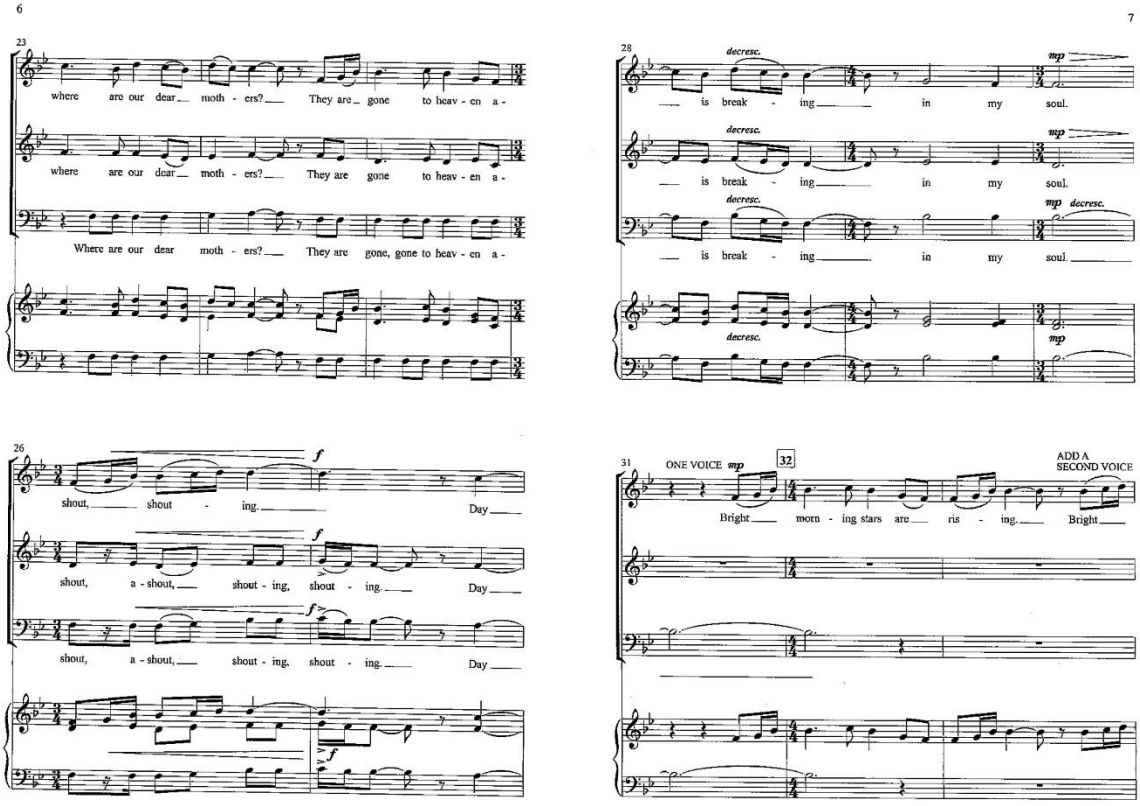
Kentucky Folk Song
Arranged by **JAY ALTHOUSE**

