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National Music Education Standards and Adherence to Bloom's Revised Taxonomy

Vada M. Coleman
Walden University

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Eric Riedel, Ph.D.

Walden University
2013

Abstract

National Music Education Standards and Adherence to Bloom's Revised Taxonomy

by

Vada M. Coleman

MS, Walden University, 2003

BMus, Georgia State University, 1994

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Teacher Leadership

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Abstract

Pressures from education reforms have contributed to the need for music educators to embrace new and diverse instructional strategies to enhance the learning environment. Music teachers need to understand the pedagogy of teaching and learning and how these affect their praxis. The purpose of this multiple case evaluative study was to investigate the instructional methods used in 10 middle school general music programs to assist students in obtaining the National Standards for Music Education. Bloom's revised taxonomy was the theoretical framework used to evaluate the teaching praxis of the participating teachers. The research questions for the study addressed the effectiveness of the instructional strategies in the music classroom and how they align with the National Standards Music Education and Bloom's Revised Taxonomy. Data were collected from an open ended survey, individual interviews, and unobtrusive documents from 10 general music teachers from suburban, rural, and urban school districts. A line-by-line analysis was followed by a coding matrix to categorize collected data into themes and patterns. The results indicated that standards-based metacognitive instructional strategies can assist music teachers in their classrooms and unite cognitive, affective, and kinesthetic experiences applicable beyond the music classroom. It is recommended that music teachers use alternative teaching techniques to promote and connect critical thinking skills through musical learning experiences. Implications for positive social change include training music educators to create learning environments that support and motivate students to learn and achieve academic success.

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Dedication

I dedicate this paper in memory of my parents, Reverend G. C. and Christine Coleman, who left a legacy of being advocates of the arts. They were both wonderful singers and I am so thankful and blessed that I inherited their talent and love for music. From the first live concert that my mother took me, at 6-years-old, to see Marian Anderson, the seed was planted for my destiny as a musician. This paper is also dedicated to my wonderful cousin, mentor, and friend, Erma Cain, for your unconditional love and support. Without you, I could not have made it through all the ups and downs that I've experienced over the years.

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I began this journey oblivious to the many steps necessary to achieve the doctoral status. There are many people to thank who carried, mentored, assisted, and protected me, sometimes from myself, during the difficult and the triumphant times. First of all, I give all honor and praise to my Lord and Savior, Jesus Christ, who has provided all my needs according to His riches in glory. To my sons, Christopher and Jonathan, thank you for your support and tolerance during the neglect of your mother when the pressures of study overwhelmed me and took time away from the both of you. I feel blessed and honored that all the professors at Walden University have been supportive, always available, and honest with me, which enabled me to recognize and correct my shortcomings. Dr. Marilyn Simon, it has been a privilege to be a Simon Scholar. Thank you for setting a great foundation for me to follow. You exemplify all the attributes that demonstrate and describe a scholarly expert in the area of academics. To Dr. Esmail, whose humble demeanor supported me through those early difficult methodology concerns I encountered, you have been a true blessing and a valuable professional expert to have as a mentor, committee member, and advisor.

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Section 1: Introduction to the Study

The future of music education is in crisis. Across the United States, state legislatures and school district administrators contemplate which nonacademic programs will remain each semester. Music education is not considered as important a curriculum component as subjects such as math and science and is usually one of the three most frequently discussed choices for elimination (Conrad, 2006). The effectiveness of music education, especially for adolescents, is not measured by high-stakes tests and is not addressed in the mandates of the No Child Left Behind Act of 2001. Music education is not given a high priority in schools and is often recommended as a sacrifice for the sake of spending more time or money on basic skills instruction (NAfME, 2004). Due to the pressures of policy mandates and education reforms, the opportunity for a new instructional perspective for music educators has emerged.

Background of the Study

The majority of music teachers organize their lesson material with concrete knowledge content that reinforces traditional instruction rather than investigate and introduce new instructional approaches that will teach music students how to synthesize their learning and strengthen the cognitive development process. Guerrero (2005) noted that teachers lack knowledge in a new domain of expertise in diverse educational instructional strategies. Athanases's (2006) and Brooks and Brooks's (1993) findings concurred with Guerrero's findings regarding the need for music teachers to develop a constructivist perspective regarding curriculum interpretation, student assessment, instruction, and teaching in general. In constructivism, knowledge is constructed through learning experiences that are applicable to real-world practices. Constructivism includes

the significance of the lesson objectives and knowledge construction as its foremost

principles (Yilmaz, 2008). Guerrero contended that a constructivist viewpoint supports

adolescent cognition and promotes engaging in metacognitive instructional development.

Cognition is a means of obtaining knowledge, and metacognition is a way of

monitoring what one knows (Martinez, 2006). Cognition and metacognition are

intertwined but can function independently. A constructivist classroom does not include

a standardized curriculum. Instead, a constructivist curriculum incorporates students'

prior knowledge to provide students an active role in the learning process to assess their

development and growth (Brooks & Brooks, 1993). Freer (2009) outlined specific

constructivist learner-centered activities that promote interest and engage music students,

such as student-led rehearsal practices, repertoire selection, games, and musical analysis

(p. 57). Educators need to shift paradigms to embrace metacognitive instructional

strategies that stem from a learning constructivist viewpoint and align with the National

Standards for Music Education (NSME). Constructivism supports the perspective that

cognitive development results from the association between knowledge and personal

experience during adolescence (Walker, 2002).

The role of an educator is to create innovative learning opportunities for students

to discover information through new understandings (Mohr et al., 2004). Teachers need

to develop advanced skills to help their students enhance their learning (Mohr et al.,

2004, p. 143). Anderson et al. (2001) collaborated with other researchers to revise

Bloom's taxonomy, which was designed in 1956 to help educators understand that there

were multiple levels of learning. The taxonomy was revised for two purposes: (a) to

refocus the attention of educators' perspective of the original taxonomy as a clear

indicator and supporter of current standards and (b) to incorporate new knowledge and

thought into Bloom's framework (Anderson et al., 2001, p. 1).

Bloom's revised taxonomy (BRT) was designed to help teachers understand and

use a standards-based curriculum and as an evaluation model to assess low-level or basic

skills. The revised taxonomy uses a common language that music educators can use to

design metacognitive learning objectives that align and comply with the NSME

(Krathwohl, 2002, p. 218). According to Hanna (2007), the NSME supports educational

goals, rather than a curriculum, and helps to enhance all Fine Arts disciplines that are

both critical to and an integral component of adolescents' life experience. Aligning the

cognitive domain of the taxonomy with the NSME can offer potential illustrations of

what adolescent learners should learn in music class. The national music standards and

the revised taxonomy can translate music educators' intuitive knowledge of cognitive

processes in learning music into academic language that nonmusicians can understand

(Hanna, 2007, p. 15). The cognitive domain of the revised taxonomy supports standards-

based instructional strategies; addresses cognition as a thinking, active process; and

provides a variety of learning objectives that extend beyond the traditional general music

classroom experience. The new taxonomy "aligns learning objectives, curriculum, and

assessment to link the complexity of learning with the cognitive and knowledge domains"

(Hanna, 2007, p. 9).

The 2007 National Association for Music Education (NAfME) conference

supported the premise that the national standards connects student learning with basic

education in the arts. NAfME believes that "Music education provides insight into form

and structure, inspires creativity, and greater experience with diverse musical styles and

genres that are required toward the development of informed musical judgment"
(NAfME, 2007, p. 5). Success in the music classroom is dependent upon competent and
creative instruction to ensure students have the comprehension tools necessary for
creating their own path (Smith, Rook, & Smith, 2007). The fine arts assist with bridging
the creative and logical thinking domains that shape perception and imagination,
particularly during adolescence (NAfME, 2007). Elliott (1995) directed teachers to
discard *music-ing*, or traditional music making, and to promote the concept of "music as a
license to connect musical experiences as a conduit to learning and developing effective
musicianship skills" (p. 40). Elliott contended that music is an action word that embraces
the practice of critical pedagogies that endorse significant engagement in the music
classroom.

There are many advantages to blending musical learning experiences with the
total educational curriculum. Gordon (2009) posited that learning should uphold
experiences that compel students to become actively engaged in constructing personal
interpretations of the topics of interest (p. 47). Previous studies (Aiello, 2003; Gruhn &
Rauscher, 2002) have revealed that blended musical instruction can bridge cognitive,
social, and emotional developments and support long-term effectiveness. Therefore,
music teachers might enhance the learning experiences in the classroom practice when
blending musical and cognitive activities, which could increase comprehension,
information processing, and cognitive skills and engage students in learning experiences
to link academic areas.

Problem Statement

Since 1907, NAfME has worked to guarantee high-quality music instruction that is balanced and comprehensive for every student. The call for educational change dates back to the publication of *A Nation at Risk* (National Commission on Excellence in Education, 1983), in which a key to reforming the educational system was a better understanding of learning and teaching. Musical instruction and learning that occurs in the general music classroom needs to transfer to other tasks that incorporate related cognitive skills supported by spatiotemporal reasoning tasks (Crncec et al., 2006, p. 585).

Several researchers (Aiello, 2003; Norton et al., 2005; Stewart & Williamson, 2008) have noted that metacognitive strategies can be valuable in music education, although researchers are still not quite clear how music educators are applying the strategies. Metacognition, the awareness of one's own thinking processes, cultivates self-determination in learning, provides insights into the learner's thinking processes, helps develop positive analytical skills, and encourages self-efficacy and satisfaction Marzano (2005) concluded that metacognitive thinking is the primary instrument for student learning and assigns skills to other learning circumstances that are remembered over time.

Metacognitive ability is important and consequential for learners in the classroom and can be viewed as a tool to assess learners' ideas (Martinez, 2006, p. 698). Common classroom practice rarely incorporates metacognition teaching strategies. Marzano (2005) recommended metacognitive skill building that encouraged teachers to craft learning objectives, provide strategic feedback on students' learning processes, encourage student reflection on task execution, and provide reminders to direct student thinking. (p.

68). The current evaluative study involved elucidating the learning objectives similar to those offered in BRT with 10 middle school general music programs to determine if the NSME have been met in the classroom.

Purpose of the Study

The purpose of the current qualitative evaluative study was to determine the instructional methods used in the general music classroom to elucidate how the classroom praxis aligns with the standards-based metacognitive strategies from BRT and the learning objectives met the NSME. The rationale for conducting the current study was that the general music classroom might be an effective platform to demonstrate the effect that metacognitive activities have on cognitive development and to examine standards-based metacognitive strategies as effective instructional tools to develop and integrate knowledge and learning (Wang, Kliegel, Yang, & Lu, 2006).

