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Measuring arts integration teacher effectiveness in non-arts classrooms through student growth

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MEASURING ARTS INTEGRATION TEACHER EFFECTIVENESS IN NON-ARTS CLASSROOMS THROUGH STUDENT GROWTH

by

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DEDICATION

I dedicate this work to my wife, Sukhali, and to my two wonderful children, Eran and Lydia. Their patience, understanding, and support throughout the writing process were my primary motivation for completing this project. I love you!

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ABSTRACT

John Dewey is known as the father of American experiential education. His views on building understanding in children through experiences in a correlated curriculum continue to influence educational practice to this day. His writings and experiments with experiential education also influenced music and arts education, most recently through the formation and implementation of arts integration programs.

Several well-known arts integration program leaders cite Dewey as a foundational figure in the existence of their initiatives. While influenced by Dewey, programs such as the Kennedy Center Changing Education Through the Arts (CETA) and the Chicago Arts Partnership in Education (CAPE) also are directly connected to the modern testing movement, and often gauge program success through reporting on a comparative analysis of standardized test scores. Current teacher evaluation models also measure student growth, along with teacher effectiveness, through the use of student test scores. Several arts education figures make an argument against measuring success in the arts through the use of test scores, stating that the true impact of study in the arts cannot be measured in this way.

This study piloted a model of measuring growth in arts integration classrooms through the use of the Tennessee Fine Arts Student Growth Measures (TFASGM) system, a portfolio-based teacher evaluation and student growth measurement model. Teachers worked in control and treatment groups to implement the TFASGM in general education classrooms. Along with using the model, a teacher treatment group received targeted arts integration training, and through the model's results, the impact of the training through teacher effect scores was also measured.

Results showed teachers receiving arts integration training produced more significant student growth, and had a greater effect on student performance. Higher levels of arts integration that are more closely aligned with Dewey's experiential education philosophy, such as process-based learning and the exploration of concepts common to arts and non-arts subjects, were also observed. More study, including a wider-scale implementation of the TFASGM in arts integration classrooms, is needed to make more substantial conclusions. However, this study demonstrates the viability of a growth-based arts teacher evaluation model in arts integration classrooms, and a new way of reporting on the success of arts integration programs that is in line with Dewey's experiential, growth-based philosophy.

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LIST OF ABBREVIATIONS

ELA.....English Language Arts

ESEA.....Elementary and Secondary Education Act

ESSA.....Every Student Succeeds Act

GLADiS.....Growth in Learning Determination Information System

NAfME.....National Association for Music Education

NCAS.....National Core Arts Standards

TCAP.....Tennessee Comprehensive Assessment Program

TEAM.....Tennessee Educator Acceleration Model

TFASGM.....Tennessee Fine Arts Student Growth Measure

WCPM.....Words Correct Per Minute

Chapter One: Introduction

Progressive Education and Arts Education

The progressive education movement strongly influenced the beginnings of American school arts programs. Music teaching techniques and progressive education ideals were similar in that they both required students to physically demonstrate learning (Mark & Gary, 1992), a key characteristic found in modern arts integration classrooms. G. Stanley Hall, John Dewey's psychology professor at Harvard, wrote about the ability of music to serve as a training ground for the aesthetic sensibilities of children. Music was seen as an important curricular area for accessing and meeting the needs of children, and the integration of school life with life outside of school. John Dewey's ideas on education and child-centered learning resulted in flexibility in music curriculum and content delivery (Keene, 1982).

For the first half of the 20th century, Dewey's thoughts on education influenced the conversation on the arts in the school curriculum. He held the arts as a curricular area in high regard, and referred to them as "the highest point of refinement of all the work carried on" (Dewey, 2001 p. 105). The arts were about more than just physical involvement; they were about "an idea, a thought, a spiritual rendering of things" (p. 53). Connections through art to life and work, such as in the art of the Renaissance, were imperative if students were to gain a deep understanding of the artistic process. Dewey believed subjects should not be taught in isolation, and that students learned best through "moving and doing" (Cornett,

2007, p. 285).

Dewey's vision of the arts included a strong emphasis on the individual experience, and this experience included learning in an integrated environment (Dewey, 1934). His call for a holistic approach to learning that relied on the integration of multiple subjects has been widely used by proponents of arts integration programs (Anderson, 2014; Burnaford et al., 2001; Cornett, 2007; Yenawine, 2014). His views on children and curriculum emphasized the notion that children naturally move between topics without attention to transitions or breaks, and being occupied by "the unity of the personal and social interests which his life carries along" (Dewey, 1928, p. 6). According to Dewey, the delineation and separation of subject areas was a concept that did not lend itself to a complete education:

> There is no line of demarcation within facts themselves which classifies them as belonging to science, history, or geography, respectively. The pigeon-hole classification which is so prevalent at present (fostered by introducing the pupil at the outset into a number of different studies contained in different text-books) gives an utterly erroneous idea of the relations of studies to one another and to the intellectual whole to which all belong. In fact, these subjects have to do with the same ultimate reality, namely, the conscious experience of man. It is only because we have different interests, or different ends, that we sort out the material and label part of it science, part of it

> history, part geography, and so on. Each "sorting" represents materials arranged with reference to some one dominant typical aim or process of the social life. (Dewey, 1909, pp. 32–33)

In 1935, the National Council for Teachers of English (NCTE) published *A Correlated Curriculum,* a research report which offered guidance on the integration of English with other subjects, including the fine arts. Along with other methods of integration, the report highlighted Dewey's vision of the "seamless curriculum, one that does not acknowledge subject area boundaries" (Kridel, 2010, p. 255). A 1937 review of the report in *The English Journal* called it an "illuminating description of current practices" (Hopkins, p. 418), although it also stated that:

> We believe that the department of English must take care of matters much more fundamental than correlation before it can be ready to prepare anything more than a merely descriptive account of relatively unevaluated practices. (p. 420)

Dewey's thoughts on the individual experience and connection of school to life outside school were echoed in the writings of psychologist and musician James Mursell, one of the most influential music education voices of the time. His progressive views on the study of music also placed the individual experience at the forefront of teaching and learning. The process was more important than a product, and the "only real goal for learning was growth" (Kelly, 2012, p. 17), as growth should be at "the heart of a well-organized scheme of music education" (Mursell, 1948, p. 3).

Opening in 1896, Dewey's laboratory elementary school at the University of Chicago highly valued singing and composition, and the process of composing songs was completed in whole group writing sessions. During this period, music education in most public schools focused on sight-reading, and did not allow for student "creative activities" (Shiraishi, 1995, p. 16). A 1936 article on the use of "creative music" (p. 31) in the general education curriculum highlighted the story of a school in Long Beach, New York that built a music program through the work of the entire school community. The principal of East School described in detail how twelve classrooms of students worked together with a classroom teacher appointed to lead music rehearsals, as well as a team of arts and non-arts educators, to write and stage an operetta. During a five-week period, 150 students met with teachers, as often as 60 percent of each school day, to select a story, plot scenes and write dialogue, and write music to accompany the scenes. The school principal pointed to its output of student compositions, as many as "one thousand per year" as evidence of "preserving something good that the children have done" (Henrickson, 1936, p. 31). Dewey believed in the importance of composition, as he viewed "compositional project that utilized rhythmic components" (Kelly, 2012, p. 16) as products of student artistic expression. While the work of groups of students creating an operetta was described as creative leisure, student performance opportunities were mentioned as evidence of authentic music experiences.

Music activity in Dewey-influenced schools was drawn from daily life and student activity in other curricular areas. Students composed song lyrics and wrote

melodies based on their individual experiences, and music was "knit into the daily activities" (Shiraishi, 1995, p. 6). Music was included along with reading and science as subjects that promoted communication and the application of scientific methods. Unlike in modern arts integration programs that often promote songs about content from other subject areas, or the use of music in curricular areas outside music to teach non-music content, music served the purpose of providing students an avenue to experience high levels of communication, self-expression, and the "highest level of refinement" (p. 13).

James Mursell promoted Dewey's ideas in the field of music education. Being a musician and a music teacher, Mursell had a broad understanding of music pedagogy, and wrote texts on music education and psychology that became standards in the field during the first half of the 20th century. His child-centered approach to teaching music, focusing on developing musicality and individuality, was viewed as "guided growth requiring the differentiation and integration of information into a meaningful context" (Kelly, 2012, p. 15).

Mursell wrote of the growth mindset, and how it could be beneficial for the field of music education. He connected music with other subjects through the belief that to become a better musician, one must also become a better person. Through personal development, one becomes a more musical person, and therefore has a greater appreciation and capacity for artistic expression (Mursell, 1948). He also drew clear and precise connections between music and language arts, particularly through literature. He called a Beethoven symphony a piece of "musical

architecture" (p. 46), drew parallels between the writings of Keats and Shakespeare to musical structure, and called music "wordless poetry" (p. 48).

Winslow drew on Dewey's writings to advise art teachers on the necessity of integrating the arts across the curriculum, and constructed lists of suggested topics for art integration at the elementary school level. With such headings as, "Art in relation to conservation of natural resources," or, "Art in relation to occupations" (Winslow, 1939, pp. 114–115), the list reflects the progressive educational objective of connecting schoolwork to everyday life. According to Winslow, the purpose of writing a book on art integration was to "meet the requirements of an advancing culture, one of which the conservation of human resources must play an increasingly important role" (1939, p. vii).

Societal and Political Change in Education

With the launch of Sputnik in 1957, progressive education gave way to a back to basics education movement. Comparisons between American education and European education resulted in a renewed focus on math and science, which had a detrimental effect on arts programs (Mark & Gary, 1992). Progressive education ideas were muted in favor of a stronger emphasis on a separated, subject-specific education (Kridel, 2010). Arts classes were viewed as non-essential to national security, and were relegated to a diminished role in the general school curriculum. As a result of losing the space race to the Russians, the general public lost trust in the current system's ability to produce capable students. A rise in standardized testing also shifted attention away from a student-centered teaching approach to a

more teacher-centered approach (Kelly, 2012).

As a result of an "unbalanced curriculum" (Mark & Gary, 1992, p. 332), an effort to offer arts opportunities to all students arose in the 1960s through the JDR 3rd Fund, an institution created by John D. Rockefeller to fund projects that integrated the arts into the core school curriculum. The primary goal of the fund was to find and enhance a model for "making all the arts integral to the general, or basic, education of all children in entire schools and school systems" (Fowler, 1980, p. xi). Between 1968 and 1979, twenty-eight programs were funded, and each program was evaluated based on criteria such as the attitudes of participants, engagement levels of students, and involvement of school staff. While test scores were not considered in any of the project evaluations, it was seen as a problem that none of the projects produced "hard data" (p. 197) that would convince a skeptical teacher or administrator to buy in to arts integration. In the project's rationale for arts in education, integration of the arts was justified through progressive ideas of participation in the arts as a means of connecting with culture, aesthetics and social development, and the use of the arts as "tools for everyday living" (p. 235).

During the 1960s, Dewey's progressive education ideas reemerged in music education as a call to emphasize creativity and exploration in music classrooms. Inspired by the National Science Foundation, The Yale Seminar on Music Education, held in 1963, issued a report that recognized the inability of music education to develop creativity and individuality in its students (Keene, 1982). Believing that there was a link between scientific achievement and study of music and the arts, a

panel appointed by President John F. Kennedy expressed concern over the lack of emphasis on the arts in the public school curriculum (Mark & Gary, 1992).

The Tanglewood Symposium in 1967 brought together voices from a multitude of fields and backgrounds to make recommendations on the direction of music education. Faced with a swiftly changing society that devalued the arts in favor of science and math courses, The Tanglewood Declaration sought to set a course for music education that included suggestions on the place of music instruction in general education, including music instruction to address social problems, and on the need for expansion of music courses to include music history and literature (Mark & Gary, 1992). Only a few years before Tanglewood, music education "fit very well into the Progressive Education philosophy" (Mark, 1981, p. 104).

In the late 1970s and early 1980s, American societal and political issues strongly affected the availability and impact of fine arts and arts in education programs in American schools. Declining economic conditions in the late 1970s resulted in program cuts, and programs that survived were scaled back. A fragmentation of music education teaching into competing approaches and methodologies also contributed to a lack of a unified vision and voice for music education teachers (Mark, 1981).

In 1983, The National Council for Excellence released *A Nation at Risk,* which sent a clarion call to the country that American education was in decline, and drastic measures should be taken to fix a broken system. The report was filled with

statistics related to student achievement on standardized tests, school dropout rates, and declines in English and math test scores. Schools providing a "curricular smorgasbord," and "excessive student choice" (United States, 1983, p. 21) were presented as having a negative impact on student learning. Among the recommendations made by the committee was a required high school curricular structure that consisted of multiple years of English, math and science study, with two years of foreign language study for college-bound students. The arts are mentioned in the report as a subject area that supports the "new basic" subjects of English, math, and science, and should be included to "advance students' personal, educational, and occupational goals" (p. 26).

The resulting focus on English and math, along with the sciences, greatly impacted school arts programs. The narrowing of the school curriculum was intensified with the implementation of No Child Left Behind (NCLB) in 2001. Schools that did not show adequate yearly progress (AYP) on test scores were targeted for restructuring or closing. As a result, many teachers in core subjects began teaching to the test (McNeil, 2000), which deemphasized subjects such as music and visual art (Yeh, 2005). At the same time, federal grant programs that funded arts in education and arts integration projects, such as Arts in Education Model Development and Dissemination (AEMDD) and Professional Development for Arts Educators (PDAE), began requiring grantees to evaluate projects based on student performance on math and language arts standardized tests.

Dewey and Arts Integration

Despite the emphasis on test scores in all curricular areas, Dewey's idea of a curriculum without boundaries is invoked as a starting point for current arts integration programs (Bresler, 2002; Burnaford et al., 2001; Freyberger, 1985; Wiggins, 2001;). While progressive education was diminished in the 1950s by opposing ideas on how and by whom the arts should be taught, the notion that the arts should not be taught in isolation has survived through shifts in educational philosophy. Even in the midst of the current testing and standards movement, the integration of the arts into the general curriculum is taking place in schools across the country, albeit in a manner that does not always align with its progressive roots.

Freyberger (1985) and Wiggins (2001) discussed the movement away from Dewey's original thoughts on the integration of school curricula, which has led to arts integration becoming a "contested and confusing term" (Mishook & Kornhaber, 2006). Wiggins stated the current definition of arts integration is not true to the original intent of Dewey, and few reports exist that examine how arts integrated teaching affects student learning (2001). Of the reports that do exist, the use of student performance data on state mandated tests is a common manner in which program success is determined. A prime example exists in the Chicago Arts Partnership in Education (CAPE), an effort undertaken in the 1990s to provide a more structured, extensive arts program to children in Chicago Public Schools. CAPE utilized arts integration practices that focused on inquiry-based learning, the integration of the arts in promoting creativity, collaboration, and critical thinking

skills, and "connecting the self to the larger community" (Burnaford et al., 2001, p. 20), a concept taken directly from Dewey's philosophy. Along with other measures, the report offers evidence of success in arts integration programs through analysis of test scores.

The majority of modern arts integration programs rely on some link to standardized test scores as proof that the programs are effective. The Tennessee *Value Plus* program, a U.S. Department of Education funded grant program operating in six schools across east and central Tennessee, reported in its end of project report on the effectiveness of the program training through increases in standardized math, reading, science, and social studies test scores, and decreases in achievement gaps between treatment and control groups (Tennessee Arts Commission, 2011). The Mississippi Arts Commission *Whole School Initiative* program published a 2011 executive summary that based its analysis of program success on standardized test scores for 4th and 5th grade students (Phillips, Harper, Lee, & Boone, 2011). A similar program funded by the Tennessee Arts Commission began in 2006 in east Tennessee. Programs in Chicago, Phoenix, Oklahoma, and Arkansas also heavily relied on standardized test performance to gauge program success.

In October 2009, Shelby County Schools in suburban Memphis, Tennessee, was awarded a Professional Development for Arts Educators (PDAE) grant from the U.S. Department of Education. During the four-year program, over 500 teachers 16 schools were trained to integrate the arts into the teaching of language arts, math, science, and social studies content. As part of the requirements of the U.S.

Department of Education, student performance on the Tennessee Comprehensive Assessment Program (TCAP) tests, as well as teacher performance on the Tennessee Value Added Assessment System (TVAAS), were examined. However, the results were not included in the project final report because an effort was made to present a more qualitative, non-test score dependent picture of an arts in education training program (Lee, 2012).

The Shelby County Schools evaluation model departed from other notable arts integration evaluation models in Chicago, Phoenix, and Tennessee in that it did not rely on student test performance in its end of project reporting. Throughout the project, teachers were observed before receiving arts integration training, or after an initial training session, and then again after receiving at least one year of professional development. In the pre and post teacher classroom observations, evaluators used the Arts Infusion Measure, a 24-item instrument written to measure the impact and depth of arts infusion lessons as they were being taught in the classroom (Lee, 2012).

Teacher Evaluation in Tennessee

In 2010, the State of Tennessee was awarded a Race to the Top grant by the U.S. Department of Education, and with Delaware, became one of the first states in the country to receive a grant through this program. As part of the $500 million award, Tennessee agreed to a massive overhaul of its teacher evaluation system. Beginning in the 2010–11 school year, all teachers were required to meet new evaluation requirements that included more frequent classroom observations, input

by parents and students on teacher performance, and an increased measure of teacher effectiveness through the use of TVAAS data (State of Tennessee, 2010), a set of student test scores and assessment performance projections based on longitudinal analysis that "measures student growth, not whether the student is proficient on the state assessment" (Tennessee Department of Education, 2015). The new evaluation system, known as the Tennessee Educator Acceleration Model (TEAM), was used for all teachers, including those teaching in non-tested subjects, such as music and other arts courses. For fine arts teachers, TEAM scores were drawn from in-class teacher evaluations as measured against rubrics for instruction, planning, and classroom environment, professionalism as measured against a rubric, and a value-added measure drawn from school wide test scores.

The Tennessee Value Added Assessment System, developed in Tennessee in the 1990s, uses a "statistical mixed-model methodology to enable a multivariate, longitudinal analysis of student achievement data" (Wright, Horn, & Sanders, 1997, p. 58). At the beginning of each school, students in grades 3–8 receive a predicted score on the state TCAP test, and performance on the test is measured against the predicted score. The scores are reported on a 1 to 5 scale, with 5 representing the highest level of growth. Currently, TVAAS scores account for, depending on the grade level and subject taught, 10% to 35% of a general education teacher's total evaluation score.

Teachers also select an achievement measure that constitutes 15% of the total TEAM evaluation score. The source of the achievement score is selected by

each teacher, and may be drawn from one of several sources, including TCAP scores, school benchmark screening tests, or end of course grades for teachers in upper grades. Therefore, it is possible for test scores to make up 50% of a teacher's total TEAM evaluation score. The remaining percentage of the TEAM evaluation score is taken from classroom observations conducted by a school evaluator trained and certified in TEAM evaluation techniques, and depending on the teacher's grade and subject area, the evaluator's score can make up 50–70% of the total evaluation score.

Soon after the implementation of the TEAM evaluation system, a group of fine arts teachers across Tennessee began collaborating to construct an alternative system of measuring teacher effectiveness that did not rely on TVAAS scores or test scores. In the spring of 2012, the Tennessee Fine Arts Student Growth Measures (TFASGM) system was piloted in Memphis City Schools. Music, visual art, theatre, and dance teachers collected evidence of student learning and growth through videos, audio files, pictures of student visual art work and theatre projects, and examples of written work. At the end of the yearlong pilot, results were submitted to the Tennessee State Board of Education, and in 2012, the TFASGM system was approved as an alternate measure of teacher effectiveness for fine arts teachers (Palmarini, 2014).

Over 100 years after Dewey's vision of a curriculum without borders came into practice in his laboratory school, several social and political trends, including the launching of Sputnik, the publication of *A Nation at Risk,* and the implementation

of No Child Left Behind legislation, have had a deep and lasing impact on American public school curriculum and teacher evaluation systems. While conditions have not always been ideal for an integrated curriculum, programs have flourished throughout these shifts in educational practice. Along with organizations such as the John F. Kennedy Center for the Performing Arts, the Lincoln Center for the Performing Arts, and a multitude of foundations and arts agencies, the U.S. Department of Education promotes the establishment of arts integration programs through grant-funded initiatives. An example of how many integrated programs are currently evaluated can be found in the U.S. Department of Education President's Council on the Arts and Humanities Turnaround Arts Initiative program.