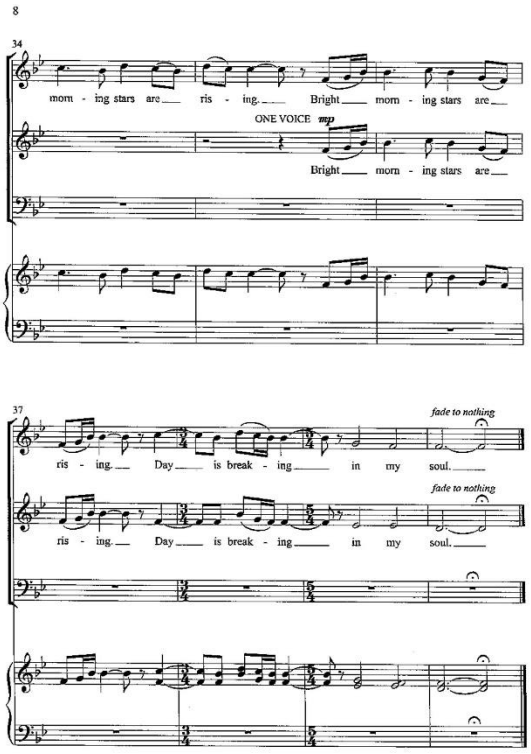


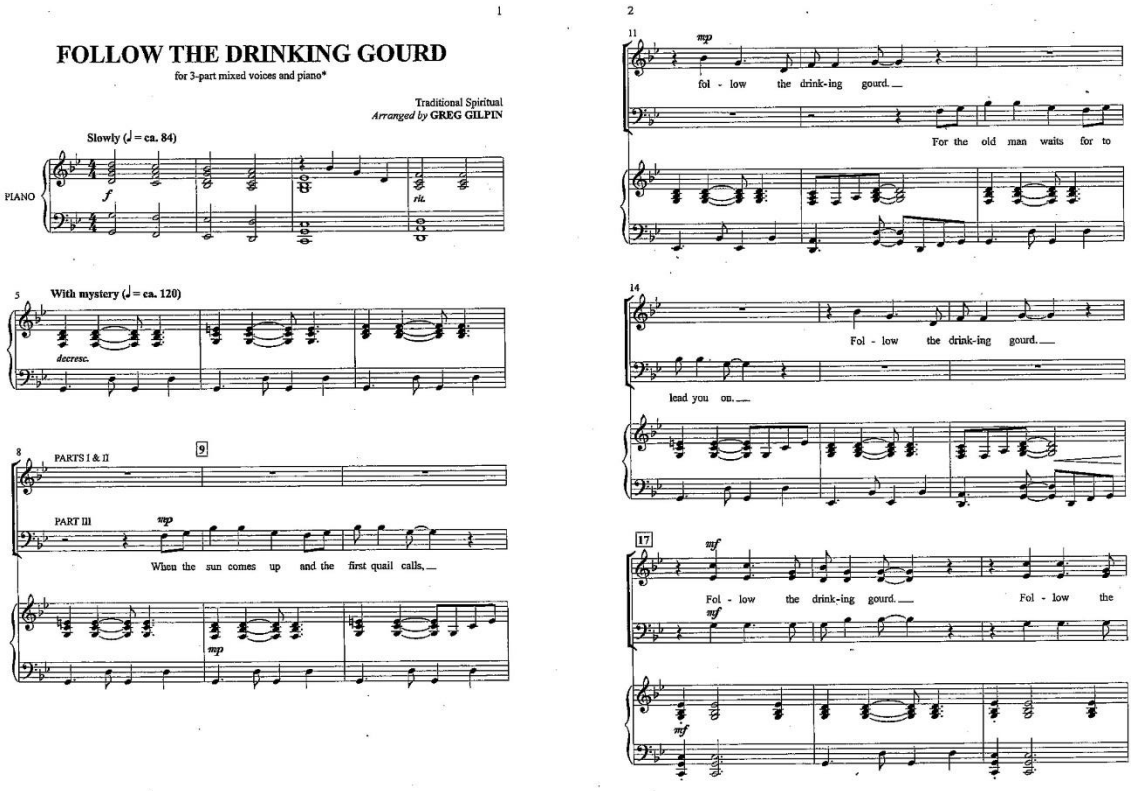
* Also available for S.A.T.B. (31223) and S.S.A.A. (31224).
Visit *alfred.com* for digital scores and audio.




4
5
10
ALL SOPRANOS
mp
11
Oh, where are our dear fa - thers? Oh,
ALL ALTOS mp
Oh, where are our dear fa - thers? Oh,
mp
Oh, where are our dear fa - thers? Oh,
16
pray - ing. Day is break - ing in my soul.
pray - ing. Day is break - ing in my soul.
pray - ing. Day is break - ing in my soul.
13
where are our dear fa - thers? They are in the val - ley
where are our dear fa - thers? They are in the val - ley
where are our dear fa - thers? They are in the val - ley
20
mf
21
Oh, where are our dear moth - ers? Oh,
mf
Oh, where are our dear moth - ers? Oh,
mf
Oh, where, where are our dear moth - ers, moth-ers?
mf


6
23
where are our dear moth - ers? They are gone to heav - en a -
where are our dear moth - ers? They are gone to heav - en a -
Where are our dear moth - ers? They are gone, gone to heav - en a -
7
28
decresc.
mp
is break - ing in my soul.
is break - ing in my soul.
is break - ing in my soul.
26
f
shout, shout - ing. Day
shout, a - shout, shout - ing, shout - ing. Day
shout, a - shout, shout - ing, shout - ing. Day
31
ONE VOICE
32
ADD A SECOND VOICE
Bright morn - ing stars are ris - ing. Bright


8
34
morn - ing stars are ris - ing. Bright morn - ing stars are
ONE VOICE mp
Bright morn - ing stars are
37
fade to nothing
ris - ing. Day is break - ing in my soul.
fade to nothing
ris - ing. Day is break - ing in my soul.



1

FOLLOW THE DRINKING GOURD

for 3-part mixed voices and piano*

Traditional Spiritual
Arranged by **GREG GILPIN**

Slowly (♩ = ca. 84)

PIANO

f

rit.

5 **With mystery (♩ = ca. 120)**

decresc.

8 PARTS I & II

9

PART III

mp

When the sun comes up and the first quail calls,

mp

2

11

mp

fol - low the drink-ing gourd.

For the old man waits for to

14

Fol - low the drink-ing gourd.

lead you on.

17

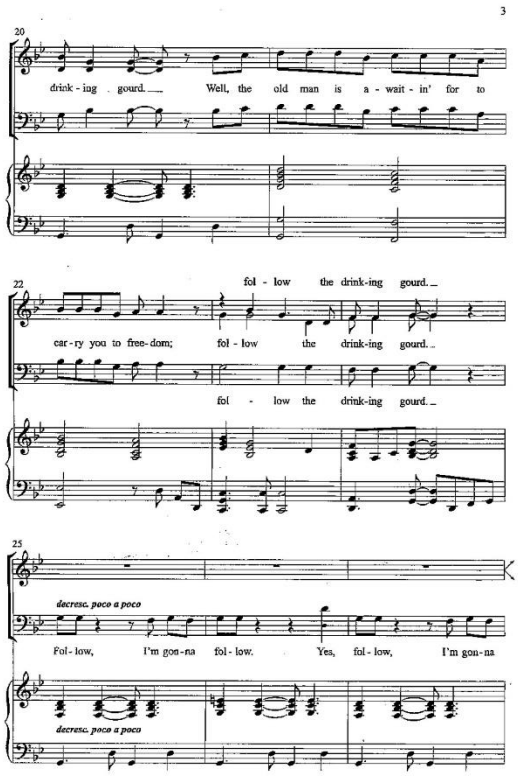
mf

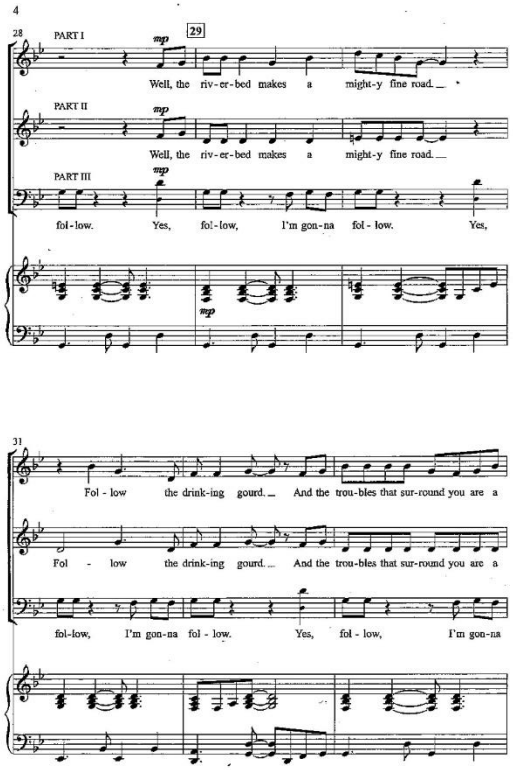
Fol - low the drink-ing gourd.