Schellenberg (2005) posited that the knowledge of music is an important intelligence and warrants more intense investigation before reducing music in the public middle school curriculum. According to Flavell, Miller, and Miller (2002), "Whether the students are singing, playing, or listening to music, when you incorporate metacognitive activities, the participants connect with the learning experience" (p. 22). A classroom that includes metacognitive instruction and is standards-based for music education will be full of energy, engagement, and vigor.

Lesson plans of 10 general music teachers with varied years of teaching experience from suburban, rural, and urban school districts were evaluated to gain a deeper understanding of their teaching praxis. Twenty submitted lesson plans, two from each teacher, with lesson objectives as referenced in the cognitive domain of BRT, were

critiqued and aligned with the National Standards for Music Education. A coded matrix table was created to outline and integrate the national standards and the cognitive domain of BRT. This process resulted in a translation of music education outcomes into educational criteria and addressed the procedural and metacognitive processes critical to music education (Hanna, 2007). Findings from the research contribute to the body of knowledge on the effects of using metacognitive instructional techniques and Bloom's revised cognitive domain categories in compliance with national standards.

Significance and Nature of the Study

The significance and results of the study could help educational leaders and music teachers understand how standards-based metacognitive instructional strategies are being adapted in the music classroom. Aligning the learning objectives in the revised taxonomy with the NSME could equip music teachers with instructional tools to begin using alternative teaching techniques.

An evaluative study design was appropriate for addressing the problem and allowed varied data collection techniques such as in-depth interviews and classroom observations (Yin, 2003). Yin (2003) posited that case studies are appropriate when examining the global nature of a program or a policy. The case study approach works well when research questions are broad and multifaceted and need to be addressed using multiple methods (Keen & Packwood, 2008). According to Hancock and Algozzine (2006), "In contrast with experimental research, case study research is generally more exploratory than confirmatory; that is, the case study researcher normally seeks to identify themes or categories of behavior and events rather than prove relationships or test hypotheses" (p. 16). Case evaluation allows researchers to document what is actually

occurring in a classroom, determine the effect of a program or policy, and identify what

links exist. According to Yin and Davis (2007), "effective and accurate data collection,

clear and concise record keeping of field notes, and observation documentation are key

factors for performing the data analysis to support and evaluate case study findings" (p.

17). Yin and Davis claimed that evaluative studies are designed for investigations in

which the outcome will be learning.

The current evaluative study involved investigating how music teachers apply the

NSME. The standards require that music educators create interesting and engaging

lesson plans that might involve including activities that use metacognitive learning

objectives as presented through BRT. The elements of music education were examined

to address new ways to enhance teaching music (NAfME, 2004). Innovative

instructional ideas and documentation from the literature review are included to support

the study.

Research Questions

RQ1: How effective are the instructional strategies in the music classroom and

how do they align with the NSME?

RQ2: How can Bloom's Revised Technology (BRT) link varying teaching

practices with the NSME to assist music teachers and support a standards-

based curriculum?

Conceptual Framework

The current study supported the recommendations from NSME and BRT that

music educators consider the possible relationship between metacognition and music

instruction (Hanna, 2007). Standards-based instructional strategies supported by the

cognitive domain of BRT address cognition as a thinking, active process and provide a variety of learning objectives that extend beyond the traditional general music classroom experience. The BRT cognitive domain was used as an aid in understanding classroom instruction. The quality of instruction might be improved through multiday project models such as curriculum interdisciplinary and integrative units that consist of related educational objectives that focus on a specific topic and provide a context of interpreting daily activities and assessments (Anderson et al., 2001, p. 110). Cross-curriculum interdisciplinary projects using music instruction and metacognitive strategies promote and enhance learning (Smith et al., 2007). According to Bloom (1956), the cognitive domain involves academic competence, acknowledgment of precise details, practical models, and theories that maintain academic capabilities and cognitive progress.

Cognitive development refers to the growth of a person's thinking, including higher order thinking skills, problem solving, decision making, interpretation, and reasoning (Siegler & Alibali, 2005). Cognitive development contributes to the thought processes that focus on the realm of perception and memory and is derived from an interaction between intrinsic abilities and social experiences (Rauscher & Hinton, 2006). The goal of the cognitive movement in education is to help students learn how to learn rather than being passive receptacles of information (Bamberger, 2005).

Classroom practices can be affected by teachers' pursuit of understanding the pedagogy of teaching, learning, adolescent learners, and music education. These components describe the complex nature of teaching and the professional development and training necessary to become a master music educator. Decision-making skills and learning methods presented in significant standards-based music programs can assist

students in the acquisition of knowledge in other subjects (Marzano, 2005). How educators learn to organize learning objectives is important to the way they instruct and motivate students to learn and achieve academic and social success (Aiello, 2003). In her research on metacognition in music, Aiello (2003) recommended that music teachers use metacognitive methods and explicitly help students develop their metacognitive capacities to acquire a clearer constructive knowledge of music (p. 657). Professional development and training on metacognitive strategies and the integration of music knowledge should become part of the music curriculum (McAlpine, Weston, Berthiaume, & Fairbank-Roch, 2006).

Gardner's (2006) multiple intelligence (MI), Piaget's (1962) cognitive development, and Vygotsky's (1978) zone of proximal development (ZPD) theories contributed to the constructivist perspective and the foundation for the study. Gardner (1991) noted that adolescents need extended opportunities to work on topics that employ the arts, as they help to develop skills to connect and form an understanding across disciplines. Gardner's MI theory addresses cognitive development as it relates to the arts. Gardner (2006) had a profound impact on education, especially in the United States, by introducing the MI theory as a metacognitive approach to learning. Gardner's MI theory stresses that the character of education is influenced by how well classroom instruction and curriculum are coordinated. The arts can promote and maintain an engaging, exciting, and innovative academic setting. Further, the power of thought can be organized and mastered through learning activities that include descriptions and patterns from the arts, the surrounding environment, real world knowledge, and society that integrates self-reflection. Intelligence is not derived from mental development, it is like a

higher mechanism, and radically distinct from those which have preceded it. Intelligence presents, on the contrary, a remarkable continuity with the acquired or even inborn processes on which it depends and at the same time makes use of (Piaget, 1962, p. 21). Piaget (1962) noted that understanding and learning developed at their own rhythm and pace and believed learning and thinking processes should consist of instruction for different learning styles that is full of spontaneous invention and discovery as it develops and strengthens cognitive development.

According to Vygotsky (1978), adolescent reciprocal teaching or student–teacher role playing serves as a useful strategy to demonstrate knowledge as the adolescent students' interact in the classroom. Holton and Clarke (2006) emphasized that the process of scaffolding and the ZPD both offered assistance to assess the learning potential of adolescents. Intellectual and cultural tools such as language of thought, memory aids, writing, and speech are all necessary to develop and balance learning.

Definitions of Terms

Cognitive development: Relating to or involving the process of acquiring knowledge and understanding as a result of maturation (Piaget, 1962).

Metacognition: A person's knowledge of his or her own thoughts and the factors that influence thinking (Martinez, 2006).

Zone of proximal development: A setting in which culture, collaborative learning, and group problem-solving schemes form a partnership. The ZPD describes and places special emphasis on Vygotsky's view regarding social interactions as they apply to cognitive development (Vygotsky, 1978).

Assumptions, Scope, Limitations, and Delimitations of the Study

Assumptions

A major assumption of the study was that although budget cuts and education reforms might promote the elimination of music education from the public middle school curriculum, students will continue to have some form of formal music education. Despite past threats for extinction, the majority of students in public and private schools continue to receive general music instruction, and the few who want to specialize in performance continue to receive some form of instrumental instruction. Additionally, certain statistical data supporting music education and its benefits to the total curriculum agenda might validate the importance of music instruction. By ensuring the anonymity of the participants who volunteered for the study, it was assumed that data collected from the survey responses would be valid and the selected music teachers would provide comprehensive lesson plans and corresponding classroom activities to demonstrate the instructional methods they use on a regular basis.

Scope

The study represented a cross-section of teaching experience with diverse student populations in various areas of their district's music programs. The selection provided ample cross-validity in evaluating varying teaching practices in the general music classroom. The data collection process occurred within a 2-month time frame.

Limitations

Case studies provide little basis for scientific generalization and are not represented by experimental sampling (Yin, 2003, p. 10). The focus of the evaluative study provided a generalizing analysis of middle school general music programs. The

strength and soundness of the study was limited to the dependability of the instruments used.

Delimitations

Elementary and high school music teachers were not included. Participation was delimited to middle school music teachers from several Georgia school districts. Most of the middle schools were on block scheduling, which limited the number of classes taught daily and extended each class period to 90 minutes. Several schools have opted to offer only chorus classes or they use an A/B block scheduling, which allows the teacher to rotate general music instruction and chorus classes. Additional delimitations were that the study included only interviews and the responses of the six teachers might be biased.

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Summary

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The current study involved investigating learning objectives from BRT that addressed cognition as a thinking, active process and connected with the NSME. Students who practice metacognitive strategies have been distinguished as more successful learners than their peers. Diversity also plays an important role of connecting knowledge in various ways, encouraging multiple learning styles, and displaying multiple representations of acquired knowledge (Farenga, Ness, & Flynn, 2007). The curriculum is a major contributor that influences academic competence, affects skill building, and motivates adolescents to learn. A curriculum should connect instruction that includes basic operations of reasoning, domain-specific metacognitive knowledge, values, beliefs, and dispositions (Eisner, 2002).

The outcome included optional ways to achieve effective standards-based learning through the positive attitudes of adolescents that will be acquired through skill

development related to positive learning experiences. The results showed evidence of students who have acquired a fundamental working knowledge of music, are also better students in other academic areas, and are becoming lifelong learners and consumers of music (NAfME, 2004). Section 2 includes a review of the literature and research on the NSME, metacognition, and learning. The benefits and intrinsic value of music education will be addressed, along with critical viewpoints of BRT as it relates to the NSME. Section 3 includes a discussion on the methodology of the qualitative evaluative case study, including descriptions of participants, data collection, and data analysis procedures. Section 4 includes the findings and the framework of the study. Section 5 includes an overview of the study, an interpretation and summary of the findings, implications for social change, and recommendations for dissemination and further research studies, as well as a reflection and a closing summary.