Beginning in 2011, eight schools across the United States, all of which were deemed high poverty schools, began participating in the Turnaround Arts Initiative program, a federal initiative to use the arts to reverse declining achievement trends in some of the poorest, lowest-performing schools in the nation (Stoelinga, Silk, Reddy, & Rahman, 2015). At the outset, the plan was for replication of the program, and as such, a comprehensive evaluation program was conducted in all eight schools. The results of the evaluation were published in January 2015, and along with data collected from classroom observations and surveys, student achievement data were also prominently featured. Despite admission that it is "challenging to isolate the effects of the arts as a lever" (Stoelinga et al., 2015, p. 45) in increasing student achievement on standardized tests, increases in math and language arts test scores were reported as compared to schools not participating in the program. An

interesting side note to the discussion on student achievement numbers is found in the report that alludes to the notion that a measure of data over time may be another manner in which program implementation may be evaluated:

> Should we consider change over time in the strength of the implementation of the arts, rather than using a single point in time when comparing trends in implementation to trends in school improvement indicators? (Stoelinga et al., 2015, p. 57)

The implementation of the TEAM teacher evaluation system in Tennessee public schools spurred fine arts teachers to formulate an evaluation plan that focused on data collected from daily practice to typify student growth and teacher effectiveness. Instead of accepting a school wide standardized test score taken at a single point in time, the teachers constructed a plan that used student work to measure growth in fine arts classrooms over a period of time. According to Dru Davison, Fine Arts Coordinator for Memphis City Schools and chair of the statewide committee that constructed the Tennessee fine arts portfolio system, the plan was to use student growth to document teacher effectiveness:

> Creating new tests was an impossible task for us. So instead of using a standard test, the committee recommended building a portfolio through purposeful sampling. We are not asking teachers to teach differently, assuming that they're using standards-based teaching. We are just asking them to document how the students are growing. (as cited in Powers, 2012, p. 39)

The emphasis on growth in the Tennessee portfolio plan harkens back to the early days of the American progressive education movement, when Mursell's ideas on musical growth were placed at the center of his educational efforts. As he said in his treatise on the subject of growth in music education, "the best way to get fruit from a tree is to pay particular attention to the growth. There you have the whole idea of developmental teaching" (Mursell, 1948, p. 20). Dewey's idea on growth, a definite influence on Mursell's educational philosophy, are often confused and misunderstood by critics. According to Hildreth (2011), Dewey was purposefully vague in determining absolute ends for education. Due to the influence of No Child Left Behind, definitions of success and achievement in education have narrowed. His view is that it is time to revisit Dewey's ideas, and place the business of measuring and defining growth back into the hands of those closest to the classroom:

> Rather than impose specific curricular aims, Dewey provides evaluative criteria so that citizens themselves can assess the educational and democratic value of any practice, curricula or institution. This stance is at the heart of Dewey's radicalism and antifoundationalism; it is also the source of considerable critique. Many commentators are not comfortable with his radical belief that "ordinary" educational actors (students, parents, teachers, administrators) have the capacity to determine their own ends. The political implications of this position are profound. It pushes away from expert driven models of educational authority towards empirically grounded deliberative

processes that might guide educational practice and policy (Hildreth, 2011, p. 29).

As previously noted, Dewey's name is often invoked in discussions of the beginnings of arts integration or interdisciplinary learning. Lacking in these discussions is any focus regarding Dewey's thoughts on growth, and how it should be determined. The resistance shown by fine arts teachers in Tennessee to accepting growth and effectiveness evaluation numbers based on standardized test scores is akin to Hildreth's interpretation of Dewey's ideas on growth. A group of ordinary educational actors set out to devise a plan to measure growth and teacher effectiveness that did not rely on outside measures.

No Child Left Behind legislation and the emphasis on standardized testing, which operate in opposition to Dewey's thoughts on growth and who should define it, have ironically influenced arts integration program evaluation. While many arts integration program evaluation reports do feature qualitative data related to student engagement, it is often the attribution of increased test scores to involvement in arts activities that receives the spotlight. Similar to the movement away from test scores made by Tennessee fine arts teachers, the arts integration community needs to consider measuring program success in a different way. What if ordinary educational actors determined what growth and effectiveness look like in arts integrated classrooms?

Problem Statement and Purpose of the Study

The discussion on academic gains as prompted and produced by arts instruction traces its recent resurgence to inaccurate interpretations of Rauscher's (1993) study on spatial task performance. Due to the use of Mozart's music in the study, the term *The Mozart Effect* was invented to give name to the concept that music makes listeners smarter. Rauscher (1999) responded to the assertion that her original study determined that listening to music enhances intelligence by stating the study created several misconceptions, and that the effect gained from listening to Mozart was limited to "spatial-temporal tasks involving mental imagery and temporal ordering" (p. 827).

Along with passively listening to music, similar claims are attributed to the structured study of music and other arts subjects. Despite the "fundamentally divergent" (Winner & Cooper, 2000, p. 63) nature of the arts, the impact of learning through the arts is often linked to increases in test scores (Burnaford et al., 2001; Corbett, Wilson & Morse, 2002; Lormier, 2009; Luftig, 2000). Catterall cautioned against causational student achievement claims, and stated, "results do not support a cause-and-effect relationship between arts involvement, on the one hand, and academic or civic achievements on the other" (2012, p. 11). The claim that involvement in the arts produces academic gains on standardized tests is far from settled (Smithrim & Upitis, 2005; Winner & Cooper, 2000).

Therefore, a system of measuring student success and teacher effectiveness in arts integrated classrooms is needed that shifts away from test score analysis.

Accounting for student growth in the arts and corresponding non-arts subjects through an analysis of student work has the potential to answer the problem of the use of test scores for evidence of academic success. Teacher effectiveness data may also be garnered from such a model, as a structured portfolio system can exhibit teacher effect on student learning through measures of growth in student skills and concepts over time.

The purpose of this study is to establish and evaluate a model for measuring student growth and teacher effectiveness in arts integrated classrooms through implementation of the Tennessee Fine Arts Student Growth Measure system. Created in 2011, the TFASGM is a state-approved measure of student growth in arts classes that replaces the 35% of total arts teacher evaluation scores previously taken from school-wide test data. TFASGM is a portfolio-based system that requires teachers to compile collections of student work that show growth from one point to another within a school year. All collections of student work are uploaded to a website, and are self-scored by the teacher, as well as by a peer reviewer. The following questions are posed for further study and examination:

1. Is there a significant difference in student growth in classrooms where teachers receive arts integration training versus those classrooms where teachers receive no training?
2. How can the TFASGM be effectively utilized to measure student growth in arts integrated classrooms and provide valuable teacher effectiveness data?

3. How do teachers, using data from the TFASGM, examine and reflect upon their teaching practice and make adjustments to instruction?

Conclusion

The concept of integrating the arts into subjects such as language arts or math is not new. Throughout the 20th century and into the 21st century, fine arts teachers, subject area teachers, school administrators, district school officials, and other education stakeholders have debated how to integrate the arts into non-art subjects, and whether they should be integrated at all. Freyberger (1985) outlined the potential negative impact on art programs produced by arts integration. Articles from the 1940s referencing the work of John Dewey also presented the potential downside of arts integration.

Despite the concerns expressed in professional arts journals, arts integration continues to gain popularity as a method of improving school performance and providing students with engaging, active educational activities. Across the United States, several large-scale programs, such as the Kennedy Center Changing Education Through the Arts program, the Chicago Arts Partnership in Education, and the Opening Minds Through the Arts program in the Tucson, Arizona area, continue to provide schools and other educational entities with curriculum, training, support, and financial support in the building and maintenance of arts integration programs.

John Dewey's views on education and learning form the basis of the modern arts integration movement. His ideas on the correlation of the school curriculum

and the consideration of the social aspects of learning continue to influence arts integration theorists and educators. Dewey wrote and spoke at length about the ends of education, arguing that education was not training for life, but life itself (1916). Assessment rose from the process of learning, and should be embedded in the learning process itself instead of taking place at the end of instruction (Shepard, 2000).

In contrast to Dewey's views on assessment, many state teacher evaluation models use scores from standardized tests administered at the end of each academic year to calculate teacher effectiveness scores. In Tennessee, test scores can constitute as much as 50 percent of a teacher's total evaluation score (Tennessee Department of Education, 2015). When the Tennessee Educator Acceleration Model (TEAM) teacher evaluation system was enacted in 2010, a system that uses school wide test scores to gauge teacher effectiveness levels, the evaluation of teachers in non-tested grades and subjects with the test scores of students not enrolled in fine arts classes presented a problem that needed a quick solution.

In 2010, a group of teachers, administrators, and other stakeholders in the former Memphis City Schools district in Memphis, Tennessee, created and piloted a fine arts teacher portfolio evaluation model now known as the Tennessee Fine Arts Student Growth Measure (TFASGM), a portfolio-based teacher evaluation model that uses pre and post examples of student classroom work to determine student growth and teacher effectiveness. Soon after it was piloted, the system was approved by the Tennessee Department of Education as an alternate measure of

student growth and teacher effectiveness for fine arts teachers (Tennessee Department of Education, 2013). For the first time, teachers in systems adopting the model had access to a teacher effectiveness and student growth measure that did not use school wide standardized test scores.

In the efforts to conduct an arts integration study that does not primarily use test scores to measure student achievement and teacher impact on student learning, the TFASGM system represents an opportunity to apply a state-approved measure of fine arts growth and teacher effectiveness in arts integrated classrooms that measures student growth and teacher effectiveness through the collection and scoring of student classroom work over a defined period of time. This study evolved out of questions directly related to arts integration student growth and teacher effectiveness, as well as the use of a state-approved fine arts growth measure to gauge student growth and teacher effectiveness in arts integrated classrooms

It is intended that the results of this study will inform school administrators, school district leadership, education policymakers, the greater arts integration community, and the greater educational community, on the viability of the application of a fine arts student growth and teacher effectiveness measure in arts integrated classrooms. The results will also provide valuable data drawn from the experiences of teachers as they receive arts integration professional development, document student learning and growth through the use of the TFASGM system, and reflect on the teaching of arts integrated lessons and study units.

Chapter Two: Arts Integration and Measuring Student Growth

In this chapter, I present models of arts integration from Bresler (1995, 2001) and Wiggins (2001) to form a basis for contrast with the use of test scores as evidence of professional development and student performance success. Current models of teacher evaluation, which utilize growth measures based on test scores, are connected to arts integration programs that use similar reporting strategies. Finally, the Tennessee Fine Arts Student Growth Measure (TFASGM) system, a model currently used in Tennessee to evaluate student growth and teacher effectiveness in fine arts classrooms, is examined and presented as a viable alternative to the evaluation of arts integration teaching and learning through the analysis of scores on standardized tests

Arts Integration Models and Approaches

The historical changes in the role and function of arts integration in U.S. schools have not gone unnoticed, as researchers are now considering the impact of integrated learning on standardized test scores, student engagement, attendance rates, and teacher professional practice. Arts integration as a teaching strategy is also a topic of recent study. Bresler (1995) conducted a three-year study of arts integration programs and outlined four levels of arts integration practice:

1. The Subservient Approach
2. The Co-Equal, Cognitive Integration Style
3. The Affective Style
4. The Social Integration Style

The arts were found to be subservient to other subjects, such as language arts or math, when they were used to "spice up" (p. 36) instruction. This style was most prevalent in Bresler's studies of arts integration programs, and found to be the least impactful in practice. The lack of impact is due to the low level of student cognition required to complete a task, such as singing a song about planets to aid in memorizing their names. The art form functions only as a vehicle to deliver content in another curricular area, and the critical thinking and creativity required in the art form is not considered. Bresler referred to this as a unidirectional integration because music and the other arts serve other curricular areas in "contents, pedagogies, and structures" (2001, p. 7).

The co-equal, cognitive integration style, the most desirable and most often advocated style in scholarly literature, was the least commonly found, and only observed by Bresler in gifted programs. The requirement of "discipline-specific knowledge or skills" (1995, p. 36) on the part of the teacher, as well as that of collaboration and cooperation between arts and non-arts teachers, resulted in its rarity. Unlike in the subservient approach, Bresler observed teachers that practice co-equal integration often collaborated with arts specialists, and possessed an extensive knowledge of music or other art forms. Students were also engaged in cognitive activities that required higher-order thinking skills, such as synthesis, evaluation, and analysis.

The affective style was typified by two distinct uses of the arts: to change mood and to spark creativity. In the classroom, music was used as background

noise, or to set a mood in the classroom or other areas of the school. This application of music did not require students to be active participants in the artistic process, and more closely resembled the subservient use of music to passively deliver content in other subject areas. The creative approach did require active participation, as students were observed creating visual art pieces and dances as they listened and responded to music. Teachers using music in this manner saw its potential to allow students to respond through the arts in unique, individual ways. This style was most often found in grades K–2, where students are under less pressure to perform on standardized tests (Bresler, 1995).

The social integration style complimented the school curriculum through performances at parent meetings, holiday programs, or other school functions. Principals in schools participating in the study valued the role of music to serve as a marketing tool to boost parent attendance at meetings. Music and other arts were presented for their ability to catch attention, not to educate an audience or to attend to aesthetic standards (Bresler, 1995).

Bresler (1995) cautioned against viewing each of her categorizations of arts integration in isolation, as it is possible to find two, three, or even all four theoretical constructs in practice in the same school. However, the styles are distinct, and while various approaches may be found in one location, the co-equal, cognitive style requires the most extensive changes to curriculum, pedagogy, and philosophy. The arts are integrated into the curriculum to the extent that the arts are valued in the school.

Wiggins (2001) examined Bresler's views on arts integration practice and found confusing terms such as *metadisciplinary*, which means comparing practices within a particular discipline, and *transdisciplinary*, which means examining a concept as it appears in political and physical discourse (Wiggins, 2001). The failure of Bresler to address arts and non-arts curricular goals resulted in an analysis where "students are seen as producers or performers - not as learners" (Wiggins, 2001, p. 42). Wiggins's five-level model of arts integration connections is somewhat like Bresler's, although distinctions are drawn between the two approaches:

1. Teaching tool connections
2. Topic connections
3. Thematic or content connection
4. Conceptual connection
5. Process connections

In contrast to levels 1–3, which are similar to Bresler's subservient and affective approaches, levels 4 and 5 are framed as "our vision of what arts integration should be" (p. 42), and are more directly related to the learner's thought processes, and the ability to make connections between arts and non arts subjects.

Teaching tool connections are similar to Bresler's subservient approach in that the arts are used to deliver content in other curricular areas, such as when students sing the alphabet. When teaching tool connections are made, one subject is clearly less important than the other. While the arts are often subservient to other subjects when used as teaching tools, it is possible for arts teachers to create lessons

and activities in which subjects such as math or science become subservient to music.

Topic connections occur when one curricular area is used in another for topic enhancement. An example of a topic connection is students in a history class reading Beethoven's Heiligenstadt Testament. While the letter is a historic document, reading the letter alone does not enlighten students to the qualities of Beethoven's music. However, if the letter is introduced with key information on Beethoven, his compositions, and stylistic characteristics of his music, a stronger, balanced connection is made between historical and musical objectives.

Thematic or concept-based connections center on concepts or themes taught across the curriculum, and are often taught as thematic units. Motivation for teaching thematic units, which have the potential to address goals in multiple curricular areas, range from increasing student interest to making substantial links between two or more subject areas. Wiggins cautioned against the tendency to value the mode of content delivery over the content itself: "We need to take care not to confuse the substance of a content area with the packaging in which it is presented" (2001, p. 42).

Conceptual connections occur when students use understanding in one discipline to solve problems in another. The focus is on the concept, such as in a study across curricular areas on conflict and resolution (2001). This is an example of a concept that is central to the study of multiple subject areas, such as music, literature, and theatre arts.

Process connections focus on how students engage with subject matter, such as through sequencing, visualizing, or reflecting. These skills are crucial to study in any curricular area, and easily cross-curricular boundaries. The process of student learning becomes paramount, and understandings in one area are enhanced and grown in other areas (2001). Interestingly, process-based connections are prominently featured in the National Coalition for Core Arts Standards, the revised versions of national standards for music, visual arts, theatre, dance, and media arts.

Levels 4 and 5 represent a shift away from teacher preparation and actions to the thought processes and actions of the student. These levels align with the thinking of such early 20th century progressives such as Leon Winslow and Viktor Lowenfeld, who saw true integration as not occurring at the curricular level, but within the mind of the student. Correlation occurred between subject areas; integration occurred "within the individual" (Freyberger, 1985), and grew "out of the life of he child" (Winslow, 1939, p 33).

Wiggins stated the profession must be clear about the "theoretical underpinnings" (2001, p. 41) of arts integration, as there are multiple theoretical arts integration models (Bresler, 1995; Fogarty, 1991; Gullatt, 2008; Snyder, 1996; Wiggins, 2001). The Kennedy Center and Lincoln Center, two of the leading proponents of arts integration training and professional development, each promote models that draw on different philosophies of integration. The Kennedy Center model is built on a definition that promotes constructivism and the demonstration of understanding though the arts (see Appendix J), and the Lincoln center model is

built on a list of learning capacities developed in collaboration with Maxine Greene (Denaway, 2013). State arts commissions in Tennessee, Mississippi, and Arizona, along with other state commissions and educational institutions, promote their own models of integration, drawing on influences from different sources. Metropolitan arts agencies, such as Sierra Arts in Reno, Nevada, and the Cathedral Arts Project in Jacksonville, Florida, manage integration programs that partner with local arts organizations, teaching artists, and area public schools. There is no singular philosophy or approach to arts integration training or project implementation (Wiggins, 2001; Mishook & Kornhaber, 2006).

Many definitions of the term *arts integration* exist (Mishook & Kornhaber, 2006). An examination of 13 arts integration projects revealed "different points of emphasis" (Burnaford, Brown, Doherty, & McLaughlin, 2007) in each project definition. There is also no singular name for the teaching technique, and disagreement exists on whether it should be called a technique at all (Wiggins, 2001). In scholarly literature, arts integration is referred to as *arts infusion* (Luftig, 2000*), learning in and through the arts* (Burton, Horowitz, & Abeles, 2000), *curriculum integration* (Krug & Cohen-Evron, 2000), *arts in education* (McGowan, 1988), and *interdisciplinary curriculum* (Wiggins, 2001).

Along with the confusion surrounding terms, definitions, and models is the reasoning behind arts integration program implementation and evaluation. Rather than viewing the arts as possessing intrinsic value, the arts as integrated into the curriculum are often seen as a "vehicle for delivering content" (cited in Heitin,

2014). Over the past 20 years, the notion that involvement in the arts produces gains on standardized tests has taken hold in the arts community, as teachers and administrators advocate for equitable instructional time, and for recognition of the arts as a core curricular content area. Mehr, Brady, Katz, and Spelke (2013) recently studied the non-musical cognitive benefits produced by music study, and the findings "suggest caution in interpreting the positive findings from past studies of cognitive effects of music instruction."

The Tennessee Fine Arts Student Growth Measures System

Despite the fact that Tennessee developed a teacher evaluation system based on achievement and growth as measured by student test scores, only about 30% of teachers teach in areas that require yearly standardized testing. In response to new teacher evaluation requirements, and to provide a basis for teacher merit pay, Hillsborough County Public Schools in Florida developed tests for all subject areas, including arts subjects (Banchero, 2012). The State of North Carolina also developed similar tests for all subjects, although they have been abandoned due largely to parent complaints. Wanting to avoid testing for arts areas, fine arts teachers in Tennessee developed a new plan for measuring student growth and teacher effectiveness known as the Tennessee Fine Arts Student Growth Measures System.

The TFASGM is a highly structured, systematic means of measuring student growth and teacher effectiveness without relying on standardized test scores. To understand how the system works, it is necessary to know and understand the various components of the system, and how they work together to provide a view

into student growth. At the heart of the system are the four portfolio collections required of all participating teachers. A *portfolio collection* is made up of student work that show growth between two points in time based on criteria selected by the teacher. To show growth, a *pre-test* or pre-assignment is administered that sets a baseline for student knowledge and understanding of a particular arts skill or standard. The pre-test may be a written test, a recorded or photographed student performance task, or a preliminary sketch, outline, or student writing example that shows a present level of understanding. An example of a pre-test is a video of a high school band performing a new piece of music for the first time, or after a minimal amount of practice.