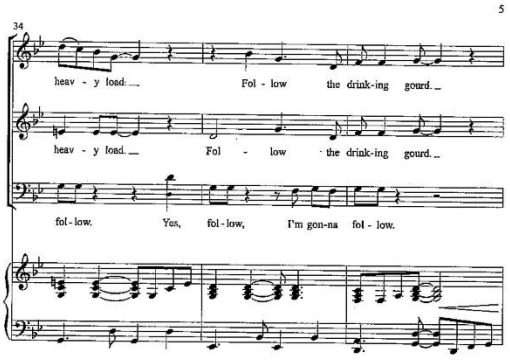
Fol - low the

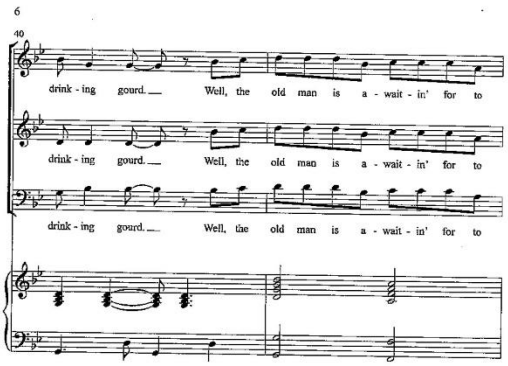
mf

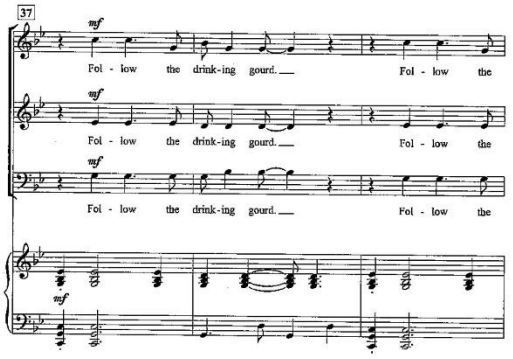
mf

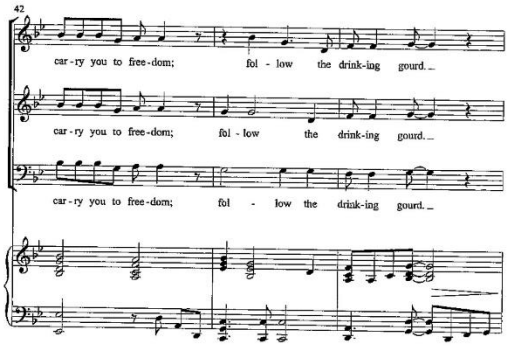

3
20
drink - ing gourd. Well, the old man is a - wait - in' for to
22
fol - low the drink-ing gourd.
car - ry you to free - dom; fol - low the drink-ing gourd.
fol - low the drink-ing gourd.
25
decresc. poco a poco
Fol - low, I'm gon - na fol - low. Yes, fol - low, I'm gon - na
decresc. poco a poco