Section 2: Literature Review

Section 1 included an overview of the problems related to music education and the application of metacognition as a strategy to address the importance of music education, specifically for adolescent learners. The current case study involved examining standards-based metacognitive strategies as effective instructional tools and developing and integrating knowledge with learning objectives using Bloom's Revised Taxonomy (BRT). The conceptual framework derived may provide educators with a variety of ways to organize learning objectives that will motivate students to learn and achieve academic and social success (McKeown & Gentilucci, 2007). The literature review presented in Section 2 contains a summary of theoretical and empirical studies to provide the background necessary for understanding the key aspects of the NSME, metacognition, learning, thinking, the benefits and intrinsic value of music education, and critical viewpoints of BRT as it connects with the national standards. The literature review includes a summary of the importance of music education, the effect of budget cuts and curriculum reforms on music education, and the advantages of music in the middle school classroom. The information could help to understand the positive links between music education and cognitive development (Bamberger, 2005; Day, 2004; Rauscher & Hinton, 2003).

Research Overview

The basis of the evaluative case study was the theoretical perspectives and previous studies of classical theorists Jean Piaget and Lev Vygotsky and modern theorist Howard Gardner. Their theories were highlighted to analyze the learning, thinking, and cognitive development of adolescents during the formal operational stage and to

articulate a greater understanding of adolescent growth and cognitive development. The literature review provides an insight into alternative views regarding the effects of integrating music education and cognition as it applies to public middle school adolescents, a review of music cognition research, and the role and effect of integrating metacognitive instructional strategies in the music classroom (Flavell, 1979; Rauscher & Hinton, 2006; Smith et al., 2007).

Documentation

The literature review is based on information from documents, peer-reviewed journals, scholarly books, research, and other noted references regarding the importance of music education, BRT, and the NSME from sources such as the Walden University research database search engine that includes EBSCOhost, ERIC, and SAGE, and Education Research Center, etc. Key words used in the search included *music education, cognition, metacognition, adolescence, learning,* and *development*. The search engines assisted in researching the *what, how*, and *why* in a multiple case study and to establish knowledge and recognition of the relationship between music education, cognitive development, the standards, and the taxonomy. The literature search led to the discovery of many sources that met the objectives of the study.

The Importance of Music Education

Budget Cuts and Curriculum Reform

Administrators nationwide face decisions that affect music education in public school (Gerber & Gerrity, 2007). The time once allotted for arts instruction in the curriculum has been reduced to allow for extended core subject instruction. General music study, in many cases, has been eliminated. The prominent ideals that have

supported the importance and significance of music education need to be remembered and cherished, especially as they affect and enhance the lives and education of adolescents (Gerber & Gerrity, 2007, p. 17).

The National Endowment for the Arts supported the importance of music education by stating the benefits of music from leading groups of arts educators, who suggested that "15% of instructional time at the elementary and middle school levels should be devoted to serious study of the arts" (Consortium of National Arts Education Associations, 1994, p. 16). Swanson (1973) posited that in middle schools "music has something of value for every child and promotes self-expression, encourages self-discipline and diligence, and provides self-gratification" (p. 30). According to Montague (2007), daily music lessons, for at least 1 hour, connect multiple learning styles that engage students from diverse backgrounds with meaningful activities and are a step toward the development of healthy life skills. Educators are challenged to develop a variety of programs to meet the nature, abilities, and needs of middle school adolescents. Music education provides learning experiences that encourage students to make healthy decisions; feel safe in their school environment; and develop a positive attitude, a sense of belonging, and purpose as it relates to education.

Petress (2005) addressed the necessity of keeping music in the public school curriculum; solicited the assistance of parents, teachers, and students; and integrated the views from experts to discuss the importance of becoming involved as advocates who speak out against the forces that fail to understand the benefits of music education. Petress identified four skill categories that music education and knowledge of music can contribute to enhance success: social, life skills, intellectual development, and academic.

These were the key topics cited to illustrate the major contributions of music education. NAfME has also addressed each of the four categories with findings detailed on its Music Education Facts and Figures website (www.nafme.org), which cites research from major studies to support the four skills promoted by music education.

Lesson activities from the music classroom should include incorporating personal values in addition to learning music (source, publication date). The Texas Commission on Drugs and Alcohol Abuse, a NAfME-cited source, reported that its studies addressing the elements of success in society revealed secondary school students who played musical instruments showed lower consumption or abuse of illegal substances (Petress, 2005). Michael Greene, Recording Academy president and chairman of the 42nd Annual Grammy Awards in February 2000, stated that music could offer activities that increase intellectual development and that could aid in creating jobs and improving the quality of life for communities (as cited in Petress, 2005, p. 2). Conclusive reports on the No Child Left Behind Act of 2001 claimed that the arts should be included as a vital component of the school curriculum and that college entrance exams have shown students who have been in music classes earned higher scores (Petress, 2005, p. 9). Heart surgeons, chief executive officers, and leaders in many other key corporate organizations have expressed their perspectives that music instruction might have a great impact on lifelong attention skills. Findings based on neurological research support and defend how music education enhances abstract reasoning and contributes to the significant improvement of spatial-temporal skills with results that support success in intelligence (Gruhn & Rauscher, 2002; Rauscher & Hinton, 2003, 2006).

Advantages of Music Education

Since the 1980s, several substantiating factors have upheld other benefits of the general music curriculum. According to Hedden (2008), children who have consistent general music instruction and are actively engaged in the learning experiences show increased competency in core academic subjects that connect with music, like reading and writing, along with positive attitudes and enhanced higher order thinking skill abilities. Music should be taught because it "systematically develops a form of intelligence that affords a humanizing self-knowledge of feeling as a pervasive quality of mental life and affords meaningful, cognitive experiences unavailable in any other way" (Reimer, 1989, p. 28). Elliott (1995) noted how valuable music is because it brings about challenges that cognitively propel the student to engage in critical thinking thought processes that otherwise would not be available, even through other arts forms.

Music education embraces every discipline, supports world history and culture, enhances creative innovation, and provides artistic ways to problem solve. Music education also enables adolescents to demonstrate essential knowledge and skills; make new concrete and abstract discoveries; and unite cognitive, affective, and kinesthetic experiences applicable beyond the music classroom (Siegler & Alibali, 2005, p. 177). Lorenzo Moore, a 30-year veteran band director in Georgia, summarized his perspective at a 1990 county meeting workshop regarding the essence of music education as it relates to nonarts disciplines (Moore, 1990). Moore (1990) identified the relationship music has to each area of study usually encountered in the public middle school environment. His philosophy was that music, like science, is exact and demands acoustical knowledge. Mathematics and music are both rhythmically based and demand subdivisions. Music

links with foreign languages through Italian, German, and French terms and notes that are

highly developed shorthand, and music also depicts history because every historical

moment can be identified through songs to tell multicultural stories recorded throughout

the world. The activities associated with music and physical education demand great

coordination muscles throughout the body. Music is artistic and allows individuals to

portray their musical sense of life, creativity, and emotions through all disciplines

(Moore, 1990).

Jorgenson (2008) cites that the study of music can help adolescents recognize

beauty and have more love, more compassion, and more gentleness and feeling. The

curriculum goal should be to expand musical intelligence and increase the capacity for

feeling through music. The teacher's role is to teach artistic realization through musical

expression and affective values (Jorgenson, 2008). Schellenberg (2005) cited similar

benefits that connect music and cognitive development. Schellenberg mentioned

multiple skills that can be used in music instruction to improve abstract reasoning

abilities, assist the adolescent in acquiring musical knowledge that links to the study of

different languages, and demonstrate the abstract nature of music that might contribute to

how adolescents think and process information (p. 320).

Overview of Cognitive Development in Adolescence

Adolescence is an intriguing and complex stage of development. Critical

thinking, problem-solving, decision-making, interpretation, and reasoning skills all

develop during adolescence (Siegler & Alibali, 2005). The normal adolescent lives in the

here and now and at the same time is beginning to think about the future and other issues

of life. During adolescence, children learn to originate hypotheses and to create, solve,

and express logical implications (Pulaski, 1980)). How adolescents learn to organize

thought patterns during this period is crucial for their academic and social success.

Classical theorists Piaget and Vygotsky both dealt with learning and described the

process of cognitive development. Piaget's and Vygotsky's theories explain a child's

potential for learning and describe a constructivist point of view (source, publication

date; source, publication date). Constructivism maintains that knowledge is not about the

world, but is rather constitutive of the world. Piaget's and Vygotsky's theories examined

the learning, thinking, and cognitive development of adolescents aged 12-15.

Piaget's Theoretical Perspective

Piaget contributed more than any other theorist to the understanding and

communication of what children's thinking is like (Gardner, 1999). Piaget spent a

lifetime exploring how knowledge is constructed. During adolescence children undergo

four changes of developmental change: sensorimotor, preoperational, concrete

operational, and the formal operational that occurs during adolescence (source,

publication date). Piaget believed that adolescents construct the general periods of

development themselves and that children pass through the stages at different rates

(Piaget, 1962). Piaget studied how children progress through the developmental stages.

To explain the progression, Piaget introduced the notion of *schemata*, the name of a

process that organizes learning experiences. In addition to schemata, Piaget supported

another cognitive framework he called *scaffolding*, which provides adolescents with

opportunities to extend their knowledge and skills. Both schemata and scaffolding help

explain why adolescent students are likely to learn better when they gain knowledge

through inquiry and experimentation rather than being told what to learn by a teacher in a

class situation (Siegler & Alibali, 2005). According to Holton and Clarke (2006), scaffolding is an instructional approach that supports how the learner constructs knowledge and lays the framework for continued learning experiences (p. 131).

Case (1992) supported Piaget's approach that the principle goal of education was to provide instruction that nurtured adolescents into adults who are innovative, creative, and original. Other studies supporting Piaget's theory revealed that education should lead the mind to question, not accept everything as truth, seek confirmation, and verify various trends of thought. The result would be adolescents who were active, eager to learn through self-discovery and instruction, equipped for life, and capable of facing the issues and struggles of life (Ginsburg & Opper, 1969).

Opposing Views of Piaget's Theory

Brainerd (1978) contradicted the equilibration of Piaget's stages of development, which he believed could be explained by simplifying learning objectives, measuring a child's learning quantitatively instead of qualitatively, and analyzing cognitive maturation as it develops during each stage. Piaget defined how knowledge was processed and emphasized that during the formal operational stage, a universal learning prototype exists and supports the growth process regardless of specific academic scholastic practices (Bhattacharya & Han, 2001).