After the pre-test is administered, the teacher then instructs students in the self-selected skill or standard. The standard is selected from a scoring guide that is aligned to state and national arts standards. During the time after the pre-test, regular instruction on the selected skill or standard takes place. When the teacher is satisfied that a significant amount of growth has taken place, a *post- test* is administered, one again in a form chosen by the teacher.

Fine arts teachers complete four collections that consist of pre and post student growth data. Along with this data, the teacher may also submit a *portfolio collection template* form that provides information on how pre and post data were collected, specifics on class size and teaching conditions, and information how the amount of time taken between pre and post test administration. Each collection must be either a *Type I* or *Type II* collection. A Type I collection is taken with an

entire group of students, as in the case of measuring the growth of a large performing group, where growth is not differentiated. A Type II collection accesses growth data from "defined populations of learners" (Palmarini, 2014, p. 43) to typify growth. The populations are represented by at least one emerging, proficient, and advanced student. At least two of the four total collections must be Type II collections (TFASGM Guide, 2014).

The Tennessee *Portfolio Scoring Guide* provides the context and scoring mechanism by which teachers select the skill or standard to be taught, and how the level of growth is determined once the post-test is administered. The guide contains scoring rubrics for music, visual art, dance, and theatre, along with guidance on portfolio construction and processes for scoring growth. The guide gives teachers clear guidance on how to recognize and score growth:

> 1—Students *did not* demonstrate growth of the standards-based objectives specified by the teacher OR the collection did not include two points in time OR the student work was not labeled and could not be compared OR the standards- based objectives stated were not consistent with the evidence shown and could not be reasonably scored.
>
> 2—Students demonstrated, on average, *less than one level* of growth of the standards-based objectives specified by the teacher OR the students made some positive growth, but not in the objectives specified by the teacher.

> 3—Students demonstrated, on average, *one level* of growth of the standards-based objectives specified by the teacher when considering the following: time span, student grade level, complexity of task, and extenuating circumstances, etc.
>
> 4—Students demonstrated, on average, *approximately two levels* of student growth of the standards-based objectives specified by the teacher when considering any of the following: time span, student grade level, complexity of task, extenuating circumstances, etc.
>
> 5—Students demonstrated *more than two levels* of growth OR *approximately two levels* of growth of the standards-based objectives specified by the teacher when considering any of the following: time span, student grade level, complexity of task, extenuating circumstances, etc. AND demonstration of *some* of the following: meta- cognitive processes; knowledge and skills; risk taking, imagination and voice; and a range of abilities with technique, problem solving and ideation (TFASGM Guide, 2014, p. 7).

Using the scoring guide, on a 1 to 5 scale, the teacher chooses the level of growth present between the pre-test and post-test data, and scores each portfolio collection. The scores and evidence are uploaded to a secure website known as GLADiS. The site allows for all portfolio components, including videos, audio files, photos, and other documents, to be uploaded and categorized by portfolio collection number and type (Type I or Type II). Teachers may also enter information about

course loads, teaching conditions, and specific information about how and when evidence was collected and scored.

The *self-score* is an important part of the process, as this score is compared to a *peer reviewer* score at a later time. The peer reviewer is a fine arts teacher trained in the portfolio scoring process, and all peer reviewers are teachers working in the same arts area and at the same education level as the teacher submitting the portfolio collections. Once a teacher completes and submits a portfolio in GLADiS, it is assigned to a peer reviewer, who is able to review all evidence and other information entered by the teacher. Without seeing the teacher's self-scores, the peer reviewer also uses the portfolio scoring guide and scores each collection on a 1 to 5 scale. After the scoring process ends, the teacher self scores are compared to the peer reviewer scores, and if any score is more than 1 point apart, the portfolio is sent to another peer reviewer for scoring. The score of the peer reviewer stands as the final portfolio score.

The Tennessee system is now implemented in other states, most notably in North Carolina, where it is used for all non-tested subject areas. Several school systems in Tennessee provide a portfolio evaluation option for physical education teachers, as well as for general education teachers in primary grades. Since its inception, the Tennessee system has undergone several changes, and these changes have been primarily based on teacher input. Former Tennessee Commissioner of Education Kevin Huffman said, "No system is perfect, but the question is whether the one we have now is better and more fair than the previous one. And the answer

is, indisputably, yes" (Banchero, 2012). U.S. Secretary of Education Arne Duncan made similar remarks in a 2012 speech at Harvard University on misguided education reform, stating that, "We shouldn't be asking is this a perfect solution? We should be asking is this a much-better solution? Does it help us challenge the status quo and accelerate student achievement?" (U.S. Department of Education, 2012). Duncan has spoken several times about Tennessee's fine arts portfolio system, stating that teachers in the city of Memphis and across the state of Tennessee have worked together to solve the problem of being evaluated based on "school wide performance in math and English" (U.S. Department of Education, 2012).

Conclusion

This chapter outlined the approaches to arts integration as documented by Bresler and Wiggins, and how these models form the basis of the study on student growth in arts integrated classrooms. The Wiggins five-level model of interdisciplinary learning coincides with the five levels of growth as defined in the Tennessee Fine Arts Student Growth Measures system. The TFASGM system, a state-approved method for measuring student growth in fine arts classrooms, requires teachers to collect pre and post student work data to show growth in arts skills and concepts. This method of evaluating teacher performance and student learning contrasts with the Tennessee Value Added Assessment System, a method of measuring student growth through the use of test scores and predicted student performance levels. The TFASGM system and Wiggins' five-level learning model,

along with Bresler's research in arts integrated classrooms, form the basis of the study on the measurement of student growth in arts integrated classrooms.

Chapter Three: Methodology

Based on a literature review of Dewey's educational philosophy, the current state of arts integration practice and program assessment, and the availability of alternate measures of arts integration student growth and teacher practice, I used Creswell's Concurrent Embedded research design (2009) to implement the TFASGM system with control and treatment groups consisting of elementary classroom teachers. During the study, both groups received training on using the TFASGM model as they documented student growth in arts integrated lessons and study units. Control group teachers also received arts integration professional development to allow for the collection of data on the impact of arts integration professional development on teacher practice. Both groups followed the Kolb Learning Cycle (1984) to reflect on their portfolio collections and observed levels of student growth.

To measure growth in arts integrated classrooms, I implemented the TFASGM with classroom teachers integrating music into language arts content. To gauge the impact of arts integration professional development, I selected teachers to participate in the study in control and treatment groups. Teachers in both groups were taught how to use the TFASGM to measure student growth. Treatment group teachers also received arts integration professional development, including training on the Wiggins five-level model of interdisciplinary learning. Teachers completed two portfolio collections, which were made up of pre and post student work. A peer reviewer, a fellow teacher trained in the evaluation of TFASGM portfolio collections

and several years of experience as a fine arts portfolio peer reviewer, also scored the collections. Each participating teacher also kept a reflective practice journal where they wrote about their experiences with using the TFASGM.

Embedded in the TFASGM process is a system of data collection and reporting that combines quantitative and qualitative methods. The process requires teachers to document student growth through using examples of student work collected over time, self-score the work using a five-point scoring rubric, and uploaded to a secure website for scoring by a peer reviewer. Teachers were also required to reflect on their teaching and resulting student work through recording their thoughts on a reflective practice document. The scores did allow for the use of a quantitative collection component, although this method did constitute not the primary focus of this study. The richness of the data contained in the pre and post student work, teacher reflections and lesson plans, and peer reviewer comments, allowed me to provide an in depth explanation of each teacher's experience through a multiple case study research approach.

Participants and Setting

To begin the study, I recruited teachers via email and by principal recommendation at two elementary schools (see Appendix A for the study consent script) located in a small suburban school district in west Tennessee. After a two-week period, eleven teachers responded indicating their interest in participating in the study. Before any study activities began, the teachers were divided into control and treatment groups, and were informed via email that they were selected for the

study (see Appendix B for the email script form). The number of participants was limited to eleven due to the nature of the study, which required teachers to receive training, implement arts integrated study units, collect pre and post student achievement data, score and upload all pertinent student data, and participate in a reflective practice cycle, all across a three-month time period. The study also fell within the March-May state testing window, which is a particularly busy and stressful time for elementary classroom teachers. After teachers were divided into control and treatment groups, each was required to complete a pre-study survey to provide teacher demographic information, as well as background information on previous arts and arts integration experience (see Appendix C). After the pre-surveys were completed, one of the teachers decided not to participate in the study. This development left four teachers in the control group, and six teachers in the treatment group. All teachers were assigned a number, and were identified by this number throughout the course of the study. Table 1 contains number assignments for control and treatment groups, and the teaching levels and number of year of teaching experience for each participant:

Table 1

Control and Treatment Group Study Participants

Control Group Teacher #	Grade Level	Years of Experience
1	5th	8
2	K	10
3	1st	2
4	K	10
Treatment Group Teacher #	Grade Level	Years of Experience
1	K	20
2	2nd	27
3	2nd	23
4	3rd	2
5	3rd	4
6	3rd	3

After the study participants were recruited and selected, the peer reviewer was selected. The peer reviewer is a certified music teacher with significant experience in constructing and scoring portfolios in the TFASGM system. The reviewer has extensive arts integration training, and she regularly collaborates with classroom teachers to integrate language arts and math content with music content.

Research Design

Using Creswell's Concurrent Embedded research design approach (2009), a mixed methods strategy that employs concurrent collection of quantitative and qualitative data, I designed a study using the TFASGM as the central source of data collection. In this approach, there is a "primary method that guides the project and a secondary database that provides a supporting role in the procedures" (p. 214). In this study, the TFASGM served as the primary research and data collection method, and embedded in the model was a qualitative reflective practice collection method.

The portfolio scoring process produces numerical scores on a 1 to 5 scale, and these scores are used to calculate, along with other measures of teacher effectiveness and professionalism, a comprehensive teacher evaluation score. An analysis of quantitative data to determine *p* values was used to measure the impact of arts integration professional development occurring between the first and second portfolio collections. The significance of arts integration professional development on teacher practice was a motivating factor in my decision to conduct this study, and the mixing of quantitative and qualitative data prompted me to provide further insight into the raw portfolio scores through a *p* value analysis.

The TFASGM system, approved as a growth measure by the Tennessee Department of Education, and a suggested alternate growth measure by the U.S. Department of Education, was selected for this study due to its ability to adequately measure student growth and teacher effectiveness in fine arts classrooms (Banchero, 2012; Duncan, 2012; Robelen, 2013). Because the TFASGM model was created for use in fine arts classrooms, some modifications were necessary for use in this study. However, the main components of the TFASGM were kept in place, including the purposeful sampling research approach.

The addition of a reflective practice journal provided me with a necessary qualitative component to support and compliment the quantitative data collected through the portfolio scoring process. In Concurrent Embedded research, a secondary data collection method is nested in a primary method that addressed different questions. Creswell (2009) provided an example in which a quantitative

method “addresses the expected outcomes from the treatments while the quantitative data addresses processes experienced by the individuals in the treatment groups” (p. 214). This study design used the TFASGM data collection method to address the impact of arts integration professional development, as well as the viability of a portfolio-based teacher evaluation method for arts integration classrooms. The reflective practice data addressed the experiences of each participant as they participated in the three-month study.

According to the TFASGM portfolio teacher guide, the portfolios must contain information from a “representative sampling of students” (TFASGM Teacher Guide, 2014, p. 1) as determined by the following criteria:

- Contain 4 total evidence collections
- Be proportionally representative of the teacher’s course load
- Contain evidence leaning toward longer time spans
- Demonstrate evidence of the teacher’s impact on the learning of children from varying populations

Although the study only required two collections, they were representative of each teacher’s course load, and mirrored the number of collections a fine arts teacher would complete in a typical three-month time span. Study participants were also required to teach at least two weeks, or ten complete music/language arts integrated lessons, between the pre-test and post-test. The final requirement of collecting evidence from varying populations was also adhered to, as participants were required to submit one Type I and one Type II collection.

Procedure and Instrumentation

Initial training for both groups was held in March 2015, and the purpose of this training was to introduce both study groups to portfolio implementation, collection, and reporting processes. Along with a video that explained the portfolio process, each participant was also given a copy of the Portfolio Scoring Rubric (see Appendix D) and the Portfolio Collection Template (see Appendix E). The scoring rubric document contains the rubric used by study participants and the peer reviewer to score each portfolio, an explanation of how scores are calculated, a brief explanation of the definitions of student growth and teacher effectiveness, and Wiggins's five types of interdisciplinary learning, which were used to determine the level of arts integration. The five-minute training video, which I produced[1] and narrated, included specific information on identifying portfolio types (I or II), the peer review process, and an overall view of the entire process of planning and completing two portfolio collections. All participants were also given a copy of the National Core Arts Standards anchor standards for music:

<u>Create</u>

Anchor Standard #1. Create and conceptualize artistic ideas and work.

Anchor Standard #2. Organize and develop artistic ideas and work.

Anchor Standard #3. Refine and complete artistic work.

<u>Perform</u>

Anchor Standard #4. Analyze, interpret, and select artistic work for presentation.

Anchor Standard #5. Develop and refine artistic work for presentation.

Anchor Standard #6. Convey meaning through the presentation of artistic work.

Respond

Anchor Standard #7. Perceive and analyze artistic work.

Anchor Standard #8. Interpret intent and meaning in artistic work.

Anchor Standard #9. Apply criteria to evaluate artistic work.

Connect

Anchor Standard #10. Synthesize and relate knowledge and personal experiences to make art.

Anchor Standard #11. Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.

As both groups began the process of setting up their first portfolio collections, I sent each teacher a copy of a suggested timeline containing recommended dates for the administration of pre-tests, post-tests, and uploading of student data to Dropbox (see Appendix F). The timeline was constructed to assist teachers in meeting the requirement of teaching for at least two weeks before administering a post-test, and to assist in meeting study deadlines. Instead of using GLADiS, the online system used by Tennessee fine arts teachers for their portfolios, I used secure folders on Dropbox, a popular site used for file sharing and storage. Dropbox allowed for the creation of anonymous, secure folders that could be accessed by teachers at school or at home, and also allowed for the sharing of files with the peer reviewer. I created a secure, numbered folder for each teacher, and shared the folder links via email.

Before the due date of the first collection, I emailed teachers the Portfolio

Teacher/Peer Reviewer Scoring Form (see Appendix G), and the Teacher Journal Template (see Appendix H). The scoring form was used by teachers to choose the appropriate arts integration level from the scoring rubric, and to assign self scores in the three rubric indicator areas. This form was completed by each teacher for each portfolio collection and uploaded to a Dropbox folder. The Teacher Journal Template was completed for each collection after all pre and post-tests were conducted, and the portfolio was self scored.

Upon completion of the first portfolio collection, the teachers uploaded all pre and post student data, along with the Portfolio Collection Template, Teacher/Peer Reviewer Scoring Form, and the Teacher Journal Template, to a secure Dropbox folder. As the due date approached for the first collection, I regularly checked each folder, and informed participants by email when the first collection was deemed complete. Once all collections were submitted, they were shared with the peer reviewer via email for scoring.

The peer reviewer had access to all student pre and post data, as well as the Portfolio Collection Template, Teacher/Peer Reviewer Scoring Form, and the Teacher Reflection Template. As in the TFASGM system, the review process was double blind, as the peer reviewer only was able to identify users by their folder numbers, and the study participants did not know the peer reviewer. Using the same scoring rubric used by teachers to score their own portfolio collections, and the same Teacher/Peer Reviewer Scoring Form, the peer reviewer scored each collection, entered the scores on the scoring form, and uploaded the form to each

teacher's folder. The peer reviewer also was allowed to enter short, specific qualitative feedback in the form's comments section. The availability of reviewer qualitative feedback, along with the fact that portfolio collections were scored one at a time and immediately shared with teachers, were changes I made to the TFASGM model for this study.

In the TFASGM system, teachers upload four complete collections, which are all scored at the same time. The final scores are not available to teachers until after the school year has ended. I made this change in the TFASGM methodology to allow teachers to receive scores, reflect on their scores, and have opportunities to make adjustment and improvements before completing another collection. Another important change I made to the TFASGM method was in the requirement for teachers to submit reflective practice documents with each collection. The Teacher Journal Template, influenced by Kolb's Learning Cycle (1984), allowed me to gain a view into the thoughts and decisions of each teacher, and to collect important data that formed the basis of the pilot study results.

After all the portfolio collections were submitted and scored, I provided treatment group teachers additional arts integration training. The session, which I facilitated at an elementary school convenient to the study participants, provided more examples of arts integration lessons, professional development on using the NAfME National Standards for Music Education in language arts lessons, a more detailed explanation of the Kennedy Center's definition of arts integration (see Appendix J), and further analysis on the Wiggins five-point interdisciplinary

learning model. Control group teachers did not receive additional professional development, but were reminded via email to access the portfolio process video and Portfolio Teacher Guide as needed.

In the additional treatment group professional development session, I instructed participants on the Kennedy Center definition of arts integration:

> Arts integration is an approach to teaching in which students construct and demonstrate understanding through an art form. Students engage in a creative process which connects an art form and another subject area and meets evolving objectives in both. (Silverstein, Duma, & Layne, 2010).

Teachers were encouraged to use this definition as they planned for their next portfolio collections. I also used the Wiggins five-point interdisciplinary connections list to instruct teachers on the different types of integration, and that lessons with concept- and process-based connections were more authentic, and would provide better evidence of student growth.

The entire process undertaken for collection #1 was repeated for collection #2. Teachers selected standards and objectives linking language arts content to music content, conducted pre- and post-tests to measure growth, reflected on the teaching process, self-scored the collections of student work, and uploaded student work artifacts and teacher-prepared documents to Dropbox folders for peer review The pilot study extended from March-May 2015, and at its conclusion, all data from both collections were examined and categorized according to teacher reflection

statements, levels of student work, portfolio self-scores, and peer reviewer scores.

In May 2015, I collected all teacher documents and student work from the Dropbox folders and began the process of analyzing the data. All qualitative data, including entries from the Portfolio Teacher Template and the Teacher Journal Template forms, were thoroughly analyzed and compared for trends in language and observations between control group and treatment group teachers.

Credibility and Dependability

In qualitative studies, reliability and validity are often referred to in terms of credibility and dependability (Trochim, 2006). Credibility refers to the believability of results, and dependability refers to how the ever-changing nature of qualitative research is handled and reported. In this study, the believability of results was addressed through the multiple measures used to document student growth and teacher effectiveness, and the effect of arts integration training on treatment group teachers as compared to control group teachers. Along with using research instruments, study participants also wrote about their experiences through the use of a reflective practice journal, and as such, thoroughly described what happened in their classrooms as they collected evidence. Orcher (2005) discusses prolonged engagement as one way to boost credibility in qualitative research studies. In this study, I engaged teachers in the documentation of student growth and arts integration professional development over a three-month period.

Dependability was addressed through the careful examination of documents and procedures, the making of modifications to the portfolio process when

necessary, and the comparison of narrative teacher responses to their portfolio scores and self-selected arts integration types. Orcher suggested more than one individual examine and interpret data in qualitative research studies to ensure dependability of results. In this study, I examined and interpreted all pre and post student data and teacher qualitative data. The peer reviewer also examined all student work and teacher documents, and using the scoring rubric, rated each portfolio collection. In the one case where a teacher's self scored and the peer reviewer's scores were more than one point apart, a second peer reviewer was called in to examine all student and teacher data to make a final score determination.

Conclusion

In this chapter I explained the process of implementing several instruments, as well as pre-study training, and treatment group arts integration training, in the use of the TFASGM in arts integrated classrooms. This study generated several points of data for each teacher that proved to be valuable resources of information in answering the research questions. In particular, the richness of teacher reflection and descriptive portfolio data allowed me to make important conclusions on the value of the TFASGM system's use in non-arts classrooms, and the impact of arts integration professional development on student growth and teacher effectiveness.

Chapter Four: Results and Analysis

I examined each collection to derive the impact of arts integration professional development, as well as the viability of the TFASGM to measure student growth and teacher effectiveness in non-arts classrooms. Qualitative teacher writings, student work, and quantitative portfolio scores from both teachers and the peer reviewer were considered in the overall analysis. Results showed a positive impact of arts integration professional development on student growth and teacher effectiveness, as well as the successful application of a growth measurement model for arts integrated classrooms and programs.