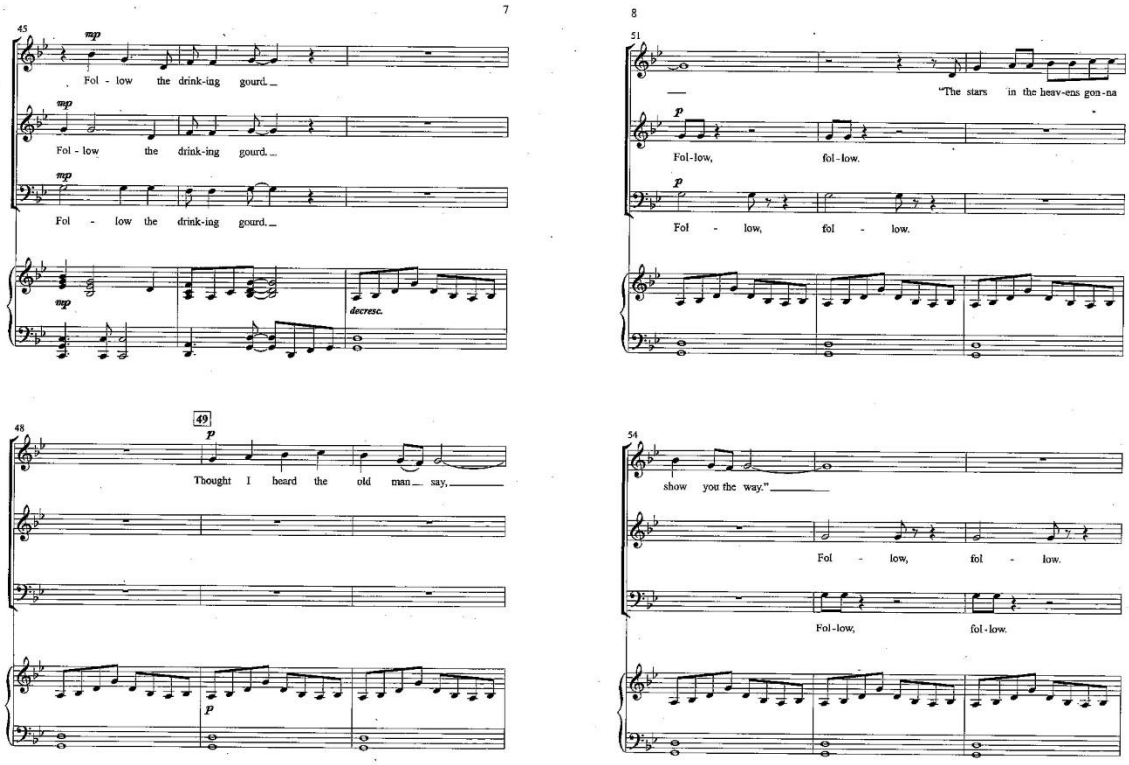

4
28
PART I
mp
29
Well, the riv - er - bed makes a might - y fine road.
PART II
mp
Well, the riv - er - bed makes a might - y fine road.
PART III
mp
fol - low. Yes, fol - low, I'm gon - na fol - low. Yes,
mp
31
Fol - low the drink-ing gourd. And the trou-bles that sur-round you are a
Fol - low the drink-ing gourd. And the trou-bles that sur-round you are a
fol-low, I'm gon - na fol - low. Yes, fol - low, I'm gon - na

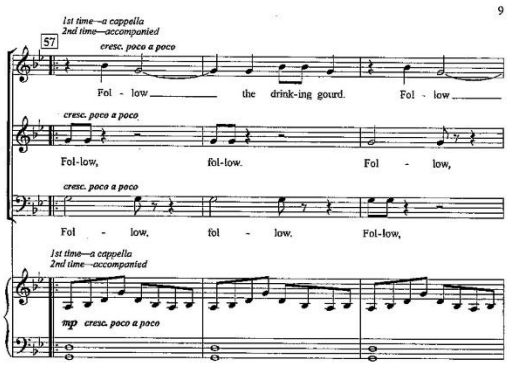

5
34
heav - y load. Fol - low the drink-ing gourd.
heav - y load. Fol - low the drink-ing gourd.
fol - low. Yes, fol - low, I'm gon-na fol - low.

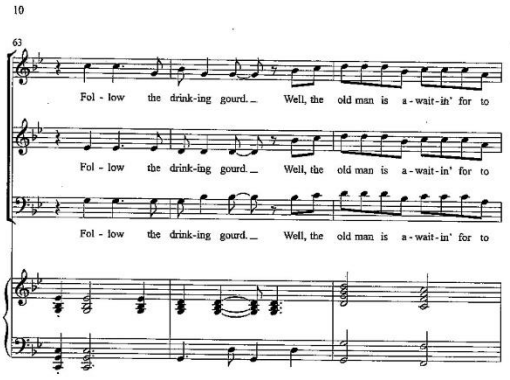

6
40
drink - ing gourd. Well, the old man is a - wait - in' for to
drink - ing gourd. Well, the old man is a - wait - in' for to
drink - ing gourd. Well, the old man is a - wait - in' for to

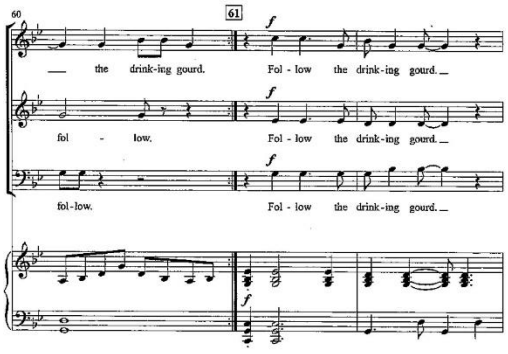

37
mf
Fol - low the drink-ing gourd. Fol - low the
mf
Fol - low the drink-ing gourd. Fol - low the
mf
Fol - low the drink-ing gourd. Fol - low the
mf

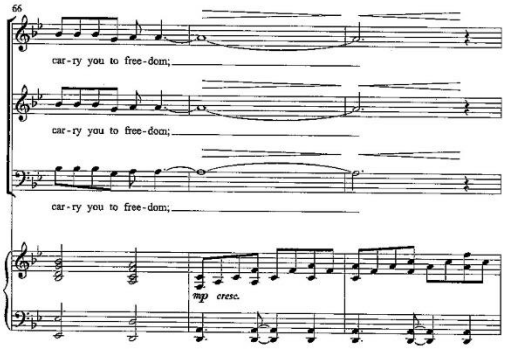

42
car - ry you to free - dom; fol - low the drink-ing gourd.
car - ry you to free - dom; fol - low the drink-ing gourd.
car - ry you to free - dom; fol - low the drink-ing gourd.

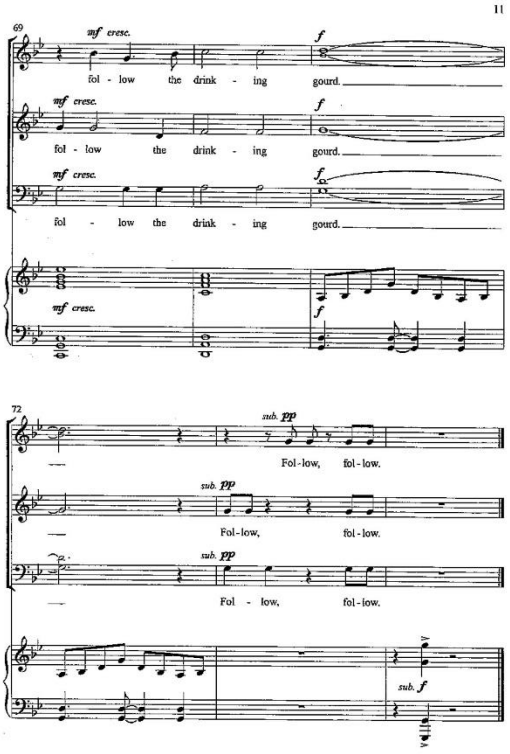

7
8
45
mp
Fol - low the drink-ing gourd.
Fol - low the drink-ing gourd.
Fol - low the drink-ing gourd.
decresc.
51
"The stars in the heav-ens gon-na
p
Fol-low, fol-low.
Fol - low, fol - low.
48
49
Thought I heard the old man say,
54
show you the way."
Fol - low, fol - low.
Fol-low, fol-low.