Several decades after publication, Brainerd's (1978) claims regarding the development of knowledge and learning were challenged, which led to parallel studies. The parallel studies have shown that cultures differ in how they learn and form knowledge; some use a particular systematic approach to learning whereas others encourage an exploratory or competitive approach to artistic mastery (Gardner, 1983).

According to Donaldson (1987), powerful evidence now supports that Piaget's ideas regarding age limits were wrong (p. 19). Despite criticism, Piaget's theory is still recognized as one of the most constructive of the 20th century and continues to be well received and accepted (Chandler, 2009).

Piaget and Music Education

Piaget's theoretical perspective focused on scientific and mathematical reasoning, and little is mentioned in his studies regarding music education (source, publication date). From the 1980s to the early 21st century, his theory served as the foundational framework for cognitive development to illustrate learning and thinking practices (source, publication date). In a psychology of music project, Zenns (1997) connected Piaget's position to the appreciation of music education and concluded that by the formal operational stage, students could effectively recognize the differences and similarities between two responses such as rhythm and contour of a listening exercise. Zenns's findings supported Piaget's perception of adolescent development at this stage of growth to determine that music should play an important role in the educational résumé of adolescents.

Bowers (2008) designed a curriculum on conceptualized teaching, learning, and assessment with a Piagetian framework for a beginning piano class of students with little or no experience with the keyboard and using a method book and a visual diagram of a keyboard. Pulaski (1980) investigated how children encountered experiences, formed mental images of the experiences, and then reacted through thinking of experiences that related to the mental picture, a process called internalized actions (p. 13). Several researchers discussed how Piaget's theory supported the benefits of developing musical

skills, listening, and appreciation of certain abilities that affect and enhance the cognitive, physical, and social development of adolescents (Campbell, Connell, & Beegle, 2007; Montague, 2007).

Vygotsky's Theoretical Perspective

Vygotsky (1978) defined the world of adolescence as one propelled and stimulated by instruction that connects with a sociocultural perspective. According to Vygotsky, development had its own rhythm but adult intervention was important, because without it, the child's cognitive development would be threatened. Vygotsky's viewpoint emphasized how sociocultural interaction strengthened cognitive development and defined a social cognition learning model applicable to the formal adolescent operational growth stage. Subsequent studies by Vygotsky (publication date, publication date) focused on understanding how thinking patterns are conceived to determine how children sequence and organize their thoughts, solve problems, and respond to correction. The theorist alleged that a child's cognitive proficiency is accelerated when guided by qualified peers or adults, which allows them to think at a higher performance level and organize their learning experiences, known as the ZPD, which is a powerful strategy that activates multiple developmental practices and functions (Levykh, 2008).

The ZPD constructed a cultural setting for collaborative learning and higher order thinking processes to explain the development of thought (source, publication date). The ZPD described and established Vygotsky's perspective regarding social interactions and its relationship to cognitive development. The zone theory was approached through the use of symbols, rudimentary signs, and various types of cognitive tasks to explore and analyze how thinking strategies and concepts are formed (Vygotsky, 1978).

ZPD, Education, and Adolescence

Vygotsky's ZPD theory focused on life experiences assumed to be dependent on social interactions and learning as they related to cognitive development (Vygotsky, 1978). The zone measurement during adolescence provided constructive facts and data that supported adolescents' educational experience. The zone also identified adolescents' potential for acquiring knowledge that could otherwise go unnoticed. Instructional tools such as scaffolding and the zone measurement offered adolescents assistance when needed, while encouraging them to achieve some tasks independently (Vygotsky, 1978). Vygotsky and Piaget agreed on the function of scaffolding as an effective instructional tool to access organized thought and the zone measurement. The scaffolding of tasks encouraged and motivated students to learn independently and highlighted the key areas of development independent of supervised adult intervention (Piaget, 1962).

Opposing Views of Vygotsky's Theory

Vygotsky died at the age of 37 (Vygotsky, 1978), which left his research unfinished. Rogoff (1990) challenged Vygotsky's theory regarding children's thinking using the ZPD and contended that without knowing the preliminary performance status of the child, adequate data would not be available to make a valid assessment on children exposed to peer- and teacher-assisted intervention. Rogoff also questioned the ability to actually measure if a child was experiencing genuine learning or if cognitive improvement was being demonstrated during the zone experience. Kozulin and Gindis (2007) noted that Vygotsky's theories, although written three quarters of a century ago, address the most burning issues still current in the educational debates (p. 87).

Vygotsky and Music Education

Vygotsky's theory supported learning in the context of expressing meaning through social connections in the educational environment and encouraging students to bring creative perspectives to be shared, which directly linked music education with his sociocultural viewpoint. Truman and Mulholland pointed out that "special emphasis on the use of Vygotsky's symbol, sign system, and language concepts can account for learned concepts, complement active participation, and demonstrate the social accomplishments of the adolescent" (2003, p. 2). Reinforcement from literature pertaining to learning indicated that learning is most effective when meaning can be attributed to the concepts to be learned as described in Vygotsky's sociocultural paradigm (Truman & Mulholland, 2003). Harwood (1998) believed Vygotsky's theory had a rational explanation that supported his theory that music creativity is limited by culture and learning takes place through social interactions with peers and music specialists. Adolescents can relate to other cultures when music elements are integrated into their daily life practices through parents, family, and peers (Harwood, 1998, p. 28).

Howard Gardner's Theoretical Perspective

Gardner's MI theory addresses cognitive development in the arts and human development. Gardner (1991) has had a profound impact on education, especially in the United States, by introducing the MI theory as an alternative approach to learning. Gardner has focused his studies on challenging the premise that the ability to make accurate judgments is a single entity measured by intelligence. Gardner believed that cognition develops from an interaction between intrinsic abilities and experiences that help children learn how to develop effective learning strategies. Known as a paradigm

shifter, Gardner's MI theory has connected with educational practices and is highly

regarded in the area of intellectual development (Gardner, 1999).

Gardner's Intelligence Criteria

Gardner (1983) recognized the capacity to solve deficiencies in the educational

system that have prevented the education of all children and developed a solution through

the use of nine intelligence criteria:

1. *Linguistic intelligence*: the sensitivity to spoken and written language, the

   ability to learn languages, and the capacity to use language to accomplish

   certain goals. This intelligence includes the ability to use language effectively

   and to express oneself rhetorically or poetically and serves as a means to

   remember information (Gardner, 1983, p.73).

2. *Logical-mathematical intelligence*: the capacity to analyze problems logically,

   carry out mathematical operations, and investigate issues scientifically. This

   intelligence entails the aptitude to detect patterns, reason deductively, and

   think logically (Gardner, 1983, p.128).

3. *Musical intelligence*: the demonstration of skills in performance, composition,

   and appreciation of musical patterns and the capacity to recognize and

   compose musical pitches, tones, and rhythms that are parallel to linguistic

   intelligence. Musical rhythmic intelligence demonstrates the capacity to think

   in music and to be able to hear patterns, recognize them, and perhaps

   manipulate them. People who have strong musical intelligence do not just

   remember music easily; they cannot get music out of their minds and it is

   omnipresent (Gardner, 1983, p.99).

4. *Bodily-kinesthetic intelligence*: the potential of using one's whole body or parts of the body to solve problems and the ability to use mental abilities to coordinate bodily movements (Gardner, 1983, p.205).

5. *Spatial intelligence*: the proficiency to recognize and determine the patterns of wide space and more confined areas (Gardner, 1983, p.170).

6. *Interpersonal intelligence*: the competence to understand the intentions, motivations, and desires of other people. This intelligence allows people to work effectively with others (Gardner, 1983, p.237).

7. *Intrapersonal intelligence*: the awareness to understand oneself and to appreciate one's feelings, fears, and motivations. It involves having an effective working model of one's self and the capability to use acquired information to regulate one's life (Gardner, 1983, p.237).

8. *Naturalist intelligence*: the ability to recognize, categorize, and draw upon certain features of the environment of nature (Gardner, 1999, p.48).

9. *Existential intelligence*: the ability and proclivity to pose and ponder questions about life, death, and ultimate realities (Gardner, 1999, p.60).

Gardner's MI Theory, Metacognition, and Adolescence

The MI theory includes exploring and introducing alternative sources to process information, relating how learning skills are developed. The intelligences are designed to function in a close relationship to assist children in their organizational and critical thinking skill development. Gardner's MI theory corroborates diverse instructional sequences, curriculum assessments, and pedagogical practices experienced by educators each day. Stimulating the varied learning styles of students promotes how they become

skilled at organizing, developing, and managing their environments and life issues

(Kornhaber, Fierros, & Veenema, 2004). Metacognitive instructional strategies work

with the MI theory and offer an advantage over traditional learning techniques that apply

to rote memorization and rehearsed approaches (Kornell & Metcalfe, 2006). Adolescent

children particularly benefit greatly from the MI, metacognitive, and memorization

strategies, and as children mature, the strategies increase options for solving problems

and making decisions.

Gardner (1991) noted that an open discussion about how old and new experiences

become part of education considerably improves learning. Terms that describe Gardner's

MI theory include *active*, *involved*, *engaged*, *innovative*, and *creative*. Students involved

in a MI learning setting come to regard intellectual ability more broadly by exploring

activities that have been proved to be a valid resource for learning (source, publication

date). Understanding multiple intelligences enables a teacher to provide a variety of

experiences and ways to teach children, especially adolescents. The goal is to help all

children become lifelong learners through having a variety of ways to acquire

information.

Opposing Views of Gardner's Theory

Critics of Gardner's MI challenged the theory by asking (a) whether the MI

criteria are adequate and (b) whether Gardner's concepts hold together to defend the MI

theory. White (1998) contended that the questions showed an element of subjective

judgment. Smith (2008) questioned Gardner's idea that IQ tests and standardized

assessments do not validate the true learning abilities of children. The main factor

surrounding the critical views of Gardner's theory is that no tests exist to measure the

validity of the intelligence criteria. Gardner himself has not tested his theory because it might lead to labeling and placing stigmas on learning style differentiations in children. Although there are concerns, many teachers have changed the way they present lessons based on Gardner's MI theory (Gardner, 2003).