The results and analysis were derived from the student work and teacher reflections submitted as part of each portfolio collection, as well as teacher and peer reviewer scoring. The nature of this study allowed for evidence to be viewed from more than one perspective, and as such, comments from teachers, the peer reviewer, and myself, are interwoven throughout the chapter. I conducted an analysis of multiple cases through closely examining each collection, which contained documents from teachers, students, and the peer reviewer. Individual teacher and peer reviewer portfolio scores appear near the end of the chapter.

Using the teacher-submitted documents, videos, photographs, lesson and unit descriptions, reflection journals, and scoring sheets, I sought to create a picture of what arts integration looked like in each classroom, and the motivations behind integrating music into language arts lessons. The teacher and peer reviewer scores gave a different perspective to the work, as the use of a scoring rubric and review

process provided a quantitative view into the business of integrating music into non-arts classrooms. The scoring process also measured the effect each teacher had on producing student growth through the use of music, the balance between music and language arts content, alignment of objectives and assessments, and overall integration levels.

In presenting the data below, I found it best to first introduce detailed accounts of the collections by using the Portfolio Collection Template documents, Teacher Reflection documents, and student work included in each collection. This approach was first used with control group teacher data, followed by treatment group data. Any discussion of the portfolios would not be complete without the accompanying quantitative data, which is found later in the chapter. Both the qualitative and quantitative data provide a complete picture of what students did, the decisions teachers made in integrating music, the reflections of teachers after portfolios were completed, and the thoughts of the peer reviewer, which often shed new light on what happened in each classroom when music was integrated with language arts content.

Control Group Teachers

Teacher #1. Control group teacher #1's first portfolio collection documented the integration of music into a 5th grade language arts grammar lesson. The integration was accomplished through the use of a song that contained lyrics on grammar rules and the correct use of punctuation. This Type II collection was conducted with 3 students, with one student each representing emerging, proficient, and advanced

levels.

The teacher administered a pre-test containing 10 multiple-choice questions on grammar and punctuation. Using the results from this test, she then exposed the three students to the grammar song on several occasions, as well as to daily lessons on punctuation and other grammar rules. After two weeks, she administered the same exam as a post-test, which showed an increase of student knowledge through higher student scores.

In the portfolio evaluation, the peer reviewer commented that, while the teacher selected the integration type as theme, there was no evidence that music aligned with any particular theme, or that music concepts were taught alongside language arts concepts. Upon my viewing of the evidence submitted by the teacher, this assertion was verified, as she only uploaded pre and post examples of how student performed on the grammar test. An imbalance between language arts and music content also contributed to the score, with language arts content being, in the words of the peer reviewer, "at the forefront of the lessons." The song used to assist in teaching language arts content was not made available by the teacher.

In the Portfolio Collection Template document, the teacher said she chose to use a song to teach grammar skills because "I've seen grammar songs work for 5th graders in the past. It helps them remember the sometimes confusing rules." The identification of thematic music integration by the teacher was correctly refuted by the peer reviewer, which labeled the portfolio as an example of teaching tool integration. The teacher did not include music standards in her lesson plans, nor did

she assess any music content in the pre- or post-tests.

The teacher reflections for this portfolio revealed a basic understanding of the growth measurement process, with attention paid to music only as a tool for increasing language arts knowledge. When answering the question, "What did you plan for the next student growth experience," the teacher responded, "If this activity did not aid in showing growth at the end of the unit, I planned to find a different song and incorporate some planned movements." The teacher also commented that she gave students the lyrics to the song, and "showed them the video at the beginning of each lesson." Her reflection indicated no substantial involvement on behalf of the students with the musical content, and no direct teaching of musical skills. Answers to the reflection questions, "What did you observe," and, "What did you and your students think," contained performance-based phrases such as, "at first, they were reluctant to participate," and, "they began to sing without thinking about it."

For collection #2, the teacher repeated the process of pre-assessing language arts skills with a focus on recognition and application of capital letter rules. The Type I whole class collection mirrored the use in collection #1 of music as a tool to teach language arts content, and teacher reflection comments were nearly identical to those made in collection #1. As in the first collection, no mention of music standards or assessment was present, and no student evidence of such standards or assessment existed.

The student work contained in each collection had no substantial connection

to music other than songs were used to deliver language arts content. From my examination of the evidence, other than the teacher's mention of the use of music, it was not apparent that music was a part of the lessons. As no music content was found anywhere in her evidence, music as a curricular area was not considered by the teacher when she wrote objectives or when assessments were administered. It was simply used as a teaching tool.

While analysis of pre and post testing showed growth in the students' abilities to correctly capitalize words and apply rules of punctuation, the tests did not require students to apply music skills or concepts. When the teacher commented she saw grammar songs "work" with 5th grade students, she likely meant they helped students memorize non-arts content, as the assessments only measured the students' abilities to recall basic grammar facts. She also commented in her reflection journal that she thought students would "enjoy being able to become better at grammar by singing/learning a rock song," further confirming Bresler's assertion that music is often used in non-arts classrooms for entertainment purposes.

Teacher #2. For her first portfolio collection, control group teacher #2's kindergarten students were engaged in lessons that assisted students in identifying verbs in a sentence, and changing verb tense by adding the letters -*ed.* In the Portfolio Collection Template document, the teacher clearly identified her use of music as an example of teaching tool integration: "In this unit, music is used as a teaching tool or to aid instruction." The particular video used was chosen to allow

students to learn definitions and act out the meaning of verbs. The Type I collection was conducted with the entire class.

The pre-assessment was teacher-made, and required students to identify verbs in sentences read by the teacher, as well as including the suffix -*ed* when needed. After the pre-assessment was administered, daily lessons were taught on verbs, and included the use of the song video, "Verbs are Words That Show Action," a song performed to the tune of, "Take Me Out to the Ballgame." Students were allowed to act out the song as they sang, and were also reminded that verb spellings change when the tense changes. The teacher also used pre-assessment data to get a "good idea of what to focus on in my lesson."

Less than two weeks later, the pre-assessment was administered again as a post-assessment. The teacher "looked to see if the students could name the verb in the sentence and include the suffix –*ed.*" Between the pre and post-tests, additional activities were included to help students make a connection between language arts and music content:

> Students not only sang the song, but also made a book from the song. We took pictures of the students doing an action. They had to write the verb in both present and past tense. Some of the verbs did not end with –*ed.* They also did a writing activity where they had to cut out a picture in a magazine that showed someone in action. They had to write a sentence about it.

The pre and post assessments required students to underline verbs in simple sentences, an activity that loosely connected to the video's lyrics through

reinforcement of proper verb and suffix use. The supplemental activity that allowed students to act out the words and write sentences, which was documented in the portfolio with pictures of students acting out words accompanied by student-written sentences, also connected to the video scenes of children doing actions related to the accompanying lyrics.

As the teacher reflected on the lesson, her motivation behind the use of music aligned with her decision to identify the portfolio as an example of teaching tool integration: "As students sang the song over and over, more were able to give the definition of a verb and made the transition to past tense verbs easier." When reflecting on the students' concrete experiences, her focus was on memorization, as students "learned the meaning of action verbs through song and movement." Peer reviewer comments also reflected the use of music as a tool: "Students understood ELA concepts with help from learning the verb song but the balance of integration was not evident. ELA was the forefront of most activities."

Unlike in the collections submitted by teacher #1, this collection was correctly self-identified as an example of teaching tool integration. Teacher comments from the lesson plan and the reflection document showed her understanding that music was being used as a tool. At the kindergarten level, music is often used to teach basic language arts and grammar content, such as letters and letter sounds. The use of music by this teacher as a teaching tool was likely not unique to this study, as she has taught at the elementary level for 10 years.

Collection #2 was also self-identified as an example of teaching tool

integration. The objective of the unit was, “Students will understand that with most words spelled with the letter Q, the letter U often follows.” The type II collection was conducted with four students representing emerging, proficient, and advanced levels.

Directly after a short lesson on the letter Q and the viewing of a letter song video from the website ABCmouse.com, the pre-assessment was administered. The assessment required students to write words containing the letters Q and QU, and draw pictures to accompany the words. After the assessment was completed, the teacher could “see that my students were not familiar with the rule that U follows Q.”

Five days later, an identical post-test was given to the same four students. Between the pre- and post-tests, the students were exposed to two videos: “QU” by the band They Might be Giants, and “Q Without U” from the children’s television show, *Between the Lions*. Daily lessons on the letters Q and U were also taught. After the post-test, the teacher compared data between the two tests and concluded, “100% of students showed growth.” She also used data from a weekly spelling test in her analysis.

Journal entries revealed more details about the lessons, how students were selected to participate, and motivation behind using music and videos to teach the concept that the letter Q is often followed by U. The mention of Tier I students refers to students that scored above the 25th percentile on an Aimsweb language arts screening exam:

> Teacher showed letter song video from ABC Mouse. This has been done with every letter. After showing video, teacher and whole class make a list of words that begin with Q. Teacher writes the words and includes the QU and talks about U always following Q but the point is not stressed. This lesson was expanded in small group time where the Tier 1 students had to draw and label four items that began with Q.

When answering the abstract conceptualization question, "What did you and your students think," the teacher said:

> I enjoy this lesson and the use of the two songs that I chose. They are fun to sing and easy to learn. The students still sing them weeks after learning them so I think they enjoy them too. I thought this would be a simpler lesson because of my Tier 1 group and they did catch on fairly quickly. I think some of it had to do with their Tier skill, but the rest had to do with the song.

These comments revealed several interesting things. The teacher observed growth from the pre- to post-test, but was not sure if it was caused by the use of the videos, or because the students were already higher achieving students. They also revealed the teacher and students enjoyed viewing the videos and singing the songs, which made learning the content more palatable. The teacher used videos "with every letter," and therefore, her students were accustomed to singing songs while learning language arts content. This reflection showed a teacher using music as a teaching tool primarily for the purpose of delivering non-arts content, but also a

teacher that was beginning to consider the level of impact music inclusion had on her students' learning.

Teacher #3. At the end of collection #1, the students in teacher #3's first grade class were to meet the teacher's lesson objective of "using pronouns properly in a sentence." The Type I collection focused on a 1st grade language arts standard included in the Portfolio Collection Template document: "Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. Use personal, possessive, and indefinite pronouns." This standard was chosen because it is "a topic covered in the 1st grade curriculum."

A fill-in-the-blank pre-assessment containing 10 items was administered that required students to select a pronoun from a short list and correctly insert them into sentences. The test was given without any prior teaching or review on pronouns. In her evidence for the pre-assessment, the teacher said she "wanted to see what they knew" before discussing pronouns, and as such, did not pre-teach any content related to the test. Results from the test showed a general lack of knowledge of proper pronoun placement, as the class of 19 students averaged a score of 65%.

Using the test results, the teacher found a pronoun song performed to the theme from the popular children's cartoon, *Spongebob Squarepants*. The teacher chose this song because "I knew this would peek their interest because they like Spongebob." The entire class performed the song during pronoun lessons, including during discussions with the class on how pronouns can replace nouns. Other related activities were also conducted with the class.

Two weeks after the pre-test, the teacher measured growth with an identical post-test. Results were inconclusive, as six students improved, six students performed the same as in the pre-test, and seven students posted lower scores. The students enjoyed the activity, but the teacher did not note a connecting thread in the learning process: "The students really enjoyed the song, but I do not see the connection between the song and the work that was done from pre-test to post-test."

Teacher Journal comments were detailed and specific as to how and why music was used during the two-week unit. After giving the pre-test and realizing over half the class did not perform at a proficient level, she found a "cute little song" that the students "really enjoyed and loved singing." Students listened first, and then sang the song line by line with the teacher. Her observations also reflected how much the class enjoyed the song, which "really helped them get into the lesson." Words such as "catchy" and "fun" were also used to describe the students' experiences with singing the song.

From the lesson description and teacher reflection, it seems plausible that she would have chosen to describe the integration type as teaching tool. She chose the topic because she saw a connection between the song and the topic contained in the chosen objective. The collection would have been stronger if students made a connection between a song and a lesson topic, which according to pre- to post-test results, clearly did not happen. Curiously, when answering the question, "What did you and your students think," she said, "I thought this was a great way to get

students involved with their learning and help them to grasp a new concept." Once again, the entertainment or motivational factor associated with using music as a teaching tool, which the peer reviewer selected as the integration type in this collection, was the primary area of focus in song choice and implementation.

Collection #2 was Type II collection administered to three students representing emerging, proficient, and advanced levels. Differing from the first collection, the teacher chose a standard from the first grade math curriculum: "Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems, and interpret solutions." No mention of any music standard, or how music relates to the math standard, was included with the integration/connection type, which was selected by the teacher as topic integration.

The teacher repeated the strategy of administering a pre-test before discussing content with the class. A 35-item test was given to the three participating students, and upon analyzing the scores, emerging (5% correct), proficient (77% correct), and advanced (97% correct) students were determined. The test was not teacher-made, and required students to recognize and identify different types of currency coins, including the penny, nickel, dime, and quarter. Students also had to know the value of the coins to perform simple calculations.

The song was then introduced by the teacher, and included each coin having "a different voice sound to remember each coin's size." For example, in performing the song, the dime had a "tiny squeaky voice" because it was the smallest coin.

Students were also allowed to hold coins and discuss the distinctive markings on each coin. Activities using the values of coins in addition and subtraction problems were also taught.

One week later, the three students were given the same exam as a post-test, and performance did improve. The emerging student scored 74% correct, the proficient student scored 100% correct, and the advanced student repeated the pre-test score of 97%. In the evidence for the post-test, the teacher said, "The song really seemed to help them understand the values of each coin, therefore helping them add the coins. The song seemed to really connect the content." The process of introducing the song was recorded in the teacher journal:

> I again found a little song that would help the students identify and know the value of each coin. I put this song on chart paper so they could see it better and refer to it when needed. We sang the song a few times and then each coin was introduced separately and activities were done for each coin. We then added some activities with all of the coins and their values. Each day we talked about a different coin and we would sing the part about that particular coin and the coin or coins discussed previously. The students really got into the song and love singing it.

The song lyrics, which were simple and directly related to the value of coins, were included in the evidence collection:

> Penny, penny, easily spent,
> Copper brown and worth 1 cent.

Nickel, nickel, thick and fat
You're worth 5 cents. I know that!

Dime, dime, little and thin,
I remember you're worth 10.

Quarter, quarter, big and bold,
You're worth 25 cents I am told.

As in the first collection, reflection comments mentioned the fun and enjoyment experienced by students as they sang the song. The integration type selected by the teacher, topic integration, was also the same as in the first collection. In the peer review scoring, teaching tool integration was the selected integration type. Comments from the peer reviewer spoke to the prevalence of math content and little evidence of music integration.

Without explanation, the teacher decided to integrate music with math instead of language arts, and only allowed one week to pass between pre- and post-testing. However, scoring would likely not have been substantially higher with more time between pre- and post-testing, as the collection represented a standard example of teaching tool integration. The song was selected to reinforce math content, and to provide students a fun way to learn about coins and their values. No evidence of the consideration of musical concepts or skills by the teacher or students was present.

Teacher #4. The entire kindergarten class was engaged in a Type I language arts collection on writing statement and question sentences, and editing sentences for correct punctuation. The content was chosen because "kindergarteners often have

difficulty distinguishing between making a statement and asking a question," a decision informed by 10 years of teaching experience. The teacher selected the teaching tool integration type, and said in the Portfolio Collection Template document that music was "used as a teaching tool."

A pre-assessment required students to write one statement and question each, and match four different punctuation marks with the appropriate short sentences. Despite administering the test to the entire class, based on the test results, the teacher divided the class into three distinct groups: emerging students answered three or less items correctly, developing students answered three to five items correctly, and proficient students answered all six items correctly. Four students (20% of the class) were emerging, 10 students (50% of the class) were developing, and six students (30% of the class) were proficient.

After the pre-test was given and results were tabulated, the teacher began to search for a song or video to use with the lessons. She found the video for the song, "Who, What, When, Where, Why" on *YouTube*, and began including it with other activities, including those purchased from Teacherspayteachers.com, a popular site where teachers purchase ready-made activities and worksheets from other classroom teachers. The class engaged in singing the song, think-alouds, whole group brainstorming, the sorting of printed question and statement cards, and responding to question and statement writing prompts.

The same test was given two weeks later, and results showed 10 students were proficient, nine students were developing, and one student was emerging.

Teacher reflection on the two-week unit showed how music was used along with other resources to bolster knowledge of questions, statements, and punctuation:

> Throughout this skill study, students were excited about singing the "question" song and would often sing to themselves while working on other activities. I observed during the pre-assessment, 2 students attempted to write a question and statement but when called upon they were unable to re-read and/or make meaning of what they wrote. As a result, it was important for me to implement think-aloud activities and whole group brainstorming in order to help guide those students in the process of creating sentences and writing out those sentences.

The second collection was a Type II collection with three students, and the collection contained the following objective: "Students will recognize and produce rhyming words, and demonstrate understanding of spoken words, syllables, and sounds." The teaching tool integration type was selected, motivated by the teacher's observation that "the ability to recognize and produce rhyming words is an important phonological skill that will assist kindergarten students in their reading ability." A pre-test was administered that required students to match rhyming words, and to fill in a rhyming word in a blank next to an existing word. An example was the word "mat," followed by a blank to be filled in by each student with a rhyming word.

Results of the pre-test showed two students achieved a score of 70%, and the

third student a score of 60%. The teacher set a proficiency standard of 90%. Following her strategy from the first collection, she used the results to find activities that would most benefit her students in achieving the proficiency goal. One of those activities was a song, "A Hunting We Will Go:"

> Oh, a-hunting we will go, a-hunting we will go.
> We'll take a little fox and put it in a box
> And then we'll let it go.
>
> We'll take a little whale and put it in a pail
> We'll take a little frog and put it in a log
> We'll take a little fish and put it on a dish.

The instructions included with the song, which were referenced by the teacher in her lesson plans or her reflection document, suggested that students be allowed to insert the names of other animals, and that the teacher should model how the words could be used to write new verses. Of all the portfolios submitted by control group teachers, this collection contained the only example of students using music content to create new material or to use existing material to produce similar content: "Students enjoyed creating their own verses to add on to the song." The students also '"listened to funny rhyming stories and created silly rhymes." Two weeks after the pre-test, the post-test was administered, and results showed all students scored 100%, thereby meeting the teacher's proficiency goal.

Treatment Group Teachers

Teacher #1. For her first portfolio collection, four students in teacher #1's kindergarten class participated in a two-week unit that focused on the Tennessee kindergarten language arts standard, "The students will be able to recognize and

read number words zero through ten in random order." Also included with the language arts standard was the National Core Arts Standards (NCAS) music anchor standard #2, "Organize and develop artistic ideas and work." Four students completed the Type II collection, and one student each represented emerging, proficient, and advanced performance levels. The teacher selected the process connection type, the highest level of interdisciplinary learning on the five-level continuum.

A pre-test was administered one-on-one, in which each student read the number words one through ten in random order. As the students read the words out loud, the teacher recorded the results, and used the data to plan the subsequent two weeks of instruction. Two students recognized and read two words, one student recognized one word, and the final student recognized zero words.

Using the test results, the teacher taught a two-week unit that integrated music through having the students create and perform a number words song. Answering the reflection question, "What did you and your students do," the teacher said:

> I facilitated as the small group created a number word song and practiced their sight word reading/singing for a week. I repeated the pre-test as a progress monitor. I facilitated their practice for another week and a post assessment was given. The students created a number word song to the tune of "Jingle Bells" and practiced it daily

together as they read/sang each sight word. They culminated this activity performing their song for their classmates.

This portfolio also contained the first use of a test during the learning cycle for monitoring of student learning. Results of the mid-point monitoring test, given halfway through the two-week learning cycle, showed two students recognized and read all 11 words, one student read nine of the 11 words, and the last student read six of the 11 words. Results of the post-test, which was given at the end of the two-week teaching cycle, showed significant growth among the group, as each student was able to recognize and read all number words one to ten when presented in random order.

Students performed the song in class, holding up cards containing the corresponding number word as they sang. The collection also contained a recording of the song, which was made by the teacher and the four students. The song, which lasted approximately one minute, was sung to the tune of "Jingle Bells:"

Zero, zero, zero,
zero, zero, zero,
One, one, one, one, one.

Two, two, two, two,
two, two, two,
Three, three, three, three, three, yay!

Four, four, four,
four, four, four,
five, five, five, five, five.