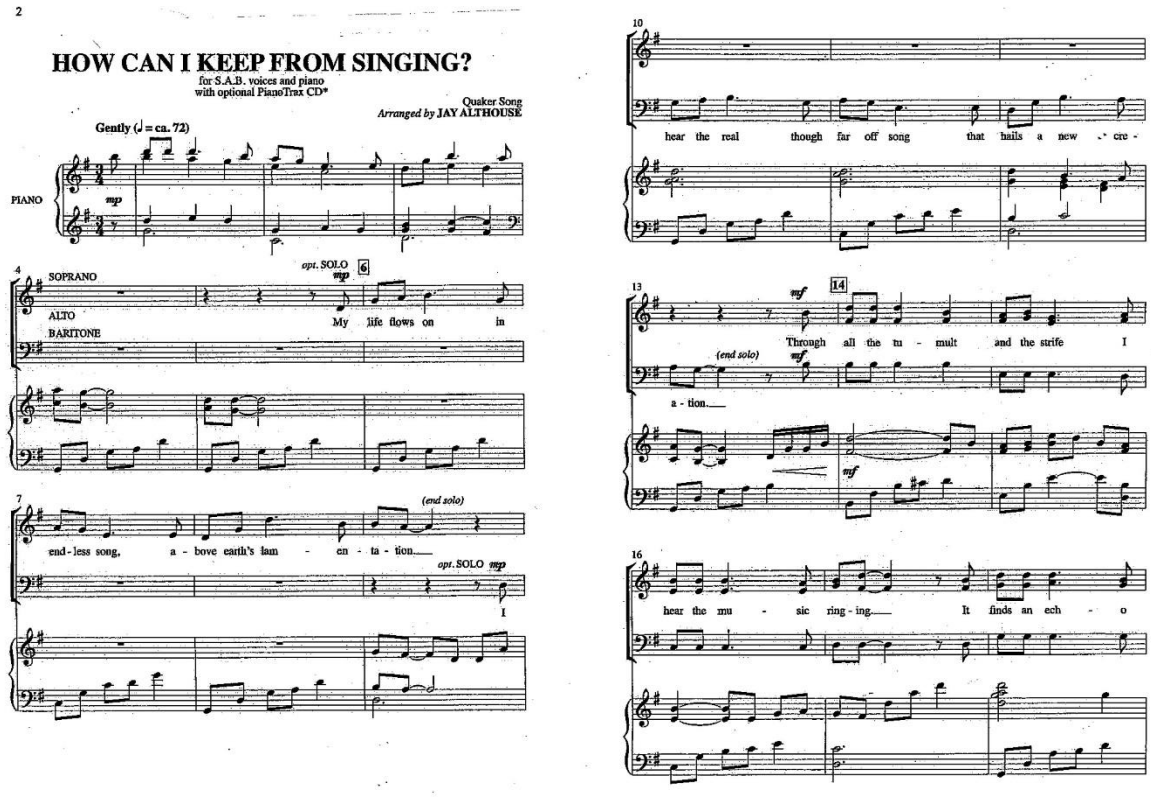

9
1st time—a cappella
2nd time—accompanied
57
cresc. poco a poco
Fol - low the drink-ing gourd. Fol - low
cresc. poco a poco
Fol-low, fol-low. Fol - low,
cresc. poco a poco
Fol - low, fol - low. Fol-low,
1st time—a cappella
2nd time—accompanied
mp cresc. poco a poco