Paradigm Shifts for Long-Term Effectiveness

Educators need to embrace and connect both right (creative arts) and left (logical-analytical) brain activity for learning to support long-term effectiveness (Gardner, 2006). The incorporation of music intelligence described by Gardner establishes a balance between what the student has learned and what the student comprehends. Vygotsky's and Piaget's perspectives questioned the ability of adolescents to learn spontaneously and affirmed the need for appropriate structures and problems from which to learn.

There are many advantages to blending music with the overall curriculum. Music can nurture adolescents through cognitive, social, and emotional developmental exchanges with teachers and peers (source, publication date). Gardner's (1983) theories encourage and support musical imagination and intellect and connect adolescent worldviews by promoting active participation in everyday musical experiences. Positive cognitive, social, and emotional interactions occur when adolescents are engaged in problem-solving activities with creative experiences in a need-to-know situation (source, publication date). Connecting musically with adolescents in the classroom allows teachers to use analogous concepts from other disciplines, the arts, and traditions to nurture the learning environment.

The sociocultural theory of Vygotsky (1978) defended the harmony involved when students and their teacher share musical imagination and intellectual experiences.

In such a scenario, the teacher and students are prompted to collaborate and share feelings, reflect, and process their experiences. Uniting school music and the adolescent world helps to maintain musical creativity (source, publication date). Adolescents are thereby enabled to find alternative solutions and diverse information processes to discover new ways to understand, think, learn, grow, and mature.

However, hindrances can stifle the recognition of musical creativity as an instructional tool to enhance cognitive development. Standardized testing in core subject areas is the mantra of current education reform initiatives and disregards music education. It is imperative that the arts be recognized as promoting learning and cognition. The goal of education must go beyond test scores in reading and math to ensure successful outcomes. Among other things, the arts can promote social engagement, which is a skill that supports and improves overall learning (Marzano, 2005).

Cognition, Metacognition, and Learning

Cognition results from an interaction between intrinsic abilities and experiences. Newell and Rosenbloom (1981) revealed that frequent rehearsing and practice of instructional strategies contribute to memory development. Adolescents often rely on old methods of learning rather than learn new techniques because the former are more familiar. Metacognitive approaches offer an advantage over the traditional learning techniques of rote memorization and rehearsed approaches (Son, 2005). Adolescents can benefit from both metacognitive skills and memorization as they mature because the former widens their options for solving problems and making decisions.

Cognition, Metacognition, and Music Education

Aiello (2003) researched metacognition in music and recommended that music teachers use metacognitive methods to help students develop their metacognitive capacities to learn music. The results indicated that metacognitive strategies help music students to learn more effectively. Aiello used a questionnaire to study whether music students could integrate what they already know with what they were learning. The results indicated that the students classified information by subject rather than generally synthesized the information.

Aiello (2003) based the findings on two observational studies of instrumental instruction teachers and students. Videotapes of instrumental and general music classes were analyzed to assess how teachers presented the lessons. The results indicated that teachers compartmentalized each musical element (rhythm, melody, and tone, for example) and left very few opportunities for discussions that might show a connection between instructional theory and learning. Over 67% of the students reported that there was minimal dialogue with their instructor regarding the links during their music lessons.

Gruhn and Rauscher (2002) reviewed research studies on cognition and learning and concluded that music cannot be counted out as a major contributor to learning and cognitive development. One key revelation indicated that the earlier children received music training, the more their cognitive and learning skills were improved and strengthened. Predictions from the studies also indicated that specific musical forms and instruction stimulated the neural patterns that enhance children's spatial-temporal abilities (Gruhn & Rauscher, 2002, p. 447).

Gardner (1991) investigated the importance of music education as it applies and relates to cognitive development, the brain, and spatial reasoning abilities during adolescence. According to Flavell et al. (2002), a classroom that includes metacognitive instructional strategies is full of energy, engagement, and vigor. Whether the students are singing, playing, or listening to music, metacognitive activities will enhance learning (Flavell et al., 2002, p. 166).

Bloom's Taxonomy

Bloom (1956) attempted to define the functions of thought and cognition in the 50-year-old original taxonomy (Bloom, 1956). The taxonomy classified the lesson objectives of what educators expected and intended students to learn. The taxonomy also categorized educational goals and objectives and provided a meaning to the learning objectives to enhance communication between teacher and student (Krathwohl, 2002). The original framework was considered a work in progress, with presumptions that the taxonomy would be adapted as education changed. The need for knowledge increased as more educators in various fields of study realized how important objectives were to education. The original taxonomy consisted of specific characteristics to measure and evaluate grade-appropriate and cross-curriculum activities, along with shared learning and educational goals that could be assessed and highlighted (Krathwohl, 2002).

The original taxonomy was organized into six major categories (knowledge, comprehension, application, analysis, synthesis, and evaluation), with subcategories ordered from simple to complex and concrete to abstract (source, publication date). Bloom's taxonomy had a substantial influence on evaluation for evaluating lesson objectives (Marzano & Kendall, 2007). When statewide testing began in the 1970s,

many states used Bloom's taxonomy as a model to identify and measure specific low to

basic levels of skill and performance (source, publication date). By the 1980s, schools

were emphasizing teaching higher levels of thinking. The need to revise Bloom's

taxonomy was established by an awareness of and an examination on its authenticity

(source, publication date).

Bloom's taxonomy, although influential, was criticized as oversimplifying its

relationship to learning and demonstrating an inability to distinguish between higher level

and lower level inquiries (Furst, 1994). Bloom and the original authors were aware of

and acknowledged problems with the taxonomy's structure of evaluation:

> Although evaluation is placed last in the cognitive domain because it is regarded
>
> as requiring to some extent all the other categories of behavior, it is not
>
> necessarily the last step in thinking or problem solving. It is quite possible that
>
> the evaluation process will in some cases be the prelude to the acquisition of new
>
> knowledge, a new attempt at comprehension or application, or a new analysis and
>
> synthesis. (Krathwohl, Bloom, & Masia, 1973, p. 185)

Fifty years after its publication, the original taxonomy was still one of the most

influential educational monographs used for assessment and evaluation, curriculum

development, instruction, and teacher education (Marzano, 2005). Researchers have still

struggled to clearly understand and explain the original hierarchical structure of Bloom's

taxonomy (Marzano & Kendall, 2007).

Bloom's Revised Taxonomy

Anderson and Krathwohl (2001), two of the original authors of Bloom's

taxonomy, along with other researchers, recognized the need to update the framework for

a revised taxonomy. Special emphasis was placed on updating the terms and approach to cognitive psychology and using more common language and realistic examples. Personnel at the Association for Supervision and Curriculum Development supported the revision as a probable solution to assessing the problem of student performance deficiencies on tasks that require higher level thinking. It was suggested that the revised taxonomy incorporate and examine recent studies that investigated how knowledge was acquired through reasoning (Marzano & Kendall, 2007, p. 4).

Originally, Bloom's taxonomy outlined six levels of cognitive processes referred to as the knowledge dimension: knowledge, comprehension, application, analysis, synthesis, and evaluation (Marzano & Kendall, 2007). The revision modified the one-dimensional knowledge model into two dimensions: the knowledge and the cognitive process dimensions. The framework of the revised taxonomy retained the six knowledge dimension levels, but changed the words from abstract nouns to verbs that describe an action or process (see Figure 1). In the revised taxonomy, the knowledge dimension deals with the degree and level of demonstrated knowledge, and the cognitive process dimension deals with how the student thinks or processes information when engaged in meaningful learning (Anderson et al., 2001, p. 38).

Original Version	Revised Version
EVALUATION	CREATING
SYNTHESIS	EVALUATING
ANALYSIS	ANALYZING
APPLICATION	APPLYING
COMPREHENSION	UNDERSTANDING
KNOWLEDGE	REMEMBERING
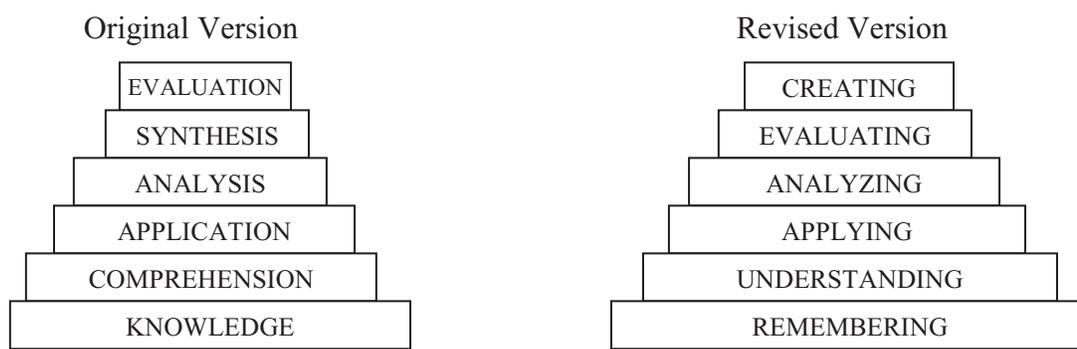
Figure 1. Original and revised forms of Bloom's taxonomy.

The Taxonomy Table

The knowledge dimension and the cognitive process dimension together represent the two-dimensional taxonomy and classify the revised taxonomy framework (Anderson et al., 2001, p. 27). Four major types with associated subtypes describe the knowledge dimension (the rows of Table 1) along with the six major categories and the related cognitive processes of the cognitive process dimension (the columns of Table 1).

Table 1

The Taxonomy Table

Knowledge dimension	The cognitive process dimension					
	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual						
B. Conceptual						
C. Procedural						
D. Metacognitive						

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

The Knowledge Dimension

The knowledge dimension of the revised taxonomy includes four words that describe the kind of learning: factual, conceptual, procedural, and metacognitive (see Table 2). *Factual* knowledge identifies what the student must know about a problem or topic of interest; the *conceptual* examines how the learned knowledge functions relate to the basic elements to solve the problem or topic. "*Procedural* knowledge involves the how-to methods of inquiry and criteria" required, and *metacognitive* knowledge investigates cognition in general and the "knowledge of one's own cognition" (Anderson

et al., 2001, p. 29). Metacognitive knowledge was not explored in the original taxonomy

but was added in the revised version due to the increasing significance of research that

demonstrated the importance of incorporating metacognitive activities in student learning

(Krathwohl, 2002).