Six, six, six, six,
six, six, six,
Seven, seven, seven, seven, se--ven!

Eight, eight. eight,
aren't we great!
Nine, nine, nine, nine, nine.

Ten, ten, ten, ten,
ten, ten, ten, let's
read our words again!

The teacher, an experienced musician that sang professionally as a backup singer and studio musician, often used music in her teaching. The results of having students write their own song caught her by surprise. The thoughts of her students reflected their pleasure in writing and performing an original song:

> I use music for many learning skills but had never had the students come up with their own song. I wasn't sure what that would "look" like but in the end it was fun because it was so meaningful to them. As a kindergartner, it is important to be excited about and have positive feelings towards learning. I think this activity supported that! In asking the students what they thought about the process, they each expressed pride in their learning and felt it was fun.

The learning became "meaningful to students as they created the song for the number words." Writing and rehearsing the song allowed them to engage with the content each day, and the extra time, according to the teacher, "helped with their fluency." The peer reviewer, who also selected the process integration type, recognized the growth achieved by the students, as well as the significance of the integration of the songwriting activity:

> Growth of at least 2 levels identified as evident in the pre, progress, and post

assessments. Students were also given the opportunity to create their own number word composition and evaluate how the number words fit into the familiar melody provided by their teacher. Student work showed evidence of above average understanding of integration as the students incorporated musical composition into the mastery of identifying number words in various orders.

Collection #2 incorporated science with language arts and music as students explored drawing and labeling, as well as capitalization and punctuation within a sentence. The Type I whole class collection was deemed by the teacher to represent thematic/content integration. In the objectives section of the Portfolio Collection template document, three Common Core language arts standards were listed, along with two NCAS music anchor standards and the accompanying teacher-constructed objectives to explain how students engaged in the creative process:

#2 Organize and develop artistic ideas and work. Students will work in small groups to compose and perform a song for the four stages of the life of a butterfly.

#8 Interpret intent and meaning in artistic work. Students will listen to four different works of music and decide which piece best fits each stage of the butterfly lifecycle.

Before any instruction began, a pre-test was given that required students to draw and label a picture of a butterfly, to use correct capitalization and punctuation when writing a sentence about a butterfly, and to correctly answer the number of

stages in the life cycle of a butterfly. In the pre-test, six of seventeen students knew the number of stages, four of seventeen students correctly drew and labeled a butterfly, and none of the seventeen students correctly capitalized and punctuated a complete sentence about a butterfly. After the assessment, the teacher divided the class into low, middle, and high achievement groups, and began a two-week unit on the life cycle of a butterfly. In the Portfolio Collection Template document, the teacher summarized the student growth measurement process:

> During instruction, teacher observation and student feedback will occur to measure student growth in recognizing that a sentence begins with a capital letter and ends with a period, question mark, or exclamation mark. To support the learning concept and deepen understanding, the students will work in a small group to compose a verse for our class song about each stage of the butterfly, and listen to four musical compositions to interpret the music as they decide which piece best fits each stage of the butterfly life cycle.

During the lessons, students discussed butterflies, viewed videos on the life cycle of a butterfly, listed as the teacher read the Eric Carle Book, *The Very Hungry Caterpillar*, and listened to four pieces of music and matched one to each stage of the butterfly life cycle. Students also worked in small groups under the teacher's guidance to write a song to the tune, "Row, Row, Row Your Boat." The class brainstormed ideas, which were taken by the teacher and translated into song

verses. Students helped the teacher arrange the words to create rhyming patterns, and as a whole group, wrote out the final lyrics to the song:

> First comes the butterfly,
> pretty butterfly.
> Lays an egg on tasty leaf and
> then away she flies.
>
> Now comes the caterpillar,
> he has many legs.
> He eats and eats and eats and eats and
> eats and eats all day.
>
> Can you see the caterpillar,
> he is fat today!
> He turns into a chrysalis and
> sleeps the day away.
>
> Out pops the butterfly,
> flowers everywhere.
> Flutter, flutter, flutter, land, and
> drink some nectar there.

The video of the performance showed the teacher's entire class performing the song while the school's music teacher accompanied on piano. The teacher worked closely with the music teacher as she assisted the students in writing the song, and found the songwriting process to be educational and fun:

> I thought writing the song about butterflies was going to be very hard for them. I was so surprised at the words they came up with and how they worked together, even in the large group to put the song together perfectly. It was a great opportunity to deepen their understanding not only of how music is composed with rhythm and rhyme, but also sentence writing is composed with correct punctuation. They loved the process and have asked

if we can extend the unit into other insects. It is great that they don't feel overwhelmed as much as they learned about writing!!

Along with writing a song, students also listened to sections of four different pieces of music and chose one to represent each stage of the butterfly life cycle: *Piano Concerto No. 1 in B-flat minor, Op. 23* by Pytor Tchaikovsky (pupa), *Appalachian Spring: Doppio movimento* from *Appalachian Spring* by Aaron Copland (caterpillar), *Prelude in E Minor, Op. 28 No. 4* by Frederic Chopin (chrysalis) and *Canon in D major* by Johann Pachelbel (butterfly). As students listened to the pieces, they discussed with the teacher which piece would align with each stage. Once the students decided on the pieces, they created movements to accompany the music. The portfolio collection included a video of students moving to each piece of music, calling out the name of each stage as the music changed, and answering questions posed by the teacher on the butterfly life cycle. As students moved like butterflies, the teacher also asked music-specific questions such as, "Is the beat loud or soft?" and, "Is the tempo fast or slow?" She also urged the students to "do it to the tempo" as they made movements with the arms that mimicked the flapping of butterfly wings.

At the end of the unit, a post-test was administered to measure growth. Results showed all 17 students correctly named the number of stages in the butterfly life cycle, drew and labeled a butterfly, and wrote a complete sentence about a butterfly with correct capitalization and punctuation. The peer reviewer also selected thematic/content integration, and commented that the students

obviously gained new knowledge and understanding of language arts, science, and music content.

Teacher #2. The objective for collection #1 was very specific to language arts, accompanied by a mention of musical outcomes: "The students will be able to increase reading word count per minute. They will be able to know the words and the melody of a song by the end of instruction." The Type II collection, conducted by a teacher with previous arts integration training and 27 years of teaching experience, required 3 students to build reading fluency by listening to and learning the words to the Phil Collins song, "You'll Be in My Heart" from the 1999 Disney movie, *Tarzan.* In the Portfolio Collection Template document, the teacher included the NCAS Anchor Standard #5, "Develop and refine artistic work for presentation," along with a description of the reasoning behind using music to build text fluency:

> Building text fluency is a process based on word recognition and having a sound phonics based background. The students will apply their knowledge of both by improving their word count per minute by listening to the lyrics of the song and reading them on the screen as they are listening. They will listen and read the lyrics as a cold read the first time. They will watch and listen to the video every day for 10 days. They will then be asked to read the lyrics and sing the melody. A word count per minute will be established on the cold read and also at the end of the ten-day practice period.

For the pre-test, three students were asked to read the song lyrics as the teacher was timing them. The test was given as a cold read, or requiring the

students to read the lyrics on first sight, and results of the test were reported in words correct per minute (WCPM), a measure commonly used in reading fluency tests. The top-performing student read 152 WCPM, the middle student read 78 WCPM, and the lowest-performing student read 49 WCPM. Recordings of each student's cold read were included in the collection, and the recordings revealed distinct differences between each student's fluency levels.

During the next two weeks, the students practiced singing the song daily. A *YouTube* video was used that included the song and lyrics, and students "read the lyrics on the screen" as they practiced singing the song. As the students practiced, the teacher "saw them gain confidence in their reading abilities." Exactly two weeks after the cold read pre-test, the students read the lyrics again and were timed. The top performer improved from 152 to 203 WCPM, the middle performer moved from 78 to 99 WCPM, and the lowest performing student surpassed the middle-performing student and posted a time of 100 WCPM.

Teacher reflections for this collection were similar to those found in the control group teacher reflections. The students "enjoyed the music," and "listening to the music was not reading, it was fun!" The teacher selected the process connection type, and commented in the portfolio scoring document that "I was very pleased with the growth. The students enjoyed the activity, and their data shows it worked to improve their WCPM." In contrast to the teacher selected integration type, the peer reviewer selected teaching tool integration for the collection. Peer review comments noted the lack of music content in the lessons, and the use of a

song to increase reading rates. Growth in reading levels was recognized, but the absence of "analysis, creation, or music connection" resulted in the selection of the lowest integration type.

Parts of speech were the focus of the second collection, a Type I collection conducted with the entire class. Along with identifying nouns, verbs, contractions, pronouns, and conjunctions, the unit objective stated that students would create original songs to explain pronouns. Students were to also "create a whole new song about a selected part of speech." The process integration type was selected, and NCAS Anchor Standard #2, "Organize and develop artistic ideas and work," was included with the language arts/music objective.

A pre-test was given to the entire class that required students to select nouns, pronouns, verbs, conjunctions, and contractions in 10 sentences. Unlike weekly class tests in which students focused on one part of speech, the teacher decided to include "all the skills to see if they could distinguish between the different parts of speech." The majority of the class scored at the 70% correct level or below, with one student scoring 90%, three students scoring 80%, eleven students scoring 70%, and four students scoring 60% or below.

In the Portfolio Collection Template document, the teacher outlined the plan for integrating music into the two-week study of the parts of speech:

> The class then listened to 5 different songs. They had to find the different parts of speech in each song. We listened to the songs daily. We discussed our answers and explained what was selected. At the end of two weeks, the

class was divided into 4 groups. Each group could select their own melody, but they all had to write about pronouns. The second song was an original song that they created together. They selected their part of speech for this part of the assignment.

During the lessons, the class listened daily to 5 songs: "Call Me Maybe" by Carly Rae Jepsen, "Wide Awake" by Katy Perry, "The Climb" by Miley Cyrus, "Eye of the Tiger" by Survivor, and "Conjunction Junction" from the 1970's children's television show, *Schoolhouse Rock*. As they listened, they identified the part of speech assigned by the teacher. After listening to the songs, students began working in groups to write original song lyrics. Recordings were made in which students played classroom percussion instruments and sang the new lyrics. During the two-week instructional period, the classroom teacher consulted with the music teacher, who "listened to their work and made suggestions toward their final products." Two of the groups wrote new lyrics to the rhythm of the chorus from "Eye of the Tiger," one group wrote lyrics to "The Climb", and the last group wrote lyrics to "Call Me Maybe."

Recordings from all four groups were included in the portfolio collection, and the musical quality of each original song varied from group to group. The song written and performed by the group using the song "Eye of the Tiger" for inspiration contained randomly played classroom percussion instruments while students chanted the lyrics. In contrast, the "Call Me Maybe" group sang new lyrics to the song's melody as the original recording played softly in the background. The

teacher's Journal Template comments to the question, "What did you and your students think?" reflected how much the teacher and her students invested in the creative process of writing and performing music:

> I loved the experience. I had several children bring in maracas, tambourines, rattles, drumsticks etc. They used the instruments to help them keep the beat and create their own rhythms. The students were very proud of their original work. They wanted to be recorded multiple times until it sounded the way they thought it should.

Results of the post-test showed overall improvement, as 9 students scored 90% or above, 7 students scored 80–89%, and 3 students scores between 70% and 79%. The peer reviewer selected process as the integration type and commented that there was sufficient balance between musical and language arts outcomes.

Teacher #3. The Water Cycle was the non-arts focus of the 2nd grade type I collection that also incorporated language arts elements. The objective for the first collection was, "The learner will be able to draw and label the parts of the water cycle, and write an expository paragraph explaining the water cycle." An explanation of the reasoning behind the teacher's choice of teaching tool integration included mention of a Water Cycle song that was used "as a tool to reinforce the vocabulary terms (evaporation, condensation, and precipitation), and to reinforce the idea that the water cycle never ends."

A pre-test was given to the entire class that required the students to label a blank water cycle drawing. Each of the four parts of the water cycle was labeled

with a letter, and below the drawing, students filled in the correct word that corresponded to that part of the cycle. Out of the twenty students in the class, sixteen labeled two or more stages incorrectly, and the remaining four students correctly labeled all four stages.

During the two-week teaching period, the teacher introduced several instructional resources to build knowledge about the water cycle. Students drew and labeled their own water cycles, wrote paragraphs about the water cycle, and sang the "Water Cycle Song." The song, performed to the tune of "She'll be Coming Around the Mountain," contained lyrics that included movement recommendations to accompany the four steps of the water cycle:

> Water travels in a circle, yes it does!
> (Use pointer finger to make a big circle)
>
> Water travels in a circle, yes it does!
> (repeat finger circle)
>
> Water goes up as evaporation
> (move hands up to the sky)
>
> Forms clouds as condensation
> (make a cloud overhead with arms)
>
> Then comes down as precipitation, yes it does!
> (sprinkle with fingers while bringing arms down in front of you)

The post-test was taken from the paragraph each student wrote about the water cycle. As stated by the teacher, the post-test was "harder than the pre-test, as the pre-test only required the students to label the diagram." The post-test contained typed paragraphs about the water cycle and original student water cycle

drawings, and while this collection was identified by the teacher as a Type I collection, she selected four students' post-tests to represent the work of the entire class. The results showed 18 of the 20 students gave the teacher an "acceptable paragraph."

Teacher reflections for this portfolio collection were short, and provided a basic description of what the teacher and the students did, observed, and thought during the unit of study. The teacher said she "used a teacher-created slideshow to teach the concept of the water cycle." After viewing the slideshow presentation, students sang the song and wrote an expository paragraph. The students "loved the song and sang it enthusiastically. During the final evaluation, the students were singing the song to themselves at they wrote their paragraphs."

The peer reviewer also chose the teaching tool integration type, and commented on the use of music as a tool for learning:

> Integration type identified as teaching tool as little is learned about music. Students used a song to learn the water cycle. A percentage of students progressed in knowing the steps of a water cycle and composing a paragraph about the process. An opportunity in music composition could have been used as students could have written their own song instead of a paragraph. Students could have analyzed each other's composition and given feedback of their musical works. There is no evidence of students understanding the connection of using music to learn the science concepts.

The teacher's second collection was also a Type I whole class collection. Teachers were asked to complete one of each collection type, but for the purposes of this study, the second collection was allowed. The lesson's objective was short and simple, and included no mention of the use of music: "The student will be able to name some of the symbols of Tennessee." The teacher chose the process connection type, the highest connection level on Wiggins' 5-step interdisciplinary teaching type list.

Before the unit of study on Tennessee symbols began, a pre-test was given. Five students missed one of the five questions, and the remaining fifteen students missed two or more questions. A sample of the pre-test was not uploaded to the portfolio folder. During the instructional period, students listened to various songs connected to Tennessee, such as "Rocky Top," "Tennessee Waltz," blues and country music selections, and music by Elvis Presley. The class also wrote one line each to a chant about Tennessee symbols, illustrated their line, and performed the song for a kindergarten class.

The portfolio collection included each student's song line and illustration. In the reflection notes, the teacher said she used the song "Brown Bear, Brown Bear" as inspiration for the chant's form. A three-minute video of the students performing their chant was also included. As music played in the background, each student changed his or her line and held up a paper containing the accompanying illustration. Between each line, students chanted, "Tennessee, Tennessee, what do you see?" Some of the song lines included, "I see the sunset over the Mississippi

River glowing for me," and, "I see the Tennessee flag waving at me."

Post-test results showed growth in the social studies skill, as seventeen students correctly identified all five Tennessee symbols, with the additional three students in the class missing two or more. The peer reviewer agreed with the teacher's selection of process as the connection type, and commented there was an "equal balance of music and state content learned about Tennessee." Teacher reflection comments were similar to those from the first collection. Students were "enthusiastic" about performing their chant for the kindergarten class, and they enjoyed "illustrating and performing."

The two portfolios submitted by this teacher posed several problems, and led me to personally disagree with the peer reviewer's second evaluation. As noted above, all teachers were asked to submit a Type I portfolio and a Type II portfolio, and teacher #3 submitted two Type I portfolios. The second collection also lacked adequate evidence of pre and post testing. The teacher made comments in the Portfolio Template document and Reflection Journal on the testing processes, and scores for both the pre and posts were shared. The actual document used for the pre and post-tests were not shared. Finally, the teacher selected the process connection type, but failed to include any mention of music standards or objectives, and did not provide evidence on how music content was assessed.

Based on these discrepancies, I sent the portfolio to an experienced portfolio reviewer and arts teacher for a second review only on the integration type. The second review produced a change of the integration type to thematic:

Based on the evidence provided by the teacher in the reflection and the collection overview, students were assessed on their identification of symbols and place in Tennessee, which aligned to the stated objective. That would be a thematic connection. The type of assessments included: written pre-test, class brainstorming, illustrating images, writing and revising a chant, performing the chant for others, which, according to the Kennedy Center definition breakdown, means this collection meets the requirements for an arts-infused learning experience. However, there is no evidence to document how students grew in their understanding of making decisions about concepts in art or illustration, why chanting is used in music, or the use of theatrical techniques. Additionally, there was not any mention of standards from another subject area. If evidence of other standards was included and students were assessed on those standards, then a solid argument could be made for a process connection. However, because that component is missing, the best categorization based on the evidence is thematic. That being said, the students did grow quite a bit from not being able to identify symbols and places to being able to illustrate, write, and perform a chant. The growth was more aligned to complexity of learning demonstration on Blooms than it was across content areas.

Teacher #4. Three students in teacher #4's third grade class engaged in a study of adverbs and vocabulary words common to science and music. Two objectives were included in the Portfolio Collection Template document: "The

students will be able to identify and use adverbs within their writing," and, "The students will also be able to use words like pitch, volume, vibration, and sound to describe what it would be like to become a singer when they grow up." The teacher selected the thematic/content integration type, and explained that grammar, science, and music were combined for the two-week unit.

Students defined adverbs, sound, pitch, volume, and vibration "in their own words" for the pre-test. Results of the test naturally divided the students into emerging, proficient, and advanced levels. An example of the differences in the student responses was in the answer to the definition of volume. The emerging student answered, "It goes high and low," the proficient student answered, "Volume is how high or low sound is," and the advanced student answered, "How loud or quiet something is."

Using pre-test results, the teacher designed a unit of study that, among other activities, required students to listen to different types of music and identify sound, pitch, and volume in each song. They also used white boards to write adverbs related to the songs. The students were also exposed to an adverb video from Flocabulary, a teaching tool that combines content from non-arts subjects with music, and makes the songs available, often in hip-hop styles, in video format. The students viewed the video clip several times and learned the adverb song. They also "read a few pages from their science book and discussed sound, volume, pitch, and vibrations and related those to words with the adverb video."

Two weeks after the pre-test, students completed a post-test in which they

defined the words from the pre-test, explained the concepts in further detail, and provided examples of each word. Students also wrote a short paragraph about what it would be like to be a professional singer in which they incorporated the vocabulary words. The advanced student's response to the prompt, "What would it be like to be a singer" showed how understanding of the word definitions and concepts increased over the instructional period:

> If I grew up to be a singer I would sing beautifully. I would use high and low pitch. My voice would vibrate slow and fast. I know this because when something vibrates fast your pitch is high and when something vibrates slowly your pitch is low.

Post-test results showed improvement in the students' abilities to explain the vocabulary words and correctly use them in context. In the post-test evidence discussion, the teacher said, "The students made the connection that the Flocabulary music video helped them define adverbs. The music video also provided a real life connection to the words pitch, sound, volume and vibrations." In answering the reflection question, "What did you and your students think," the teacher said, "I think this unit was very successful. The students felt the lessons were fun; they enjoyed the video, and said it really helped them have a better understanding of adverbs and how to identify them within sentences." The peer reviewer also selected thematic/content integration and commented:

> 2 levels of growth identified as students defined the words and then applied the usage of the terms in a paragraph relating to a real life situation. Another

> higher thinking skill of analysis could have been used if students had listened to various songs to identify and describe the terms in the lesson in the context of the song. Student work shows above average understanding of integrating arts into other subjects.

For the second collection, the entire class participated in a unit based on reading and music objectives. Students identified main idea and supporting details in a song, and worked in groups to rewrite lyrics to well-known songs. As in the first collection, the teacher chose the thematic/content integration type. No explanation was given as to why this type was chosen.