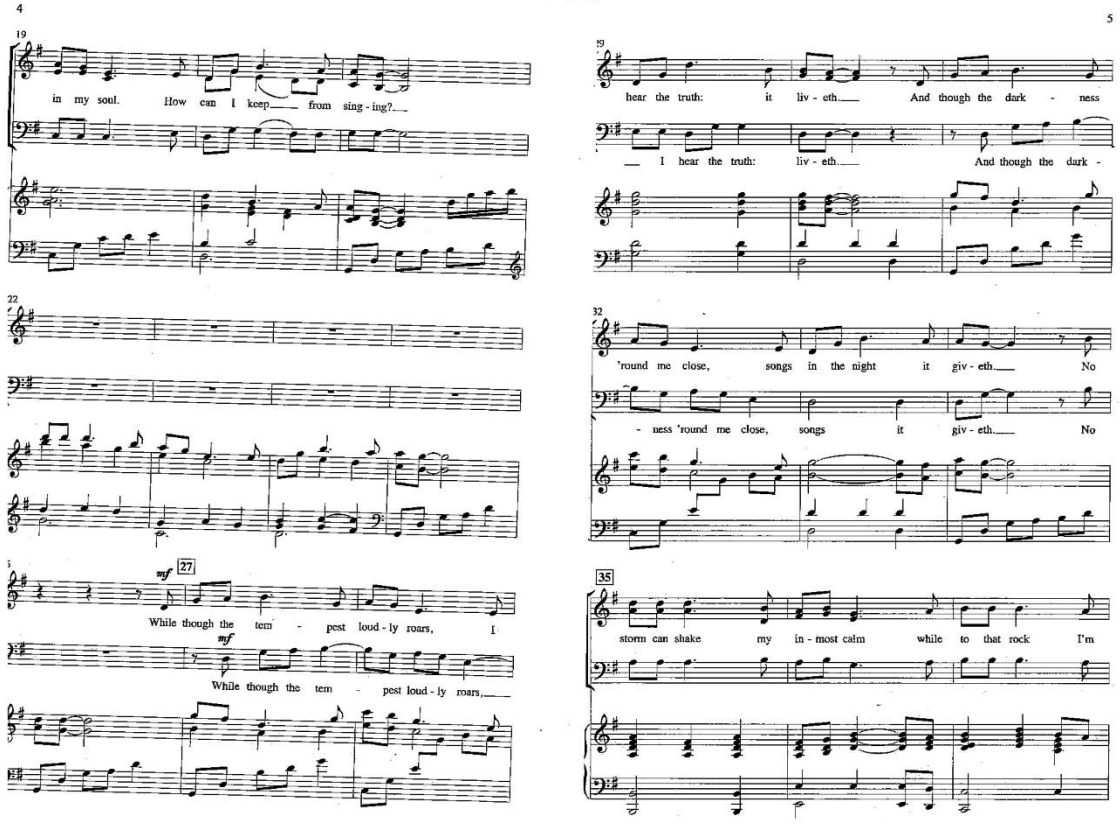

10
63
Fol - low the drink-ing gourd. Well, the old man is a-wait-in' for to
Fol - low the drink-ing gourd. Well, the old man is a-wait-in' for to
Fol - low the drink-ing gourd. Well, the old man is a-wait-in' for to

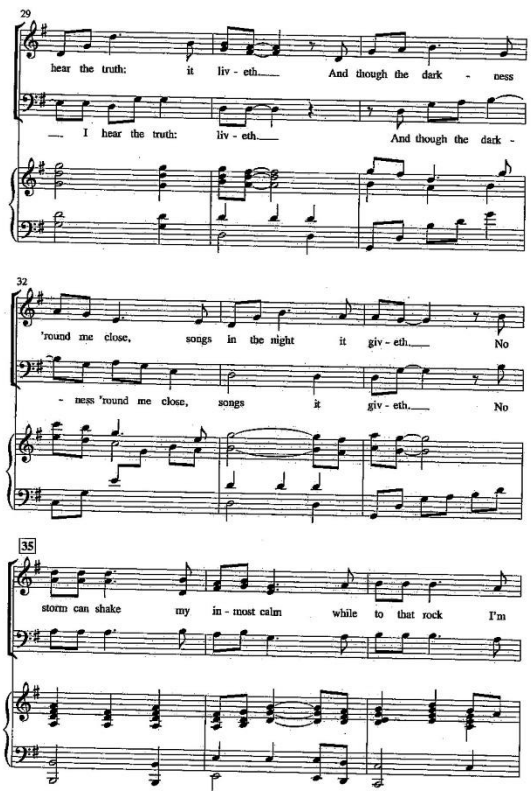

60
61
the drink-ing gourd. Fol - low the drink-ing gourd.
fol - low. Fol - low the drink-ing gourd.
fol-low. Fol - low the drink-ing gourd.

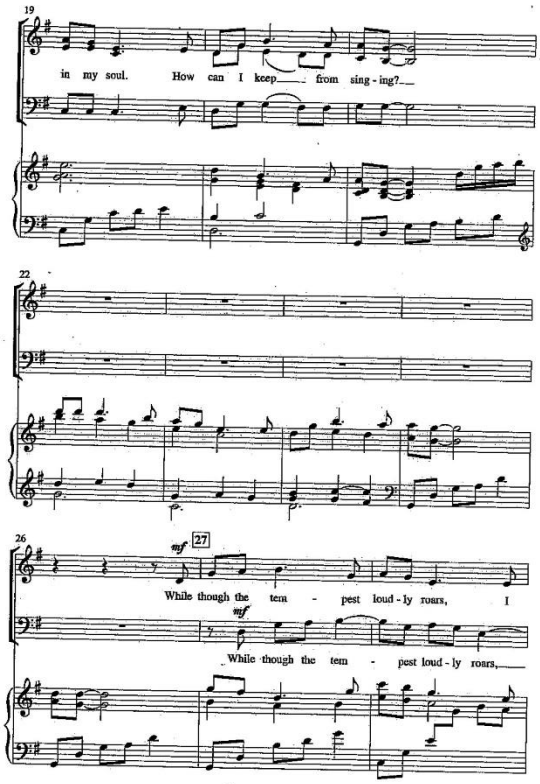

66
car-ry you to free-dom;
car-ry you to free-dom;
car-ry you to free-dom;
mp cresc.

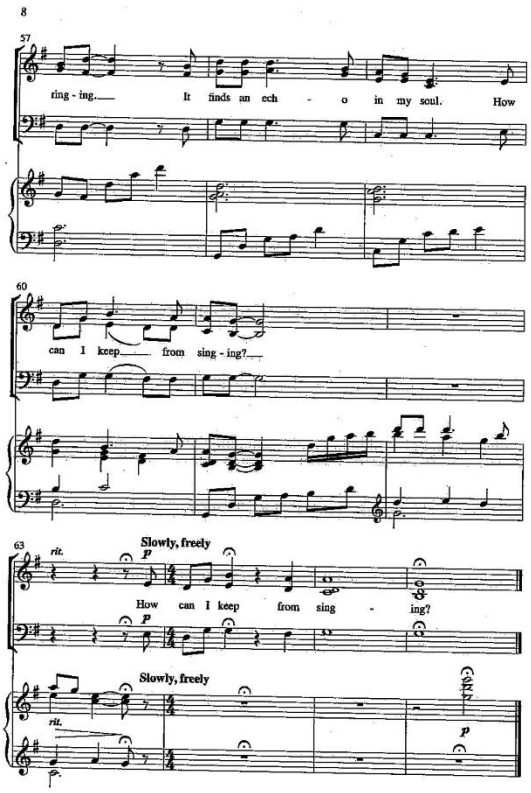

11
69
mf cresc.
f
fol - low the drink - ing gourd.
72
sub. pp
Fol-low, fol-low.
sub. f