Table 2

Knowledge Dimension

Major types and subtypes of knowledge	Examples
Factual	The basic elements students must know to be acquainted with a discipline or solve problem in it
Knowledge of terminology	Technical vocabulary, musical symbols
Knowledge of specific details and elements	Major scales, reference sources for musical terms
Conceptual	The interrelationships among the basic elements within a larger structure that enable them to function together
Knowledge of classifications and categories	Major periods of music, time signatures, forms of rondos
Knowledge of principles and generalizations	Pythagorean theorem, law of supply and demand
Knowledge of theories, models, and structures	Theory of evolution, structure of symphonic forms
Procedural	How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and method
Knowledge of subject-specific skills	Skills used in the major and minor scale tetrachords
Knowledge of specific details and elements	Vocal techniques, kinesthetic movement methods
Knowledge of criteria for determining when to use appropriate procedures	Criteria used to determine when to apply a procedure involving effective rehearsal techniques, criteria used to judge the feasibility of afterschool rehearsals to assure successful concerts
Metacognitive	Knowledge of cognition in general as well as awareness and knowledge of one's own cognition
Strategic Knowledge	Knowledge of outlining as a means of capturing the structure of a unit of a unit of subject matter in a textbook, knowledge of the use of heuristics
Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge	Knowledge of the types of tests particular teachers administer and knowledge of the cognitive demands of different tasks
Self-Knowledge	Knowledge that critiquing essays is a personal strength, whereas writing essays is a personal weakness, awareness of one's own knowledge

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 46), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

The Cognitive Process Dimension

The second dimension of BRT, the cognitive process, involves six major types of thinking: remembering, understanding, applying, analyzing, evaluating, and creating (Anderson et al., 2001). *Remembering* helps with the recovery of pertinent knowledge from long-term memory, and *understanding* involves constructing meaning from instructional messages and written, oral, and graphic communication. *Applying* involves the procedures required to carry out and use methods in a given situation, while *analyzing* involves breaking material into parts and determines the relationship between the parts to design an overall purpose or structure of a given situation. *Evaluating* involves the process of making judgments on standards and criteria, and *creating* puts the elements together to form the whole to reorganize and design a new structure (Anderson et al., 2001, p. 67). Refer to Table 3.

Teaching should be the process of instructing a specific curriculum element or for a specific reason that will eventually be measured and assessed. Consider the following example: Students will explore and discover (cognitive process) the various rhythm and percussion sounds (knowledge) as an individual and partnered project. Anderson et al. (2001) noted that placing an objective into the taxonomy table framework helps teachers to have a better understanding how the lesson objectives align with the standards, which facilitates learning and translates the standards into a common language (p. 7).

Table 3

Cognitive Process Dimension

Categories and cognitive processes	Alternative names	Definitions and examples
1. Remember - Retrieve relevant knowledge from long-term memory		
1.1 Recognizing	Identifying	Locating knowledge in long term memory that is consistent with presented material (e.g. recognize the dates of important events in U.S. history
1.2 Recalling	Retrieving	Retrieving relevant knowledge from long-term memory (e.g. recall the dates of important events in U.S. history)
2. Understand - Construct meaning from instructional messages, including oral, written and graphic communication		
2.1 Interpreting	Clarifying Paraphrasing Representing Translating	Changing from one form of representation (e.g. numerical) to another (e.g. verbal) (e.g. paraphrase important speeches and documents)
2.2 Exemplifying	Illustrating Instantiating	Finding a specific example or illustration of a concept or principle (e.g. give examples of various artistic painting styles)
2.3 Classifying	Categorizing Subsuming	Determining that something belongs to a category (e.g. classify observed or described cases of mental disorders)
2.4 Summarizing	Abstracting, Generalizing	Abstracting a general theme or major point(s) (e.g. write a short summary of the event portrayed on video tape)
2.5 Inferring	Concluding Extrapolating Interpolating Predicting	Drawing a logical conclusion from presented information (e.g. in learning a foreign language, infer grammatical principles from examples)
2.6 Comparing	Contrasting Mapping Matching	Detecting correspondence between two ideas, objects and the like (e.g. compare historical events to contemporary situations)
2.7 Explaining	Constructing models	Constructing a cause-and-effect model of a system (e.g. explain the causes of important 18th. Century events in France)
3. Apply - Carry out or use a procedure in a given situation		
3.1 Executing	Carrying out	Applying a procedure to a familiar task (e.g. divide one whole number by another number, both within multiple digits)
3.2 Implementing	Using	Applying a procedure to an unfamiliar task (e.g. use Newton's second law in situations in which it is appropriate)
4. Analyze - Break material into constituent parts and determine how parts relate to one another and to overall structure or purpose		
4.1 Differentiating	Discriminating Distinguishing Focusing Selecting	Distinguishing relevant from irrelevant parts or important from unimportant parts of presented material (e.g. distinguish between relevant and irrelevant numbers in a mathematical word problem)
4.2 Organizing	Finding, Coherence Integrating Outlining Parsing Structuring	Determining how elements fit or function within a structure (e.g. structure evidence in a historical description into evidence for and against a particular historical explanation)
4.3 Attributing	Deconstructing	Determine a point of view, bias, values, or intent underlying presented material (e.g. determine point of view of author of an essay in terms of his or her political perspective)
5. Evaluate - Make judgments based on criteria and standards		
5.1 Checking	Coordinating Detecting, Monitoring Testing	Detecting inconsistencies or fallacies within a process or product; determining whether a process or product has internal consistency; detecting effectiveness of a procedure as it is being implemented (e.g. determine if a scientist's conclusions follow from observed data)
5.2 Critiquing	Judging	Detecting inconsistencies between a product and external criteria; determining whether a product has external consistency; detecting the appropriateness of a procedure for a given problem (e.g. judge which of two method is the best way to solve a problem)
6. Create - Put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure		
6.1 Generating	Hypothesizing	Coming up with alternative hypotheses based on criteria (e.g. generate hypotheses to account for an observed phenomenon)
6.2 Planning	Designing	Devising a procedure for accomplishing some task (e.g. plan a research paper on a given historical topic)
6.3 Producing	Constructing	Inventing a product (e.g. build habitats for a specific purpose)

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (pp. 67-68), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

The National Standards for Music Education

In 1994, the NSME confirmed that the vision for music education in public

schools was limited (Reimer, 2004). The teachers of many general music programs

across the country strive to deliver a full, balanced array of learning to adolescent

students in the classroom, but the music classroom is struggling to encompass the nine

standards within the general music curriculum. Standards 1 and 2 (singing and playing)

have successfully been achieved in the general music classroom, but most classes have

accomplished little with the other seven standards:

1. Singing, alone and with others, a varied repertoire of music.

2. Performing on instruments, alone and with others, a varied repertoire of
    music.

3. Reading and notating music.

4. Improvising melodies, variations, and accompaniments.

5. Composing and arranging music within specified guidelines.

6. Listening to, analyzing, and describing music.

7. Evaluating music and music performance.

8. Understanding relationships between music, the other arts, and disciplines
    outside the arts.

9. Understanding music in relation to history and culture. (NAfME, 1994, p. 1)

Music is thriving in the United States (Jorgenson, 2008), but music education is

not thriving comparably. Traditional general music instructional strategies have become

antiquated in comparison to popular 21st-century music trends. Lacking from an

understanding of teacher knowledge is a new domain of expertise in diverse pedagogical

instructional strategies (Lindsey, Roberts, & Campbell Jones, 2004, p. 29). How teachers

learn to organize thought patterns that align with the NSME is a crucial component in

determining how they instruct and motivate their students to learn and achieve academic

and social success (Hargreaves, 2003).

　　　According to Conway (2008), NSME 1-4 (singing, playing, improvising, and

composing) enhance music literacy, while NSME 5 is designed to teach in a way that

promotes audiation before notation. Audiation takes place when individuals assimilate

and comprehend in their minds music they have just heard performed or have heard

performed sometime in the past. NSME 6 and 7 (listening, describing, analyzing, and

evaluating music) can all be means to music literacy as well. Most teachers do little with

NSME 8 and 9 (Conway, 2008, p. 35). McGuire (2002) noted that the elements of music

and the standards develop strategic assessment tools that measure what students learn

with how the learning has occurred (p. 49).

　　　Musical development is critical during the adolescent developmental stage and is

an integral component of the adolescent life experience. Facts cited at the 2007 NAfME,

summer conference stated "Musical development provides insight into form and structure

and inspires creativity and vast experience with diverse musical styles and genres that are

requirements for the advancement of informed musical judgment" (NAfME, 2007, p. 3).

The standards present a prediction of the proficiency and effectiveness of education, but

without constructing specific patterns into which all fine arts programs must fit. The

NAfME (2007) noted,

　　　　　The Standards are concerned with the *results* (in the form of student learning) that

　　　　　come from a basic education in the arts, *not with how those results ought to be*

delivered. Those matters are for states, localities, and classroom teachers to decide. In other words, the Standards provide educational goals and not a curriculum; they can help improve all types of arts instruction. (p. 3)

Integrating the National Standards and Bloom's Revised Taxonomy

The NSME were developed as universal goals that offer concepts for teachers to use to eliminate random or rote teaching. Byo (2000) noted in the *Arts Education Policy Review* that the standards heighten awareness of curriculum design and provide ways to improve music education (p. 30). BRT provides standardized assessment criteria applicable to the subject of music (Anderson et al., 2001). The revised taxonomy's cognitive domain addresses the relationship between psychomotor and affective learning that aligns with music learning (Hanna, 2007, p. 8). The authors of the revised taxonomy renamed and interchanged the one-dimensional framework to a two-dimensional framework of the cognitive categories to connect more complex forms of learning (Hanna, 2007, p. 9). Hanna (2007) discussed how the revised taxonomy could analyze objectives for each of the nine standards. Hanna also examined why the revised taxonomy is suitable for music education is worthy of further investigation. First, the significance of the knowledge domains is important because procedural and metacognitive knowledge are essential to music education. Second, the new taxonomy promotes creativity as a vital component of the cognitive processes (Hanna, 2007, p. 14).

Elliott (1995) used the term *music-ing* to describe the six forms of music, singing, performing, improvising, composing, conducting, and arranging, that require precise procedural knowledge and cognitive processing. Procedural knowledge aligns with the active creation of music, which makes this practice paramount to music education to

ensure accurate development (Westerlund, 2003). Hanna (2007) noted that the revised taxonomy identifies specific music performance factors that are procedural and involve both skill development and an intense interaction between cognition and motor skill building (p. 14).