The pre-test required students to listen to 3 songs chosen by the teacher: "The Water Cycle Song," "The Helping Verb Song," and "The Adjective Song." Students were asked to identify and write the main idea in each song and provide a supporting detail. Most students identified the songs, but did not identify the main ideas. Supporting details were also lacking, as several students simply rewrote the song titles.

During the two-and-a-half-week unit, the class listened to songs, and wrote main ideas and supporting details on white boards. In the reflection journal, the teacher described the class activities:

> I played three songs for the students to write the main idea and a detail. During the next two weeks, I played songs for the students to listen to and we identified the main idea and also listed as many details as we could to back up what we chose was the main idea. The students wrote the main idea

> and supporting details to each song on white boards. The students also created a song to perform for the class and the class had to guess the main idea and support it with details.

While music writing and performance was selected as lesson activities, no recordings or videos of the performances were included in the collection. In the Portfolio Collection Template, the teacher explained that students chose skills learned during the school year for their songs, and the choices were the solar system, tens multiplication facts, and forces of motion. Post-test results showed growth in the students' abilities to select the main idea in songs and to provide supporting details for their choices. The teacher noticed that the students "really enjoyed creating the songs" and saw "more growth when including the arts in my lessons."

Due to the absence of musical examples, the peer reviewer chose topic as the connection type. Comments reflected the absence of recordings of or lyrics to student-created songs:

> Teacher narrative mentioned students created their own songs with a main idea in the post assessment, but only student feedback on the pre and post assessment songs was included as evidence. The growth between identifying the main idea in a teacher-selected song and creating a song with a main idea demonstrated was more than expected since students were able to create their own songs following instruction.

Teacher #5. The teacher's first collection, a Type II collection, was based on the performance expectation that students would "identify vocabulary words associated with the food chain using lyrics to a song." Three students were selected to represent emerging, proficient, and advanced performance levels. The teaching tool connection type was selected without any explanation, and music standards were not mentioned.

The pre-test contained lyrics from a Flocabulary song, "Food Chains and the Transfer of Energy." Students were required to complete fill in blank test items, such as, "All things need _____to live." The emerging students correctly filled in three of the twelve total blanks, the proficient student filled in six of twelve blanks, and the advanced student filled in nine of the twelve blanks. In the Portfolio Collection Template, the teacher commented on the pre-assessment results: "All pre-assessments gave a clear understanding of how music without a lot of practice can be hard. The pre-assessments also show how learning new vocabulary takes practice, and a song can help." A video of the students performing the song for the first time was also included. In the video, the students were dancing and moving to the music, but it was obvious they did not know the words.

Over the next two weeks, the teacher played the song every day, and allowed the students to sing along and move to the music. The class also studied the parts of the food chain, answering questions each day as they reviewed the material. As the students progressed through the lessons, the teacher noticed them "improving everyday with practice." She also noted in the reflection document, "The students

were not into the song the first couple of days. After they started learning the majority of the words, they begged me to play it because they were enjoying singing along with it. After two weeks, they improved 100%."

Just over two weeks after the pre-test, the same exam was administered as a post-test. The emerging student missed two words, the proficient student missed one word, and the advanced student posted a perfect score. The teacher attributed the growth to the use of music as a teaching tool: "I learned that music and integrating the arts can improve learning. It makes the students interested and is great for all types of learners. In the future, I will integrate the arts more often." After the post-tests were completed, the teacher also took the extra step of interviewing each student on their experiences during the unit of study. In the following transcript, Student A was the emerging student, Student B the proficient student, and Student C the advanced student:

> 1.) What are the differences between how your classmates performed in the first video and the second video?
>
> Student A : In the first video, no one was singing and in the second video everyone was singing.
>
> Student B: In the first video a lot of people weren't singing, and in the second video almost everyone was singing.
>
> Student C: In the first video, the class did pretty good, but not everybody was singing. In the second video, everyone was loud and singing.
>
> 2.) On a scale 1–10 . . . 1 being the worst and 10 being the best how did your classmates do on the first video?
>
> Student A- 6

Student B- 5

Student C- 9

3.) On a scale 1–10 . . . 1 being the worst and 10 being the best how did your classmates do on the second video?

Student A- 9

Student B- 9

Student C- 10

4.) How did music help you grow?

Student A- It helped the class learn better the more we watched it. Music about the food chain helped me remember what I learned.

Student B- It helped me remember what I learned. My voice got better at singing the more I practiced.

Student C- It helped me learn who eats what and what animal is going to be eaten next.

5.) What did you learn about music?

Student A- I always have to try and sing my best even if it's just me singing.

Student B- Nobody is perfect, but you have to sing it and have fun singing it

Student C- Music can be different. This video was more of a rap/jazzy type. It made me want to get out and dance.

Peer reviewer comments reflected teacher and student thoughts on music being used as a tool for learning:

One level of student growth was identified. Pre-assessment shows students were unfamiliar with food chain words to post-assessment where students identified food chain words. There was no evidence of comprehension or

> application. The students could have memorized the lyrics to the song but not have known what the words meant. Students understood the song was used as a learning tool.

In the second collection, the teacher made a connection to a musical concept through the study of language arts and dance: "The student will identify what sequencing is, explain why it is important in a story, and explain why it is important in dance. The student will sequence a dance move using pictures or writing steps." This Type I collection was conducted with the entire class, and was deemed by the teacher as an example of topic integration.

The teacher's dance background influenced her lesson planning, and during this collection, a local professional dance company visited the school. The dance company staged a school-wide performance, and also worked with the students in her class to teach them popular and classical dance styles. She described in detail her plan to use the experience to teach her students about sequencing:

> For the pre-assessment, I wrote three questions on the board with no instruction or communication about sequencing. Students answered questions and wrote, "I don't know" if they did not know the answer. Before the post-assessment, I reviewed sequencing and connected it to a story and dance. We discussed the importance of sequencing in both. Students also were able to see a ballet company and work with them to learn different types of dances. When finished, we discussed how sequencing related to dance and how it helped me learn the dance moves. The students answered

three questions for the pre and post assessment. They were: 1. What is sequencing? 2. Why is it important in a story? 3. Why is it important in dance? For the post-assessment, students had to create pictures of a dance move they used using sequence. They also had the option of writing the steps out in order.

Results of the pre-test were five students answered all three questions correct, four students answered two of the three questions correct, four students answered one of three questions correctly, and the remaining four students missed all three questions. On several pre-test papers, students wrote, “I don’t know” for at least one answer. Of all the student pre-test papers, one student completely answered each question, and was the only student to provide answers in complete sentences.

The teacher taught lessons that helped students identify sequencing in a story, as well as requiring them to determine and write a story sequence. The arts connection was made through involvement in and discussion about the dance company performance and master class, as well as the musical selections used in the performance. The class also practiced sequencing their own dances by drawing pictures of a dance in sequence from beginning to end.

A post-test was administered two weeks after the pre-test that contained the same three questions. An added step was that students were asked to “draw a picture or write the steps of one of the dance moves you learned with the ballet company using sequence.” Results were fourteen answered all three questions

correct, one student missed one question, one student missed two questions, and one student missed all three questions. For the sequence drawing, twelve of seventeen students were able to adequately represent a dance sequence using pictures and/or words.

The peer reviewer chose the conceptual integration type, and commented on the balance between dance/music and language arts content: "Good balanced lesson of dance and language art concepts and their similarities to each other." The teacher's reflection comments on what she and her students thought about the lesson were positive toward using an art form to teach a language arts concept:

> I thought that learning a dance move in person and relating it to sequencing really helped the students' understanding of the concept. The students enjoyed writing/drawing their sequenced dance moves. They also enjoyed learning how to use sequence to learn a dance.

Teacher #6. The final treatment group teacher's first portfolio collection utilized the 3rd grade language arts standard related to identifying the parts of a book. In the Portfolio Collection Template objectives section, the teacher also included the objective, "Students should use the song that we learn to determine the parts of a book." The same document also included the reasoning behind selecting parts of a book for the unit of study: "This is a skill that is asked on TCAP that a majority of the 3rd grade students are missing." Connecting with the language in the music objective, the teaching tool integration type was chosen. The collection was a

type II collection conducted with 3 students to represent emerging, proficient, and advanced performance levels.

A two-page worksheet on the parts of speech was used as the pre-test. The first page contained 5 multiple-choice items that gave the students short scenarios in which they had to determine the part of a book to use in finding specific information. Item #3 represents the types of items found in this section of the pre-test:

> 3. Ricky is supposed to read Chapter 5 in his social studies book for homework. Where should Ricky look to see on what page Chapter 5 begins?
>
> A. table of contents
> B. index
> C. glossary
> D. title page

The second page of the pre-test presented the students with a fictional table of contents, and ten questions were listed that required the use of the information to formulate short answers. The emerging student missed five of the fifteen total questions, the proficient missed three of fifteen questions, and the advanced student missed two of the fifteen questions.

During the next two weeks, the three students worked as the teacher "used a song" to help teach the parts of a book, and to "help them remember what we use the different parts of a book for." A video of the class singing "The Book Parts Song," which was performed to the tune of the theme from the popular 1960s American television show, *The Addams Family,* was included in the collection, and showed the

class sitting at their desks as they sang the words while reading them from a projected copy of the lyrics:

> Turn to the front (snap, snap)
> Turn to the front (snap, snap)
> Turn to the front, Turn to the front, Turn to the front (snap, snap)
>
> The title page contains / the author and the title
> Plus some other info / about how the book was made
>
> The table of contents / shows the chapter names
> And the page numbers / on which the chapters start
>
> Turn to the back (snap, snap)
> Turn to the back (snap, snap)
> Turn to the back, Turn to the back, Turn to the back (snap, snap)
>
> The glossary is a / little dictionary
> with key words from the book / a-n-d what they mean
>
> The index shows you / key terms from the book
> And the page numbers / where they can be found

A brief explanation of the teaching process was provided in the reflection notes:

> I gave my students a Parts of the Book worksheet to begin. After choosing my three target students, I taught the whole class a Parts of the Book song. The students sang the song for the two weeks. At the end of the two weeks, I re-tested my target students with another Parts of the Book worksheet to see if they improved their scores.

The post-test was different from the pre-test, although it did ask the students to provide information on the parts of books. The test contained five multiple choice

and three short answer questions. Results were the emerging student missed one question, the proficient student missed three questions, and the advanced students correctly answered all questions. After the test was completed, the teacher interviewed the students to find out what they experienced during the lessons. While a transcript was not provided, the teacher commented in the Portfolio Collection template that:

> When I interviewed my students to see if they saw the connection between our pre-assessment and the post, they were able to tell me that the song helped them do better on the post assessment. They were able to sing it in their head to help them identify the parts of a book.

Teacher reflection comments were limited, and primarily reiterated the use of the song as a tool for teaching language arts content. When answering the reflection question on future growth experiences, the teacher said, "I want them to come up with their own song about the parts of a book and add motions to it to teach the class." The peer reviewer also selected the teaching tool integration type, and commented:

> 1 level of growth identified as students progressed from some students not knowing parts of a book to learning the parts of a book through song. The song was used as a tool to learn the terms but no musical concepts were introduced. Ideas for incorporating musical learning could have students composing their own songs about the parts of a book.

The second collection was similar in design to teacher #5's second collection, as both were 3rd grade teachers, and both classes had the opportunity to view a performance from a local professional dance company and work with the dancers in a two-hour master class. The unit objective was, "Students will be able to explain why sequencing is an important step when reading a story and watching dancers tell a story. Students will then tell a story using sequence steps using their own choreography." The teacher selected the topic connection type and explained her choice: "Topic connection was used in this collection. We used excerpts from books and dances to learn why sequence is an important skill that we use in many different ways. "

As in the previous dance/music/language arts lesson, the teacher utilized the same three questions for her pre-test, which was administered to the entire class. Results showed eight students scored 100%, three students scored 66%, six students scored 33%, and two students scored 0%. The teacher noticed, "When I asked the three questions at the beginning, a lot of my students were not sure why it was important for choreography to be sequenced. I had students answer, I don't know. I'm not a dancer."

After the pre-test results were collected, the class watched excerpts from 3 well-known ballets: *The Nutcracker, Sleeping Beauty,* and *Swan Lake.* The class was then divided into groups and assigned the task of creating pantomimes to reflect scenes assigned by the teacher. Students could not talk, but were allowed to include sound effects with their pantomimes. As the groups performed their pantomimes,

the rest of the class was asked to guess the subject of the scenes. Four videos entitled “The Three Little Pigs,” Birthday Party,” “Trick or Treat,” and “Morning Routine” were included in the collection folder. In each video, groups of four to five students acted out scenes as their classmates watched. In “Morning Routine,” a group of five girls pantomimed waking up, getting out of bed, and brushing their teeth. No music was played while students acted out their scenes.

The three questions used in the pre-test were also used in the post-test. Results showed nine students scored 100%, four students scored 66%, two scored 33%, and one student scored 0%. The teacher commented on the impact the viewing of the ballet videos and the pantomime activity had on the students:

> After we watched dance clips and read stories they understood why sequence is an important skill. I observed that they grasped the skill by watching them work with their groups to act out their different scenes. My students thought that acting out their scenes were great. Many of them didn’t realize that while they were working with their group they were actually using sequence steps. For example, I heard students say, “First, we need to figure out our sound effects. Then, we can move on to our dance/ pantomime.”

The peer reviewer chose the teaching tool integration type, and said that, “Dances were used as a tool to introduce the topic of sequencing. An imbalance of evidence of arts integration was found after the students viewed the dances.”

Control and Treatment Group Evaluation Score Data

Along with the rich data provided by the study participants in reflection journal entries, collections of student work, and in the portfolio template document, numerical data from portfolio self scores and peer reviewer scores provided insight into the impact of arts integration professional development, as well as a view into how the self assessment and peer review assessment processes functioned with non-arts teachers.

While the purpose of this results chapter was not to engage in a lengthy statistical analysis of portfolio scores, I found it necessary to use the quantitative data generated from the two portfolio collections to consider the *p* values, or the measure of the impact of training versus non-training, on the two study groups through comparison of average scores. Hattie (2008) conducted meta-analyses of over 800 education studies and reported on the impact of various educational strategies and approaches through a reporting of *p* values. The reporting on *p* values for this study also allows for a measurement of the impact of arts integration professional development on teacher practice and student performance. Table 2 provides all scores, both from the study participants and the peer reviewer, for collection #1:

Table 2

Portfolio Collection #1 Data- Self and Peer Review Scores

Control Group Teacher #	Self Score	Peer Review Score
1	3.6	3.0
2	4.0	3.7
3	3.0	2.7
4	3.7	3.3
Treatment Group Teacher #	Self Score	Peer Review Score
1	4.0	4.3
2	4.3	3.3
3	3.0	3.0
4	4.0	4.3
5	4.3	3.3
6	3.0	3.0

In collection #1, there was not a significant difference (p= .341, 2-tailed) in the averages of scores between teachers receiving arts integration training (M= 3.5333, SD= .60882, *N* = 6) and those receiving no arts integration training (M= 3.172, SD= .42770, *N* = 4). Before collection #1, treatment group teachers received a minimal amount of arts integration training that consisted of a brief session on the Kennedy Center arts integration definition. Treatment group teachers were also provided with a sample language arts and music integrated lesson plan. Both study groups received training on the portfolio collection process. Figure 1 contains data comparing average growth scores between treatment and control groups:

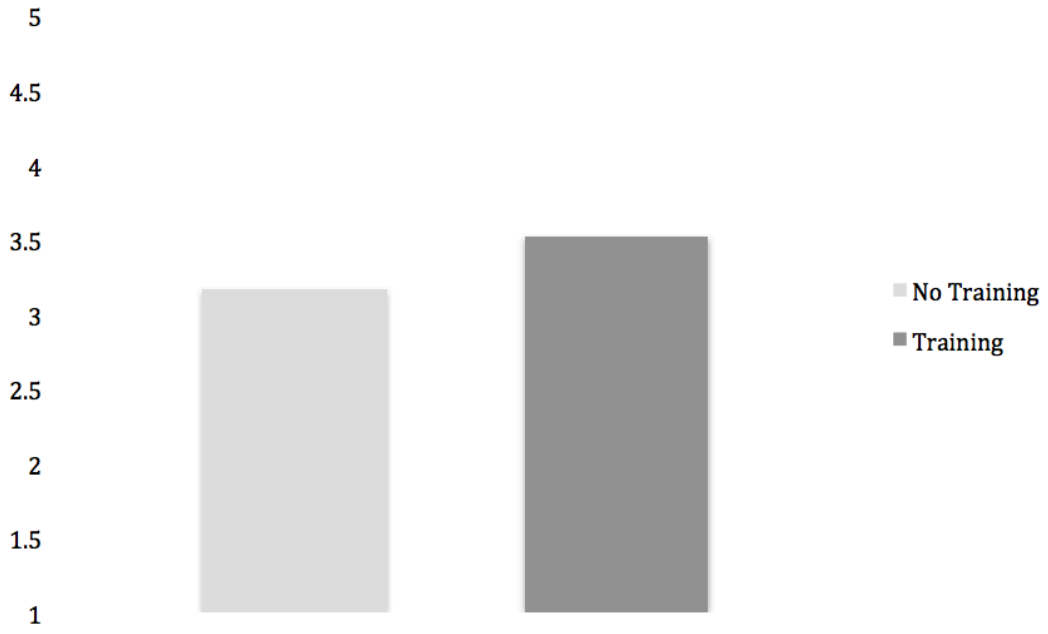

Figure 1. *Training versus no training- collection #1 growth score averages*

Control group teachers averaged a score of 3.172, while treatment group scores averaged 3.530. Due to the limited nature of initial arts integration training, its impact on evaluation scores was not realized in the first collection. The closeness in average scores between the two groups was expected, as none of the participating teachers received arts integration training prior to completing the first portfolio collection.

Table 3 contains integration types selected by each teacher, as well as the integration type as determined by the peer reviewer.

Table 3

Portfolio Collection #1 Data- Integration Types

Control Group Teacher #	Teacher Type	Peer Review Type
1	Theme	Tool
2	Tool	Tool
3	Topic	Tool
4	Tool	Tool
Treatment Group Teacher #	Teacher Type	Teacher Type
1	Process	Process
2	Process	Tool
3	Tool	Tool
4	Theme	Theme
5	Tool	Tool
6	Tool	Tool

Using Wiggins's (2001) interdisciplinary teaching model, scores were assigned by the peer reviewer that corresponded with the observed integration type. While the integration levels and definitions of each were shared with both study groups, to avoid teachers selecting high integration levels to skew growth score averages, their accompanying numerical levels were not shared in any portfolio documents. The majority of teachers selected the same connection type as the peer reviewer, and no significant differences between teacher-selected and peer reviewer-selected integration types were found. The data also showed the majority of teachers from both study groups integrated music with language arts at a low level. Eight of the ten teachers were evaluated by the peer reviewer as integrating music as a teaching tool, the lowest level of arts integrated teaching.

The teacher-selected integration types were reflected in the language used by teachers when explaining their collections. With the exception of control group

teacher #1, all other control group teachers selected the teaching tool integration type. As evaluated by the peer reviewer, all four collections contained examples of teaching tool integration. Phrases such as, "I gave the students lyrics," "Music is used as a teaching tool," and, "Using the music video" were included in control group teacher reflections and in the Portfolio Collection Template document. The highest scoring teachers, treatment group teachers #2 and #8, used language such as, "Students will create and perform a song," and, "We discussed sound, volume, pitch, volume, and vibration." Both teachers also included music standards alongside language arts and science standards.

Between collections 1 and 2, treatment group teachers received arts integration professional development. The session consisted of an analysis of the Kennedy Center definition of arts integration, analysis of the five-level interdisciplinary learning continuum proposed by Wiggins (2001), and examples of arts integration lessons that requires students to integrate music with language arts at the concept and process levels. Treatment group teachers were also required to read a white paper from the Kennedy Center, *Defining Arts Integration*, and Robert Wiggins's (2001) article, *Interdisciplinary Curriculum: Music Educator Concerns.* Control group teachers received no additional professional development.