2
HOW CAN I KEEP FROM SINGING?
for S.A.B. voices and piano
with optional PianoTrax CD*
Quaker Song
Arranged by JAY ALTHOUSE
Gently (♩= ca. 72)
PIANO
mp
4
SOPRANO
ALTO
BARITONE
opt. SOLO
mp
6
My life flows on in
7
(end solo)
end - less song, a - bove earth's lam - en - ta - tion.
opt. SOLO mp
I
10
hear the real though far off song that hails a new cre -
13
mf
14
Through all the tu - mult and the strife I
(end solo)
mf
a - tion.
mf
16
hear the mu - sic ring - ing. It finds an ech - o


4
19
in my soul. How can I keep from sing - ing?
22
mf 27
While though the tem - pest loud - ly roars, I
mf
While though the tem - pest loud - ly roars,
5
19
hear the truth: it liv - eth. And though the dark - ness
I bear the truth: liv - eth. And though the dark -
32
'round me close, songs in the night it giv - eth. No
- ness 'round me close, songs it giv - eth. No
35
storm can shake my in - most calm while to that rock I'm


29
hear the truth: it liv - eth. And though the dark - ness
I hear the truth: liv - eth. And though the dark -
32
'round me close, songs in the night it giv - eth. No
- ness 'round me close, songs it giv - eth. No
35
storm can shake my in - most calm while to that rock I'm


19
in my soul. How can I keep from sing - ing?
22
26
mf
27
While though the tem - pest loud - ly roars, I
mf
While though the tem - pest loud - ly roars,

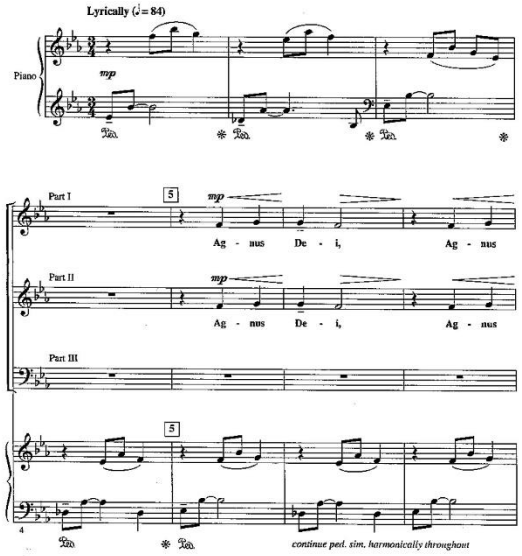

8
57
ring - ing. It finds an ech - o in my soul. How
60
can I keep from sing - ing?
63
rit.
Slowly, freely
p
How can I keep from sing - ing?
p
Slowly, freely
rit.
p