The current study involved creating a conceptual framework to investigate, explore, and identify how the NSME and BRT connect and support the relationship between metacognition and music instruction (Hanna, 2007). Metacognitive research has provided insight for educational psychologists on cognitive learning processes that support differentiation between high level and remedial students. Teaching students to be responsive and informed of how they learn and process information encourages them to become better learners (Campbell, 2005).The revised taxonomy "aligns learning objectives, curriculum, and assessment to link the complexity of learning with the cognitive and knowledge domains" (Hanna, 2007, p. 9). Standards-based instruction supported by the cognitive domain of the revised taxonomy can address cognition as a thinking, active process and provide a variety of learning objectives that extend beyond the traditional general music classroom experience.

Similar Studies and Instructional Strategies

Music education is less engaging when teachers use only one way to teach. Researchers have conducted numerous studies to investigate, analyze, and critique how diverse instructional practices can contribute to higher levels of critical thinking and improve student achievement (Louange, 2007; Strand, 2006; Williams, 2006). Marzano (2005) divided instruction into two categories, metacognition and active student achievement, to analyze and identify proven and measurable effects on student

achievement. Study results indicated that metacognitive thinking linked student learning and transferred skills to other subject areas retained over time. Constructive meaning and knowledge were demonstrated when teachers consistently used participatory activities that incorporated higher order thinking skills and multiple learning tasks.

Integrating strategies like MI with BRT enables a learner to develop different intellectual strengths and use higher order thinking capabilities. The MI theory caters to students' strengths and develops their awareness of learning, whereas BRT challenges students' thinking and caters to their different learning capabilities. The application of MI and BRT together provides a practical tool for learning (MI), provides breadth and depth (BRT), and facilitates the integration of curriculum disciplines (Noble, 2004).

Klein, Noe, and Wang (2006) noted that learners who benefited from integrated instruction were engaged in active learning and more metacognition, and were academically more successful than those in the traditional classroom. Hanna (2007) revealed the BRT was a means to interpret music education outcomes based on educational objectives. Middle school music educators analyzed the cognitive processes and knowledge domains from the national music standards to focus on more intricate musicianship styles. Hanna reported that planned knowledge in music learning is not only essential to music development, but also incorporates a vital aspect of metacognition. Strategic knowledge encourages music students to evaluate their musicianship skills to become more aware of their technique, style, and overall ability to think about their progress musically (Hanna, 2007, p. 14).

Summary

Section 2 contained an analysis of research on the importance of music education, integrating the cognitive domain of BRT with the NSME, and the value of metacognitive instruction to support learning and music education, particularly during adolescence. The section also contained a review and discussion of research on music cognition and its effect of integrating metacognitive instruction in music instruction. The NSME were examined to illustrate lesson activities that engage students, and BRT was suggested as a framework for integrating music standards with metacognitive learning that includes many elements of music (McGuire, 2002). Additional considerations were the importance of music education during adolescence, the problem of budget cuts, and the possibility of eliminating music education from the public middle school curriculum. Section 3 includes the research questions for the study, the methodology, and the importance of metacognitive lesson objectives that align the national standards and BRT.

Section 3: Research Methodology

Policy mandate pressures and education reforms have made it necessary for music educators to embrace a new instructional perspective for music education with lessons that offer a variety of standards-based learning objectives. The music curriculum needs to extend beyond the traditional general music classroom experience; address cognition as a thinking, active process; and connect music cross-curriculum. Music education is usually one of the top three choices discussed for elimination in most states facing budget cuts; therefore, it has become necessary to understand the importance and effect of music education across the curriculum and how the NSME goals are being met. The purpose of the current qualitative evaluative study was to determine the instructional methods used in the general music classroom to elucidate how the classroom praxis aligns with the standards-based metacognitive strategies from BRT and how the learning objectives supported and met the NSME. As in all case study research, the intent of the study was to provide a profound perception of a multifaceted subject to add potency to what is already known through earlier research (Yin, 2003).

Qualitative data collection procedures provided a descriptive analysis of how teachers teach music education in their classrooms. An open-ended survey conducted with 10 middle school music teachers who teach general music was one of the criteria used to determine the teaching strategies, present school demographics, years of teaching experience, and worldview of general music teachers. Four teachers who were also familiar with BRT, Gardner's MI theory, and the NSME were identified and invited to participate in a detailed discussion and interview.

In-depth interviews were conducted with four of the 10 participating teachers and yielded a greater understanding of their teaching practices. All 10 teachers provided two lesson plans, totaling 20 that were evaluated to determine the relevance of the lesson objectives of the BRT cognitive domain and how it aligned with the NSME. Significant relationships were identified and organized to create a matrix table to integrate the national standards and the six levels of the cognitive domain of BRT, to translate music education outcomes into educational criteria, and to address the procedural and metacognitive processes critical to music education (Hanna, 2007). The findings could contribute to improving general music instruction by using a more effective method of supporting and aligning classroom activities with the NSME. Section 3 contains an outline and discussion on the research methodology used in the study, research questions and design appropriateness, sampling frame, data collection, data analysis, and validity and reliability of the research.

Research Methodology

The goal of the evaluative case study was to provide a systematic way of looking at the teaching practices of the representative teachers with the purpose of improving student learning. An evaluative case study methodology was used to collect and examine artifacts to develop a framework of which instructional strategies were being used and to determine how the middle school general music teachers in selected suburban, rural, and urban schools aligned with BRT and met the NSME. The methodology allowed a focus on a specific topic of interest and then involved selecting multiple locations to investigate and illustrate the issue. A cross-case analysis followed the themes and patterns outlined

in the qualitative multisite case study to interpret and compare the case findings (Creswell, 2007).

Evaluative case reports consist of both individual and cross-case studies (Yin, 2003). Researchers can investigate each study independently and then compare them to cross reference, identify, and discuss the themes and patterns (Yin, 2003, p. 147). Yin (2003) contended the analytic benefits of evaluative multiple case study designs are more significant and the assumptions, differences, similarities, and external generalizations of the findings are more powerful and support the validity and success of multiple case study findings.

Qualitative research procedures allow researchers to present an insightful view into world situations that can produce life-changing outcomes. Researchers investigate issues and concerns in their natural environment through field notes, interviews, recordings, and dialogue (Denzin & Lincoln, 2005, p. 3). Qualitative research provides a subjective description of the research topic in nonnumeric terms through in-depth interviews using a number of open-ended questions (Creswell, 2003). The qualitative approach was appropriate for examining the instructional practices used in middle school general music classrooms along with the data collected from the interviews. A content analysis on 20 lesson plans was included. Five interview questions guided the interviews to gather information from the selected teachers. Rubin and Rubin (2005) noted interviewing provides an approach to understanding what and how the participants feel and bridges and relates opinions despite age, race, or geographical boundaries. Personal issues and events can be discussed, and researchers can watch or join the study activities

as they unfold. Qualitative inquiry employs a variety of diverse strategic learning opportunities and methods of data analysis (Creswell, 2003).

The reasoning underlying the use of an evaluative case study design is that the design supports a literal or a theoretical replication. Results from literal and theoretical replication produce differing outcomes; literal expects parallel outcomes, while theoretical expects opposing outcomes (source, publication date). The replication of two or more study findings is equivalent to two or more experiments on the same topic of interest. Yin (2003, p. 47) defended this logic or reasoning as being similar to the way scientists determine scientific findings. The intent of the study was to investigate and analyze contrasting or similar results on how the NSME and BRT aligned in lesson plans, instructional strategies, teacher expertise and experience, and block scheduling options at music programs in 10 public middle schools. The study involved a triangulation approach to support the credibility of data collection and analysis through in-depth, open-ended discussions and instructional documents such as the lesson plans of each teacher. Triangulation rests on the assumption that the strengths of one method often compensate for the weaknesses in another method (Creswell, 2003).

Success in the music classroom is dependent upon competent, standards-based, and creative instruction to ensure that the students have the comprehension tools necessary for creating their own paths (Smith et al., 2007). Collecting data through interviews and instructional materials helped identify what standards-based metacognitive instructional strategies the teachers were using and how the strategies supported the music teachers' classroom practice. The results of the study identified

potential advantages to assist general music teachers with alternative teaching techniques using the BRT learning objectives and the NSME.

Design Appropriateness

Case studies are the preferred approach to address *how* or *why* research questions to investigate a topic when a researcher has minimal control over the problem (Yin, 2003). Evaluative multiple case studies include at least four distinctive applications. They (a) explain key links to real-life interventions; (b) describe the interventions and real-life context surrounding the problem; (c) illustrate and explore specific topics within an evaluation; and (d) meta-evaluate, which is a study within an evaluation study (source, publication date). Multiple case studies provide a research design to examine closely and connect multiple issues or phenomena (Stake, 2006). An evaluative multiple case study can provide a systematic way of looking at what is happening in the general music class setting by collecting the data, analyzing the information collected, and reporting the results. Case studies predict findings that are similar, referred to as a literal replication, and also envision contrasting findings for predictable or theoretical replication (Creswell, 2003, p. 47). The current study included a multiple-case design to outline and describe examples of lesson plans, the processes of how each teacher implemented a standards-based curriculum, and the effect of block scheduling options adopted by each selected school.

Population, Sampling Frame, Consent, and Geographic Setting

Population and Sampling Frame

The study involved examining the instructional practices of 10 general music teachers in Metroplex Georgia middle schools (pseudonym) who agreed and consented to

participate. Four of the 10 middle school general music teachers from suburban, rural,

and urban school districts were interviewed. The selected teachers were familiar with

BRT and Gardner's MI theory and provided documented teaching practices, such as

lesson plans, for investigation to show how they help their students meet and achieve the

NSME. The participants included four veteran teachers with at least 20 years of

experience, three teachers with at least 10 years of teaching experience, and three novice

teachers with 2-7 years of teaching experience. The teachers were considered master

teachers and active members of the Georgia Music Educators Association and NAfME.

Students were not directly involved in the study.

The sampling frame consisted of a purposive sample that was representative of

the population and ensured that a diverse range was included. In-depth, open-ended

interviews were coded according to years of teaching experience (Veteran Teachers A, B,

C, D; Experienced Teachers A, B, C; and Novice Teachers A, B, C) and school

demographics (Suburban North, South, or Central; Rural; or Urban). The identities of the

participants, as well as the collected data sets, remained confidential. The participants'

confidentiality was maintained by keeping all data and identities in a secure file. Real

names were not used in the study. Creswell (2003) noted researchers must choose each

case carefully, and any use of multiple case designs should follow a sampling logic (p.