Collection #2 data showed a significant difference (p= .017, 2-tailed) in treatment group scores (M= 3.8267, SD= .69647, N = 6) and control group scores (M= 2.7450, SD= .17000, N = 4). Average scores of treatment group teachers grew over one unit of growth on the portfolio model growth scale, while control group

average scores decreased and dropped below the level of one unit of growth. All treatment group teachers scored 3 or above in peer review scores, whereas 75% of the control group teachers scored below 3:

Table 4

Portfolio Collection #2 Data- Peer Review Growth Scores

Control Group Teacher #	Self Score	Peer Review Score
1	3.0	2.6
2	4.0	3.0
3	3.5	2.6
4	3.0	2.6
Treatment Group Teacher #	Self Score	Peer Review Score
1	5.0	5.0
2	4.0	4.0
3	3.0	4.0
4	4.0	3.3
5	4.6	3.6
6	4.0	3.0

Along with the increase in treatment group scores, the integration levels also increased. Part of the professional development received by treatment group teachers between collections #1 and #2 stressed the importance of planning activities to engage students in integrating music at higher levels as determined by Wiggins's 5-level interdisciplinary connection model.

Table 5

Portfolio Collection #2- Integration Types

Control Group Teacher #	Teacher Type	Peer Review Type
1	Theme	Tool
2	Tool	Tool
3	Topic	Tool
4	Tool	Tool
Treatment Group Teacher #	Teacher Type	Teacher Type
1	Theme	Theme
2	Process	Tool
3	Process	Thematic
4	Theme	Topic
5	Topic	Concept
6	Topic	Tool

As in collection #1, all control group teachers taught lessons or units that required students to integrate music with language arts at the teaching tool level. While this is the most common way teachers require students to integrate music and other art forms, it is the least effective (Bresler, 1995). The majority of treatment group teachers required students to integrate music at the theme level or above, and 50% of the teachers documented students integrating music at the conceptual and process connection levels, the highest levels of interdisciplinary learning.

Graphed data from the second portfolio collection showed a wider gap between control and treatment group average scores when compared to the first collection:

Figure 2. *Training versus no training- collection #2 growth score averages*

Treatment group teachers integrated music at a higher level, and as a result, average scores increased, while control group averages remained within half a point of the collection #1 average.

In the TFASGM, portfolio scores determine growth levels for students, as well as effectiveness levels of teachers. These scores replace growth and effectiveness scores taken from calculations based on student performance on standardized tests. My goal for this study was to analyze both qualitative and quantitative data to reach conclusions on the effectiveness of the portfolio model in non-arts classrooms, and the impact of arts integration training on teaching practice. Using the processes embedded in the TFASGM, the portfolio scores showed a marked difference between

control and treatment group score averages after receiving arts integration training. and implementing some practices of arts integration over a 2–3 week period. An interesting trend that emerged in my analysis of the data was the correlation among portfolio scores, self-selected integration types, and the verbiage used by teachers as they described what they and their students did in the course of the integrated lessons and study units. Bresler (1995) mentioned the use of language as related to arts integration levels, as teachers who integrate at the teaching tool level often do not consider music as a stand-alone subject when using it to deliver content in other curricular areas.

As evident in the portfolio data, some level of growth was measured in arts integration student work, regardless of the level of teacher professional development. Throughout the study, all study participants had access to a portfolio training video, and could refer to it at any time when questions arose. Neither the peer reviewer nor I observed user error among study participants from either study group in the collection and documentation of student work. However, there were several instances in control group portfolios where music was used in lessons without any evidence of its use. The lack of recorded music, student written lyrics, or photos of students creating music, was observed in all control group portfolios containing examples of teaching tool integration.

All study participants followed portfolio protocols concerning student confidentiality and suggested time intervals between pre and post student testing. Names on student documents were redacted, or documents were coded with

numbers. The recommended length of time between pre and post testing was also shared with teachers in the scoring rubric. Among both study groups, the average time between pre and post testing was 2.5 weeks.

Conclusion

As discussed in the literature review and methodology chapters, the concept of using a portfolio model to measure teacher effectiveness, or any model that involves use of student testing to determine teacher effectiveness levels, is a topic fraught with controversy. Nevertheless, as the model was implemented in accordance with procedures and structures approved by the State of Tennessee, the model functioned as intended, and did measure some degree of teacher effectiveness. In preparing teachers to engage in using the model to measure arts integration student growth, the measurement of effectiveness was not extensively discussed. Language relating to effectiveness levels, which was taken from the TFASGM and modified to include language on the linking of music with another subject, was included in the scoring rubric. The lack of extensive discussion on my part with teachers concerning effectiveness was intentional. I was aware that teachers had very strong opinions related to student growth and effectiveness levels, and I did not want any past experiences with the use of TVAAS or standardized test scores for measuring their effectiveness to taint their attitudes toward the study. I did mention the evaluation language contained in the scoring rubric in my initial meetings with control and treatment group teachers.

Along with the quantitative results above, qualitative observations from the

peer reviewer mirrored the scoring and growth patterns contained in the effectiveness level data. After all portfolios were scored, the peer reviewer commented she did not observe large differences in growth among collection #1 portfolios. Without knowing the differences in treatment and control groups, she was able to observe the similarity in the types and levels of growth. After collection #2 was scored, the peer reviewer was "able to clearly see which group received training and which did not" (Peer Reviewer, personal communication, May 31, 2015).

Beside the differences in growth scores among the two study groups, the student portfolio data and teacher reflections comments also provided evidence of the effect of arts integration professional development. First round collections were largely similar in the types of data submitted, as well as the wording and phrases used by teachers when describing the data. Second round portfolio collection data remained largely static in the control group, but treatment group data revealed a higher level of understanding of the arts integration process. For example, treatment group teacher #2 submitted a second portfolio collection filled with evidence of opportunities for students to create, explore, analyze, and evaluate music and musical elements. While her first portfolio submission contained words in the reflection document such as "create" and "perform," the end products were judged as containing examples of teaching tool integration. This was due to the teachers' application of music, and what students were asked to do with music. In contrast, the second collection reflections, while also containing the same words,

contained evidence that students made connections with another subject as they engaged in a creative process. This evidence of growth, coupled with the growth in portfolio scores, was found throughout the collections of treatment group teachers, and they together make a solid case for the positive impact of arts integration professional development on student growth and teacher effectiveness. The collection, reporting, and evaluation format of the Tennessee Fine Arts Student Growth Measure allowed compelling evidence of student growth and teacher effectiveness to be captured in non-arts classrooms, and the data speaks to the viability of this model to document arts integration teaching and learning processes in a manner that is more congruent with the arts than standardized test reporting.

Chapter Five: Conclusions and Recommendations

At the outset of this dissertation, the need for an alternative measure of student growth and teacher effectiveness in arts integrated classrooms was presented, along with the need to gauge the effectiveness of arts integration professional development. Together, these served as the basis for three research questions:

1. Is there a significant difference in student growth in classrooms where teachers receive arts integration training versus those classrooms where teachers receive no training?
2. How can the TFASGM be effectively utilized to measure student growth in arts integrated classrooms and provide valuable teacher effectiveness data?
3. How do teachers, using data from the TFASGM, examine and reflect upon their teaching practice and make adjustments to instruction?

The results of this study show a significant difference in student growth in classrooms where teachers receive arts integration training. The targeted, intentional training offered to treatment group teachers produced, as measured by self scores and peer reviewer scores, greater growth in arts integrated lessons than the growth found among control group teachers. The qualitative data found in the portfolio documents and the reflective practice journals also exhibited a difference in how teachers talked about the integration of music with language arts content. Treatment group teachers tended to discuss integration at the conceptual and process levels, while control group teachers discussed the lessons and assessments

at the teaching tool and topical levels.

All study participants reflected on their collections by using the Kolb Cycle of Experiential Learning (1984) document. Teachers used data collected from peer reviewer scores and comments, as well as student growth data collected in pre- and post-test results, to reflect on classroom practice and make adjustment as needed. Although treatment group teachers' reflective practice data showed more growth in arts integration learning and implementation of strategies, control group reflective practice data did exhibit an awareness of the level of arts integration present in student work.

The manner in which the portfolio model was used to measure student growth and teacher effectiveness addresses the question of how arts integration teaching and learning may be measured without reliance on standardized test scores. The results produced in this study are similar to those found in fine arts portfolio measures of student growth (Parkes, Rowher, & Davison, 2015). In this sense, the model functioned just as it does with fine arts teachers. It captured examples of student growth through pre and post student testing in a variety of settings, and these examples were self scored and scored by a peer reviewer. With the exception of one collection, all self and peer reviewer scores were in alignment, and no discrepancies were found in any collections that led to further investigation by the peer reviewers.

One notable difference between the TFASGM and this study model was the requirement of a teacher reflective practice journal, and the inclusion of reflective

practice in the evaluation process. In my analysis of portfolio collections, the reflective practice documents were invaluable in determining the thought processes of the teachers, and the impact of arts integration teaching and training on their planning and assessment strategies. As noted in the previous chapter, the peer reviewer also commented on the usefulness of reflective practice documentation. It was interesting to see through student work collections what teachers actually taught versus what they said they taught. Any replication of this study must include a reflective practice component, as the data generated from its inclusion formed an integral part of this study's conclusions.

Another significant difference was that as each collection was received, it was scored by a peer reviewer, and scores were immediately shared with the study participants. The Tennessee TEAM teacher evaluation model offers teachers the ability to receive scores and feedback as observations are conducted, and state departments of education should consider adopting this strategy as they adapt and implement the TFASGM in a variety of classroom and instructional settings. The immediacy of portfolio scores and peer reviewer feedback were effective in helping teachers to make adjustments in instruction, and provided peer reviewer feedback and portfolio scores that provided study participants much-needed guidance as they prepared to collect evidence for the second portfolio evidence collections.

The findings that teachers receiving arts integration professional development produced higher student growth numbers than those not receiving arts integration professional development imply several things. The importance of

focused, intensive arts integration professional development cannot be overstated. As teachers begin the process of integrating music into language arts content, specific training on how to mesh the two subject areas together must be closely considered and planned before the beginning of arts integration teaching. Control group teachers, which did not receive arts integration professional development, nevertheless taught arts integrated lessons. However, the type of integration was at the lowest level, and without instruction, the level did not progress in the second collections. Treatment group teachers showed growth in the level of arts integration training between the first and second collections, which was a direct result of arts integration training. In this study, the arts integration professional development was focused on improving levels of arts integration and in providing more substantial evidence of the presence of student growth in arts integrated lessons. While generalized arts integration professional development can be effective, for the purposes of assisting teachers in making the connection between arts integration teaching and the documentation of student learning through the portfolio process, training specific to both areas is necessary. The process of arts integration learning mirrors the portfolio collection process in that both are ongoing, both require planning and careful attention, and both are process-based systems with observable, measurable outcomes.

These results align with findings in the Shelby County Schools Arts Infusion project evaluation, which showed a positive correlation between teachers receiving arts integration professional development and higher TEAM evaluation scores as

measured against the scores of teachers who received no training (Lee, 2012). The need for professional development and training in arts integration exhibited in this study is supported by Bresler (1995), who called for the increase of instruction in teacher preparation programs. The Kennedy Center CETA program, a model of arts integration used throughout this study, heavily stresses high-quality, sustained arts integration professional development as a central part of success in arts integration teaching and learning (Silverstein, Duma, & Layne, 2001). While the professional development offered in this study was not sustained, nevertheless, its impact was measured in the portfolio scores and in the types of arts integration collections submitted for review. The results of the *p* value analysis of portfolio scores support the need for professional development in arts integration types and teaching approaches, as well as in portfolio documentation and collection processes.

This study used readily available arts integration resources, such as the Kennedy Center ArtsEdge website[2] and research by Robert Wiggins (2001) into the levels of interdisciplinary learning. The Wiggins five-point interdisciplinary model aligned with the five-point portfolio growth model, and it provided treatment group teachers with a link between the types of arts integration and the levels of growth observed during teaching and assessment. The observed levels of arts integration student involvement and thinking correlated with Wiggins's five levels of interdisciplinary learning as observed in student work artifacts and as identified by the peer reviewer.

The portfolio model functioned the same as the TFASGM, as all of the

procedures found in the fine arts model were implemented in this study. One advantage in using a tested, proven model was that many of the glitches inherent in any new educational program or initiative had previously been identified and rectified. The addition of a reflective practice component added a completely new set of data from which to draw, and it provided the perspective necessary to make conclusions on the levels and growth of arts integration classroom work. The results of this study suggest the inclusion of reflective practice in the TFASGM may be beneficial in strengthening the potential of the model to provide individualized professional development and growth to its users. As in this study, the addition of a reflective practice component would also provide peer reviewers, district fine arts officials, school level administrators, and other policymakers, a rich and relevant cache of data directly related to teacher classroom experiences and teacher practice.

All qualitative data, including reflective practice writing and data from other portfolio documents, largely reflected the levels of arts integration understanding of the study participants. The documents revealed information unavailable in portfolio scores, and offered a view into the processes of learning and student growth. The peer review process also generated useful qualitative data that is unavailable in other similar data found in existing arts integration program evaluations. Data from these sources showed that while study participants grasped the portfolio collection and documentation processes, the difference in how teachers integrated music with language arts content stemmed from the presence or absence of arts integration professional development. The alignment of quantitative portfolio scores and

qualitative data trends further suggests the need for instruction in arts integration teaching and assessment strategies.

The final implication relates to the writings and opinions of John Dewey, which are often noted in arts integration books, articles, and program justifications. Dewey spoke and wrote about the correlated curriculum several times (1916, 2014), including in his pedagogic creed. In this document, he made a clear statement that there should be no succession of studies in the ideal school curriculum (Dewey, 1897). He also said no ends should be set up outside education, including goals and standards.

I suggest the portfolio model as applied in this study, while not completely fulfilling Dewey's vision, aligned with his views on education and the correlation of curriculum. The portfolio model accurately captured growth through providing a window into the learning process, and at the same time, providing valuable information on how the teacher structures, delivers, and assesses the content. If Dewey's idea of the correlated curriculum is the goal, then a system of measuring growth that considers and utilizes curriculum as evidence for the levels of correlation is more in line with his vision than other methods of determining student growth or achievement.

Implications for the Profession

This study was designed to introduce an established method for measuring student growth and teacher effectiveness into the realm of arts integration program research and evaluation. In Tennessee and in several other states, portfolio models

are implemented in non-tested grades and subjects as methods of measuring student growth that rely on authentic student work artifacts collected at different points in time throughout the school year. Along with the numerous studies on arts integration that rely on the analysis of standardized test scores to measure the impact of arts integration professional development, this study should also be carefully considered by teachers and school leaders as a model for measuring student growth and teacher effectiveness in arts integrated classrooms. As implemented, the fine arts portfolio model functioned as designed, and the evidence of student growth and teacher effectiveness was evident to the study participants and the peer reviewers.

With the recent mention of music and the arts in the Every Student Succeeds Act (2015) as part of a well-rounded education, policymakers should view these results as an indication of the power and validity of the portfolio review process in documenting and measuring student growth in arts integration classrooms, and as a roadmap for offering an authentic evaluation tool that may also serve as a guide for professional development planning and implementation. The finding of the need for high-quality arts integration training relates to policymakers and district and state education leadership in that, if districts and state departments of education seek to implement arts integration programs, they must include adequate opportunities for teachers to receive professional development in arts teaching and assessment strategies.

This model exists only because a group of teachers decided to seek a more

authentic way to measure student growth and teacher effectiveness, and the fact that the model was teacher-created and teacher-led was not lost on the study participants. During a time of year when schools were preparing for high-stakes tests, 11 teachers excitedly accepted the challenge of documenting two multi-week units that integrated music with another subject area. Despite the limitations of sample size and grade levels, all study activities were carried out in the context of daily teaching and student learning, and the results reflect the daily work of teachers integrating music with language arts concepts and skills.

Need for Further Research

The findings of this study represent a substantial first step in establishing a new arts integration evaluation model that relies on student classroom work instead of performance on standardized tests. As implemented, the model captured student growth in a variety of language arts and music skills and concepts. Along with measuring student growth, the model also captured data related to teacher effectiveness. The study and its results provide a framework for those seeking to implement a portfolio-based arts integration evaluation model.

The results also provide new insight into the experiences of teachers and students as they participated in arts integrated lessons, and how student work may be used to make conclusions about student growth, teacher effectiveness, and the impact of arts integration professional development. Several current topics in teacher evaluation and arts integration are addressed, and as such, this study carries implications for several constituencies within the greater arts integration

community.

This study was limited to eleven teachers working in two schools that are located in the same school district, and the study period lasted about three months. Further research with the portfolio model in non-arts classrooms should involve more teachers working in different school districts participating in a full academic year study. A longer study with more teachers would help to further validate the results obtained in this study, as well as to more closely reflect the nature of documenting student growth over an entire academic year. A yearlong pilot of the portfolio model would also allow for more extensive professional development and research on the Wiggins model and how it is congruent with portfolio student growth levels.

The successful use of a state-approved student growth and teacher evaluation model in arts integration classrooms offers a viable alternative to reliance on standardized test results, and reveals the need for further study of its use through a wide scale evaluation pilot. Using the tools and strategies provided, all study participants captured student growth in arts integrated lessons and units of study. The results of this study indicate the model's flexibility in implementation with minimal modifications. The collection and scoring processes worked similarly to those found in the TFASGM, and it is entirely possible to use this study as a template for piloting a district- or state-wide study on the use of portfolio growth measures in arts integrated classrooms.

As a direct outgrowth of this study, in early 2015, I applied for and received a

3-year Arts360 Arts Integration grant from the Tennessee Arts Commission. A central part of the grant program's evaluation plan is the use of a portfolio system to document student growth in arts integrated lessons and units, a system of measuring student growth and teacher effectiveness that the state of Tennessee is currently considering expanding to all non-tested grades and subjects. I designed the portfolio evaluation model based on the results of this study, and final project evaluation results from the Arts360 grant program will be published in the summer of 2020. These results will add to the growing body of knowledge and research on the use of portfolio models in a variety of settings, and the results will further establish the fine arts portfolio model as a viable method for measuring student growth and teacher effectiveness in non-arts classrooms.

Endnotes

[1] The portfolio training video provided all participants an overview of the portfolio collection and student growth documentation process. To view the portfolio instructional video, visit http://aistudy.weebly.com

[2] The Kennedy Center ArtsEdge website was made available to all treatment group teachers as a resource for planning and instruction. The website address is https://artsedge.kennedy-center.org

Appendix A
Email Script Form

MEASURING ARTS INTEGRATION TEACHER EFFECTIVENESS IN NON-ARTS CLASSROOMS THROUGH STUDENT GROWTH

Email Recruitment Script

Hello! My name is Brad Foust, and I am a doctoral student at Boston University. I am currently recruiting subjects for my research study, "Measuring Arts Integration Teacher Effectiveness and Student Growth in Non-Arts Classrooms.

The proposed study involves the collection of student work to show growth in language arts skills through involvement in music activities, documentation of this work through pictures, documents, audio files, or other electronic means, and uploading of files to a dedicated portfolio website. Each of the 2 to 3 collections requires a 3–5 hour time commitment for documentation, uploading, and scoring.

I am asking you to integrate music into language arts content, and document growth by collecting pre and post-test data. I am planning to begin the study in late February or early March, and will conclude the study at the end of the school year. During that time, you will collect 2 to 3 sets of pre-post data to show growth in language arts skills. You will also be supplied with a rubric that will guide them through the process. The portfolio collections will be self scored, and will also be scored by a peer reviewer.

At this point, I only need forms returned from teachers that may be interested in participating. When I receive a sufficient number of forms, I will set up a meeting where I will share more information about the study. I will also distribute a consent script at this meeting, as well as the scoring rubric. The forms may be returned to me via email or via district mail.

Please let me know if you have any questions.

Regards,

Brad Foust

Appendix B
Research Participant Consent Form

Measuring Arts Integration Teacher Effectiveness in Non-Art Classrooms Through Student Growth

Research Participant Consent Form

Introduction

Please read this form carefully. The purpose of this form is to provide you with important information about taking part in a research study. If any statements or words in this form are unclear, please let me know. I am happy to answer any questions.

If you have any questions about the research or any portion of this form, please ask me. Taking part in this research study is up to you. If you decide to take part in this research study I will ask you to sign this form. I will give you a copy of the signed form.

The person in charge of this study is Brad Foust, Title I PLC Coach at Bartlett Elementary School. Mr. Foust's dissertation advisor at Boston University is Dr. Julian Humphreys. Brad can be reached at 901-483-4428**,** or at bfoust@bartlettschools.org**.** Dr. Humphreys may be reached at humphreysjulian@gmail.com**.** Mr. Foust will be referred to as the "researcher" throughout this form.

Why is this study being done?