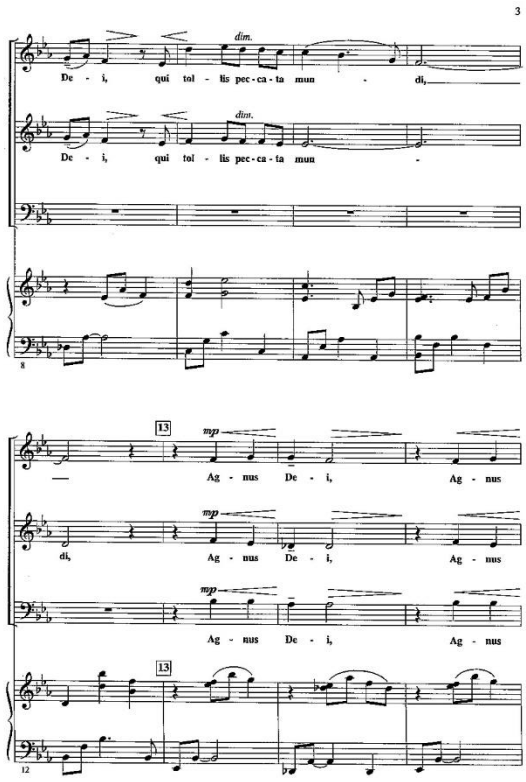
Agnus Dei

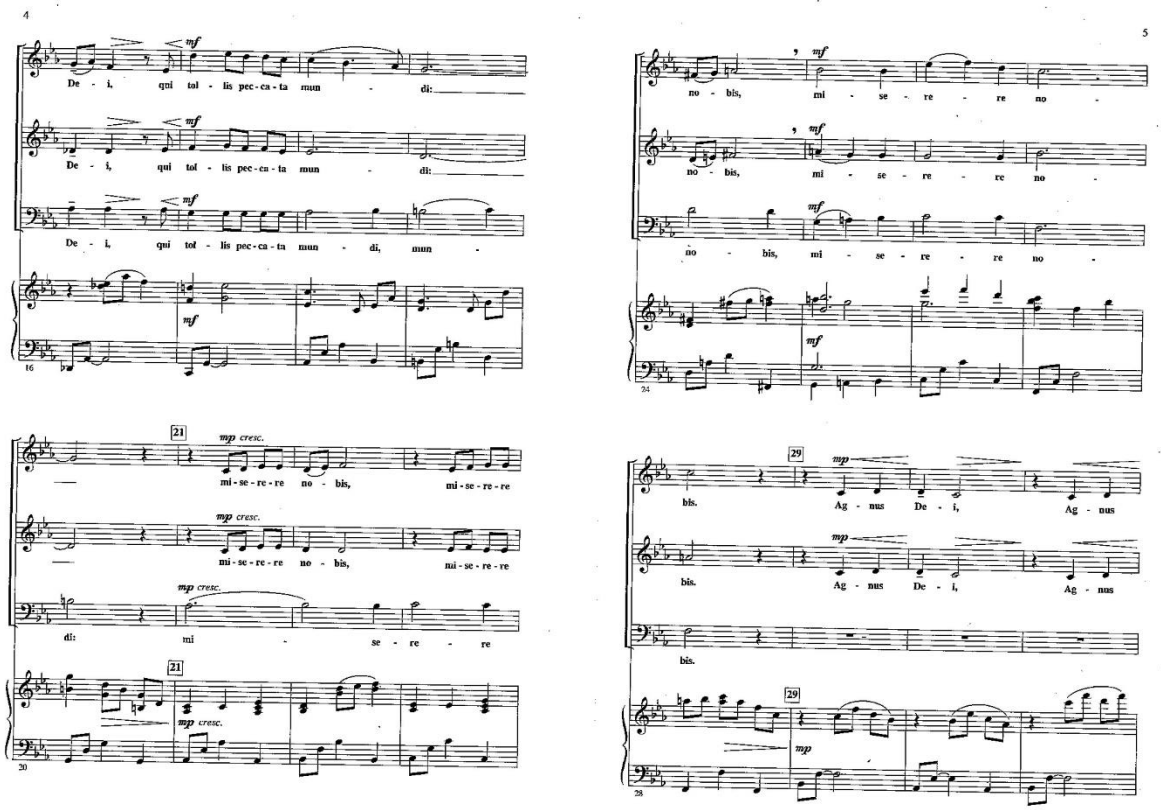
For 3-Part Mixed* and Piano
Duration: ca. 1:45

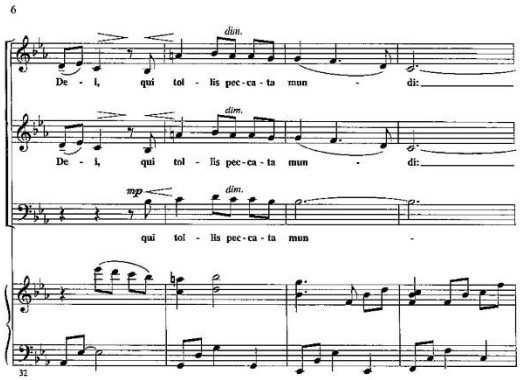
Traditional Latin Text

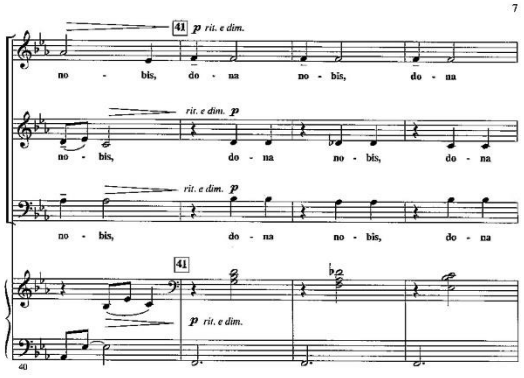
Music by
AUDREY SNYDER

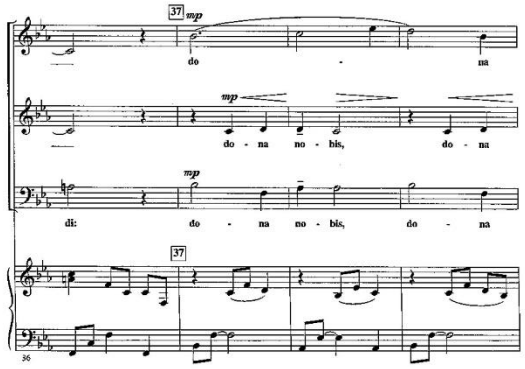


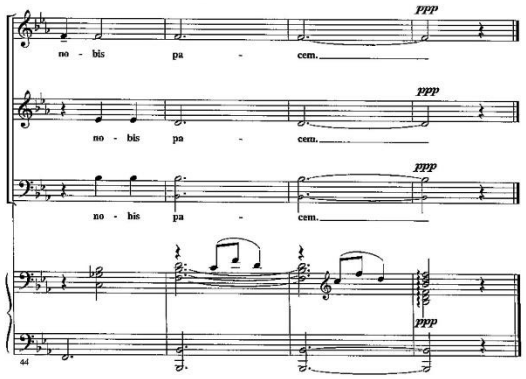



4
mf
De - i, qui tol - lis pec - ca - ta mun - di:
De - i, qui tol - lis pec - ca - ta mun - di:
De - i, qui tol - lis pec - ca - ta mun - di, mun -
16
5
no - bis, mi - se - re - re no -
no - bis, mi - se - re - re no -
no - bis, mi - se - re - re no -
24
21
mp cresc.
mi - se - re - re no - bis, mi - se - re - re
mi - se - re - re no - bis, mi - se - re - re
di: mi - se - re - re
20
29
mp
bis. Ag - nus De - i, Ag - nus
bis. Ag - nus De - i, Ag - nus
bis.
28


6
dim.
De - i, qui tol - lis pec - ca - ta mun - di:
dim.
De - i, qui tol - lis pec - ca - ta mun - di:
mp
dim.
qui tol - lis pec - ca - ta mun -
32


7
41 p rit. e dim.
no - bis, do - na no - bis, do - na
rit. e dim. p
no - bis, do - na no - bis, do - na
rit. e dim. p
no - bis, do - na no - bis, do - na
41
p rit. e dim.
40


37 mp
do - na
mp
do - na no - bis, do - na
mp
di: do - na no - bis, do - na
37
36


ppp
no - bis pa - cem.
ppp
no - bis pa - cem.
ppp
no - bis pa - cem.
ppp
44