The purpose of this study is to establish and evaluate a model for measuring student growth and teacher effectiveness in arts integrated classrooms through implementation of the Tennessee Fine Arts Student Growth Measure.

I am asking you to take part in this study because you an elementary classroom teacher, and the study will measure teacher effectiveness and student growth in language arts skills taught through the use of the arts in elementary classrooms. About 12–15 elementary classrooms teachers will take part in this study.

How long will I take part in this research study?

We expect that you will be in this research study for 5 months. During this time, you are required to collect, upload and score at least 3 portfolio collections containing

pre/post tests that document student growth through arts involvement in language arts content.

What will happen if I take part in this research study?

If you take part in the study, you will receive training in the portfolio collection process. One study group will receive arts integration professional development. You will also teach at least 3 lessons/units that integrated at least one art form into the teaching of language arts skills/concepts. As you teach each lesson/unit, you will administer pre and post assessments to document student growth through arts involvement in language arts skills/concepts. The documentation will be collected into 3 portfolio collections and uploaded to a dedicated portfolio website. You will score each collection for growth on a 1 to 5 scale. An arts integration peer reviewer will also score your portfolio collections. As part of the research process, you will also participate in reflective practice through journal writings. As each portfolio collection is scored and results are reported, you will reflect on the scores as you plan to teach the next arts integrated lesson.

As a participant, you will be assigned to one of two study groups. If you are assigned to the treatment group you will also participate in at least 2 arts integration professional development sessions at Bartlett Elementary School. If you agree to take part in this study, I will ask you to sign the consent form before I do any study procedures.

<u>Portfolio Collection Training Session</u>

A 1-hour portfolio training session will be held for all participants at Bartlett Elementary School

<u>Arts Integration Training Sessions</u>

One study group will also participate in at least two arts integration training sessions at Bartlett Elementary, or at another location of the researcher's choosing. Each session will last approximately 1 ½ to 2 hours.

<u>Portfolio Collections</u>

Each study participant will complete at least 3 portfolio collections of student work. These collections will, at the least, contain pre and post tests on language arts content that demonstrate growth through involvement in at least one art form. The process of collecting, uploading, and scoring each collection will take 3–5 hours per collection.

Sending Study Information to Research Collaborators Outside Boston University

I will send your study information via the GLADiS portfolio scoring site to research collaborators outside Bartlett City Schools. I will label all your study information with a code instead of your name. The key to the code connects your name to the study information. The researcher will keep the key to the code here at Boston University and will not share it with our research collaborators. Nobody outside of Boston University will know which study information is yours.

How Will You Keep My Study Records Confidential?

I will keep the records of this study confidential by coding all portfolio collections with identifiable numbers instead of participant names. I will make every effort to keep your records confidential. However, there are times when federal or state law requires the disclosure of your records.

The following people or groups may review your study records for purposes such as quality control or safety:

- The Researcher and any member of his research team
- The Institutional Review Board at Boston University. The Institutional Review Board is a group of people who review human research studies for safety and protection of people who take part in the studies.
- The sponsor or funding agency for this study
- Federal and state agencies that oversee or review research

The study data will be stored online via a secure website (GLADiS).

The results of this research study may be published or used for teaching. We will not put identifiable information on data that are used for these purposes.

Study Participation and Early Withdrawal

Taking part in this study is your choice. You are free not to take part or to withdraw at any time for any reason. No matter what you decide, there will be no penalty or loss of benefit to which you are entitled. If you decide to withdraw from this study, the information that you have already provided will be kept confidential.

Also, the researcher may take you out of this study without your permission. This may happen because:

- The researcher thinks it is in your best interest
- You can't make the required study visits
- Other administrative reasons

Are there any benefits from being in this research study?

Participants may not benefit from taking place in this research study. Possible benefits to the field of education include the establishment of a growth evaluation model in arts integration classrooms that focuses on student work to demonstrate growth and teacher effectiveness.

What alternatives are available?

You may choose not to take part in this research study.

Will I get paid for taking part in this research study?

I will not pay you for taking part in this study.

What will it cost me to take part in this research study?

There are no costs to you for taking part in this research study.

What happens if I am injured as a result of participating in this research study?

If you are injured as a result of taking part in this research study, we will assist you in getting medical treatment. However, your insurance company will be responsible for the cost. Boston University does not provide any other form of compensation for injury.

If I have any questions or concerns about this research study, whom can I talk to?

You can call me with any concerns or questions. My telephone number is listed below:

Brad Foust
Title I PLC Coach
Bartlett Elementary School
901-483-4428
bfoust@bartlettschools.org

Dr. Julian Humphreys
Dissertation Advisor
Boston University
humphreysjuilan@gmail.com

If you have questions about your rights as a research subject or want to speak with someone independent of the research team, you may contact the Boston University IRB directly at 617-358-6115.

Statement of Consent

I have read the information in this consent form including risks and possible benefits. I have been given the chance to ask questions. My questions have been answered to my satisfaction, and I agree to participate in the study.

SIGNATURE

_____
Name of Subject

_____ _____
Signature of Subject Date

I have explained the research to the subject and answered all his/her questions. I will give a copy of the signed consent form to the subject.

_____
Name of Person Obtaining Consent

_____ _____
Signature of Person Obtaining Consent Date

Appendix C
Pre-Research Screening Form

MEASURING ARTS INTEGRATION TEACHER EFFECTIVENESS IN NON-ARTS CLASSROOMS THROUGH STUDENT GROWTH

Pre- Research Screening Form

The proposed study involves the collection of student work to show growth in language arts skills through involvement in music activities, documentation of this work through pictures, documents, audio files, or other electronic means, and uploading of files to a dedicated portfolio website. Each of the 2 to 3 collections requires a 3–5 hour time commitment for documentation, uploading, and scoring.

If you agree to participate, please complete this pre-research survey. This survey will assist the principal investigator in choosing suitable study candidates. Please answer the following items as truthfully as possible. All information gathered from the survey will be kept confidential. Names and other identifying information will not be reported.

Name _____

School_____

Grade Level _____

Email Address _____

Total Number of Years of Teaching Experience _____

Describe your background in the arts (music, visual art, theatre, or dance)

_____

Have you attended any arts integration or arts infusion professional development sessions? If so, what sessions?

_____

_____

Do you regularly incorporate the arts in your teaching of language arts skills and concepts? If so, how?

_____

_____

Please return this form to Brad Foust via email at: bfoust@bartlettschools.org

Appendix D
Portfolio Scoring Rubric

Portfolio Scoring Rubric

Indicator	5	4	3	2	1
Level of Growth	Student work shows exemplary growth in pre-post data.	Student work shows above average growth in pre-post data.	Student work shows average growth in pre-post data.	Student work shows below average growth in pre-post data.	Student work shows little or no growth in pre-post data.
Language Arts/Music Connection Level	Student work shows advanced understanding of language arts concepts through music.	Student work shows above average understanding of language arts concepts through music	Student work shows average understanding of language arts concepts through music.	Student work shows minimal understanding of language arts concepts through music.	Student work does not show understanding of language arts concepts through music.
Standards and Objectives	Student work shows advanced mastery of integrated standards and objectives.	Student work shows above average understanding of integrated standards and objectives.	Student work shows average understanding of integrated standards and objectives.	Student work shows below average understanding of integrated standards and objectives.	Student work shows little or no understanding of integrated standards and objectives.

The Five Types of Connections (please choose one when reporting scores)

Teaching-Tool Connections- One discipline is subservient to another, and there is an imbalance between arts and non-arts content. An example is using music to teach the alphabet. While important language arts content is learned, little is learned about music.

Topic Connections- One subject is used to clarify another. An example is reading about Beethoven in language arts class to teach fluency and comprehension skills.

Thematic or Content Connections- The arts are integrated through themes and specific content. An example is a unit study of the old west that includes musical connections.

Conceptual Connections- Concepts common to language arts and music are explored. Examples are conflict and resolution and story structure in literature and music.

Process Connections- The connections focus on how student engage with language arts and music. An example is reading, writing, and listening to music that requires students to analyze, classify, connect, evaluate, and create.

How Is Growth Calculated?

Level 1- **Significantly Below Expectations**- No/limited student growth
Level 2- **Below Expectations**- on average, less than one level of student growth
Level 3- **At Expectations**- On average, one level of student growth
Level 4- **Above Expectations**- On average, more than one to less than 2 levels of student growth
Level 5- **Significantly Above Expectations**- Two levels of student growth, and evidence of at least one of the following: meta-cognitive processes; independence and risk-taking; creating and designing; analysis and self-evaluation of work.

Student Growth and Teacher Effectiveness

In the rubric, *growth* is shown through pre and post-test student work collected at two points in time. Pre/post data must be present that is adequately aligned (objectives, standards and content remain consistent throughout). A minimum of 2 weeks must exist between the collection of pre and post data to show adequate growth. Levels of growth equate to expected growth versus actual growth. How much would students normally grow in the course of a lesson, unit, or semester? Lessons or units must also show balance between language arts and music standards, concepts, and assessments. Taking all these requirements into consideration, the teacher and peer reviewer will consider expected student growth and teacher effectiveness in producing growth when calculating scores.

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Appendix E
Portfolio Collection Template

PORTFOLIO COLLECTION TEMPLATE

Grade Level/ Course	
***Portfolio Collection Type (I or II)**	
Objective(s): What will students know and be able to do at the end of the instruction?	
Integration/Connection Type (choose one)*:* *Include a justification for why the type is selected based on the relationship between language arts and music standards and objectives*.	___ Teaching Tool ___ Topic ___Thematic/Content ___ Conceptual ___Process
Student Evidence (Point A) • When is the assessment taking place? • What criteria are being used to measure the objectives before and during instruction? • How does the data collected from the pre-assessment correspond to the objective?	
Student Evidence (Point B) • When is the assessment taking place? • What criteria are being used to measure the objectives following instruction? • How do the data collected from the post-assessment correspond to the objective? • Will there be additional evidence between point A and B? • How did students make a connection between Points A and B?	
Teacher Self Score	

Appendix F
Portfolio Timeline

Timeline and Deadlines

Starting 3/9/15

Task	Due Date
Complete Portfolio Training Video	3/15/15
Complete collection #1	4/2/15
Upload to Dropbox	4/10/15
Start collection #2	5/4/15
Complete collection #2	5/22/15
Upload to Dropbox	5/29/15

Starting 3/23/15

Task	Due Date
Complete Portfolio Training Video	3/23/15
Complete collection #1	4/10/15
Upload to Dropbox	4/17/15
Start collection #2	5/4/15
Complete collection #2	5/22/15
Upload to Dropbox	5/29/15

Appendix G
Portfolio Teacher/Peer Reviewer Scoring Form

Portfolio Teacher/Peer Reviewer Scoring Form

Portfolio Collection # _____ Scoring Date: _____

Rubric Indicator	**Score**
Arts Integration Type (Teaching Tool, Topic, Thematic/Content, Conceptual, or Process)	
Level of Growth (1 to 5)	
Language Arts/Music Connection Level (1 to 5)	
Standards and Objectives (1 to 5)	
Score Average	
Comments:	

Appendix H
Teacher Journal Template

Kolb Cycle of Experiential Learning

Teacher Journal Template

Please complete and submit with each portfolio collection.
Please be as descriptive as possible.

Concrete Experience- What did you do? What did your students do?	
Reflective Observation- What did you observe?	
Abstract Conceptualization- What did you think? What did your students think?	

Appendix I
NCAS Music Anchor Standards

National Core Arts Standards
Music Anchor Standards

Create

Anchor Standard #1. Generate and conceptualize artistic ideas and work.

Anchor Standard #2. Organize and develop artistic ideas and work.

Anchor Standard #3. Refine and complete artistic work.

Perform

Anchor Standard #4. Analyze, interpret, and select artistic work for presentation.

Anchor Standard #5. Develop and refine artistic work for presentation.

Anchor Standard #6. Convey meaning through the presentation of artistic work.

Respond

Anchor Standard #7. Perceive and analyze artistic work.

Anchor Standard #8. Interpret intent and meaning in artistic work.

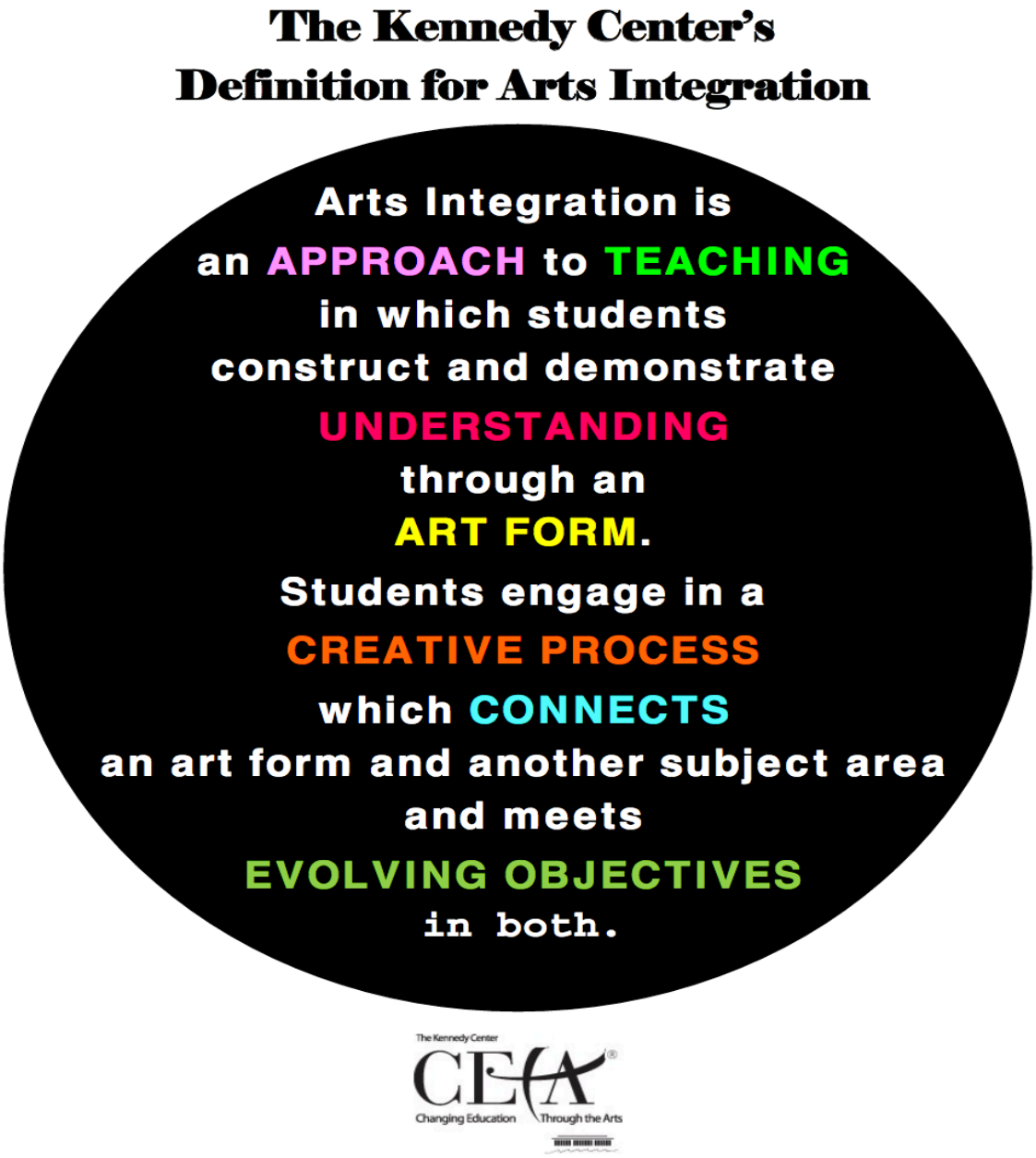
Anchor Standard #9. Apply criteria to evaluate artistic work.

Connect

Anchor Standard #10. Synthesize and relate knowledge and personal experiences to make art.

Anchor Standard #11. Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.

Appendix J
Kennedy Center Changing Education Through The Arts (CETA) Arts Integration Definition



Appendix K
Arts Integration Lesson Plan Example

Arts Integration Lesson Plan Example

Title of lesson: Little Drummer Boy: What Can We Give?
Content Area(s) other than Arts: Other than art and music, this lesson involves character education and writing skills.
State Content Standards for the above: GLE 0101.3.1 Compose simple stories with a clear beginning, middle, and end. **0101.3.5** Arrange events in a logical and sequential order when writing. **0101.3.11** Illustrate written work with simple drawings.
Art or Arts you plan to infuse in this lesson: Music, Visual Art
State Arts Content Standards: Art: 6.1 Gain an awareness of connections between visual arts and other disciplines. **Music** 1.1 Sing simple songs, 2.2 Perform long and short sounds on instruments, 5.1 Interpret iconic representations of steady beat. 6.1/6.1 Recognize same/different sections as well as other musical characteristics in a piece of music, 8.1/8.2 Experience relationships between music, visual arts, and language arts.

What are some "Big Ideas" your students need to know? (Short bulleted list)

- The story of the Little Drummer Boy
- Lyrics to the Little Drummer Boy
- Making drum-using unlikely materials
- Designing outside of drum
- How to play rhythmic pattern to accompany the song
- Moral of story- What really matters when it comes to giving?

***How* are arts activities infused in this lesson?:** (describe in 2–3 sentences)
Students engage in visual art while creating the artwork for the outside of their drums. Students learn a song and a rhythmic accompaniment to that song. They perform that rhythm with body percussion and later transfer the rhythm to their own drums.

Literacy Skills Focus: (CIRCLE student skills utilized in this lesson):

- **Oral language development**
- Concepts of print
- **Sense of story and sequence**
- Phonemic awareness and phonics
- Background knowledge and vocabulary
- Fluency
- **Comprehension**
- **Writing**

List ALL materials used *(including websites; book (texts and trade book) titles with author, publisher, date, page #'s; CD or DVD titles; art works and art supplies; music; people, places, resources, etc.)*

1) Little Drummer Boy short film purchases on iTunes (25 minutes) 2) Little Drummer Boy song by Renee & Jeremy purchased on iTunes 3) Keynote program to create visuals for the song 4) Chopsticks 5) Large metal cans (from cafeteria) 6) Roll of thick, black plastic from the hardware store 7) Duct Tape 8) Construction Paper strips (approx. 7 x 14) 9) crayons/markers/pencils 10) Computer/Projector/Speakers

***Briefly* and *clearly* list teaching steps in order of actual instruction:**
Over the course of several class periods, students will:

- Learn the song "Little Drummer Boy"
- Learn a rhythmic pattern appropriate to their grade level
- Sing song and clap/speak/tap rhythm while singing song
- Write a sentence explaining what they would give to their loved ones without spending any money (and color in the drummer boy on the color sheet provided)
- Design their drums using pencil, crayons, and markers
- Watch the "Little Drummer Boy" short film while teachers attach artwork to drums
- Be given drums, practice given rhythmic pattern, and sing/play along with the song, "Little Drummer Boy"
- Discuss as a class what can be given in the place of gifts that cost money
- Answer/explain individually with teacher paraphrasing each answer

How did you *assess* student learning during or after this lesson? How do you know students understood the big ideas they needed to know? (2–3 sentences)
Teachers can visually observe the students' participation while singing and playing their drums as well as during their design process. The discussion is also the ideal time to see if the students understand the moral of the story and how they can apply it to their own lives.

In your personal opinion, *how* did the art(s) activity contribute to student understanding in this lesson? WHY? (be specific) (2–3 sentences)
The "Little Drummer Boy" story and song helped the students to understand the importance of giving from the heart. Their drum-making activity helped them to express what was important to them through their drum artwork. Many drew pictures of things that were very important to them in their lives.

***How* did this lesson exercise and/or increase student's literacy skills?** (2–3 sentences)
This lesson will helps the students articulate how they feel as well as express those feelings through writing. The discussion helps them to form their opinions as well as take new ideas to form new opinions and elaborate on their existing ones.

In hindsight, what would you do *differently* during this arts-infused lesson? Why? Be specific. (2–3 sentences) I would have taken more time to incorporate a few more related activities: Book reading, role-playing, public speaking, etc. I think a project could even be organized for the students to make cards for a certain group: soldiers, patients, the elderly, etc. I believe the students had much more to offer on this topic, and given more time and opportunities, they could have learned the material more thoroughly and offered and gained much more insight about the subject of giving.

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CURRICULUM VITAE