53).

Consent and Confidentiality

After receiving approval, No. 09-15-10-0094644, from Walden University's

Institutional Review Board, the 10 selected teachers who agreed to participate in the

research on a volunteer basis signed consent forms. The identity of the participants, as

well as the data obtained, remained confidential by keeping all data and identities in a secure file. Participation was voluntary, and the names and identities of the participants were not revealed to protect the identities of the school district, the school sites, and each teacher. A copy of the informed consent forms from the teacher participants is included in Appendix A.

Geographic Setting

The general music programs represented various school districts located in the metropolitan Georgia area. All of the school programs consisted of culturally diverse student populations in the metropolitan area and provided a vast array of instructional interpretation data. Each middle school general music program had distinct ethnic and economic backgrounds to provide a variation of data findings and interpretations. The enrollment of the rural music programs was 70-75% European American, 12-15% African American, 2% Hispanic, 3% Asian, and 2-4% other, with 3-5% eligible to receive free or reduced-price lunches, 2-3% in special education, and 0% English language learners. The enrollment of the suburban music programs was 60-64% Hispanic, 25-30% African American, 5-8% European American, 5-7% Asian, and 2-4% other, with 37-42% eligible for free or reduced-price lunches, 30-35% in special education, and 24-28% English language learners. The enrollment of the urban music program was 93-96% African American, 3-5% Hispanic, and 4-7% other, with 24-32% eligible for free or reduced-price lunches, 35-37% in special education, and 2-5% English language learners.

Pilot Study Interview Summary

A pilot interview was conducted with a master general music teacher to examine how the national standards for music education were applied with interesting and engaging metacognitive lesson objectives as presented in the cognitive domain of BRT, in the general music classroom. Leedy and Ormrod (2001) contended that pilot studies test procedures, check analysis methodology, resolve possible problems early, and assist researchers in avoiding wasted time by identifying and classifying the topics and themes under investigation (p. 196). Participation in the pilot interview study was voluntary and anonymous.

The interview remained on task and allowed unexpected information to materialize for discussion (Hatch, 2002). The music expert was not identified by name to verify reliability of responses and ensure anonymity. Data were recorded and documented to support accurate recall of prompt and follow-up questions that developed from responses to the open-ended guiding questions (Hatch, 2002). Hatch (2002) recommended researchers initiate the interview with guided questions, followed by leads or prompts generated in relationship to the context of the research topic (p. 101). The interviewee was provided with a hard copy of the research question and a short statement of the significance of the study for review before interview began. We both knew that the purpose for the interview was to gather data. I asked permission to start the tape to ensure that everything pertaining to the research topic of interest and the structured questions was recorded. The interview began with the participant signing the consent form, with formal greetings, and with introductions to the study significance and research

question. The interview objective and the researcher's appreciation for interviewees' participation and the recording privilege were also given.

I gathered data that contributed to the study results. The interview concluded with a summary of the collected data, thank you exchanges, confirmation that a hard copy of the transcript would be forwarded, and a request from the interviewer for a follow-up meeting if necessary. The participants all responded with acceptance, well wishes, and a positive response to the possibility of a follow-up meeting.

The interview findings and conclusion component were successful; the questions were open-ended and used language that was musically appropriate, concise, and familiar. All the questions, whether they were guided, probed, essential, or a follow-up inquiry, related to the research question and respected the interviewee's professional expertise, valuable musicianship skills, and learned knowledge of the research area of interest (Hatch, 2002, pp. 106-107).

Data Collection and Case Protocol

Creswell (2007) described four approaches to collecting data for qualitative research: observations, interviews, documents, and audiovisual materials. The current study included a survey questionnaire, in-depth interviews that were audio tape-recorded for accuracy, and lesson plans. Interview data were collected through semistructured and structured interviews that were audio tape-recorded and transcribed. As the researcher, I documented and coded classroom activities collected from the surveys, interviews, and lesson plans by theme, teacher experience, and demographics to validate the research and to distinguish the diversity of the instructional strategies of each participant (Creswell, 2007).

Yin (2003, p. 86) outlined the strengths and weaknesses of the use of documentation, interviews, and direct observations. Documentation strengths, like lesson plans, can be reviewed, are exact, are unobtrusive, and allow broad coverage, whereas their weaknesses are that retrievability might be low, a reporting bias might be reflected, and access to information might be deliberately blocked. Interview strengths are that they are targeted, focused on the case study topic, and insightful, but might also be biased, which is a weakness. An informed consent letter was forwarded to each teacher participant (see Appendix A). Telephone contact with all participants occurred 1 week after the consent forms were mailed to the selected teachers qualified for volunteer participation in the study. Following this procedure allowed participants to ask any questions and discuss the preliminary procedures for conducting the study in July 2011.

Freedman, Rutchik, and Norman (2005) noted that surveys and questionnaires can present valid statistical data for case study research. The quantitative and numeric descriptions of the survey questionnaire, as outlined by Creswell (2003), indicate that questionnaires analyze the opinions of a sampled population and enable an analysis of the results to determine teacher attitudes and practices (p. 153). A survey questionnaire was distributed and collected from 10 middle school general music teachers who volunteered to participate. The questionnaire results were used to determine the teachers' years of teaching experience, current teaching demographics, and familiarity with the BRT and NSME. Ten teachers who met all or most of the requirements and were familiar with the terms *cognition* and *metacognition* were invited to participate in the study. The questionnaire design used numbers 0, 1, 2, 3, and 4, with each number being represented by a word: *always* (4), *frequently* (3), *sometimes* (2), *seldom* (1), and *never* (0). The

tabulation of the total numbers from each rating scale quadrant provided the data to measure the statistics of the responses (see Appendix B). A panel of music education experts was consulted to preview the survey questionnaire and coding materials to ensure that they were accurate and would adequately enable the obtainment of the desired information.

Additional data for the study were collected using the following protocol:

1. Pilot study interview to discuss study objectives and purpose and to investigate specific instructional strategies and lesson plan samples.

2. Two lesson plans from each teacher.

3. A follow-up interview with four teachers to discuss, examine, and critique lesson plan execution and results.

Interviews can provide a breadth and depth of information that is not accessible through checklists, questionnaires, and rubrics (Creswell, 2003). Each interview took approximately 30 minutes and was recorded, transcribed, and filed in a safe location.

The in-depth interviews were conducted in public places before or after the school day. Each interview was arranged at a convenient location and time that did not interfere with classroom instruction. The interviews were guided by five questions (see Appendix C) that characterized the alignment of metacognitive instructional strategies as outlined in the six BRT cognitive dimension categories with the NSME: remember, understand, apply, analyze, evaluate, and create (Hanna, 2007, p.10). Interview data were transcribed, coded, categorized into themes and patterns per teacher years of experience and school demographics to secure confidentiality, and filed in a safe location (see Appendix D).

Researcher Role

In this multiple case study, I was the primary investigator with the sole responsibility of gathering and analyzing collected artifacts. According to Yin (2003), prior skills, training, and preparation for the study, along with development of the study protocol, supported conducting a highly skilled study. I contacted the 10 middle school general music teachers to provide directions, set up interview dates, and answer any questions. Personal thoughts or opinions regarding the execution of the lesson plans were limited to encourage freedom of expression. Specific characteristics were discovered and examined through an analysis of the audiotapes and videotapes of the interviews and lessons plans. Patterns were established to organize themes and relationships between the use of metacognitive instructional strategies as outlined in BRT and how they linked with the NSME. I am a certified K–12 general music teacher with 16 years of middle school teaching experience, which enhanced my understanding of the curriculum and strengthened my rapport with the interviewees. All the participants were members of local music organizations and colleagues.

Protocol Instrument

Development of the protocol is crucial and essential in a case study research design. Yin (2003) described a protocol as a major component to increase the reliability and validity of the study and provides researchers with the necessary tactics to complete the study. The case study was guided by a main interview question and five interview prompts (see Appendix C), as well as an interview coding matrix (see Appendix D) that encompassed the research questions and responses from the interview encounters.

Protocol Interview Guide

Researchers have indicated that metacognitive strategies can be of value in music education (Aiello, 2003; Gruhn & Rauscher, 2002). The research questions for the study were as follows:

RQ1: How effective are the instructional strategies in the music classroom and how do they align with the NSME?

RQ2: How can BRT link varying teaching practices to assist music teachers, help students improve their overall comprehension skills, and support a standards-based curriculum?

The main interview research question and the five in-depth interview inquiry prompts were designed to investigate the teaching practices of the participants and allow for probing.

Main interview question: What instructional strategies are being implemented in your general music classes that align with the National Standards for Music Education? The interview inquiry prompts, designed for in-depth interviews, were as follows:

1. How effective are these instructional strategies in your general music classroom?

2. How do they help your students consistently improve their overall music comprehension skills?

3. How familiar are you with the cognitive domain of Bloom's revised taxonomy and Howard Gardner's multiple intelligences theory?

4. What role does cognition, metacognition, thinking, and learning play in your general music curriculum objectives?

5. What is the relationship between using metacognitive strategies in the music

classroom and the NSME?

Validity and Reliability

Yin (2003) noted that the interview protocol is more than just an instrument

designed to collect data and is essential for multiple case studies. The protocol

establishes reliability, directs and keeps researchers on target on the topic of interest, and

assists in the collection of data (Yin, 2003, p. 67). The current study involved

investigating the relationship between using metacognitive strategies in the music

classroom and the NSME to determine a consensus of the participants. Each participant

was encouraged to provide detailed perspectives to establish validity. A review of the

final documents will confirm the validity of the interview responses.

Survey and Interview Data Reliability

A coding matrix was utilized to easily organize, gather, and categorize familiar

themes and patterns across collected observation and interview data for analysis and

further study (see Appendix D for a copy of the coding matrix used to catalog the

collected interview and survey data). Collected data were coded by patterns and themes

for analysis based on the responses from participants. Interview and survey data were

transcribed and assigned numbers for identification using the research questions as the

main coding markers. The interview codes were assigned as they related to how the

activities aligned with the cognitive and knowledge dimensions of the BRT and NSME.

The coding matrix served to delineate a code of frequency; a tally of the instructional

relationship, comparison, and contrasting codes between the general music programs; and

the amount of reoccurring emerging themes from the combined interviews.

The interview information was organized and presented in tables and figures in a content analysis. Creswell (2007) explained that the case study approach focuses on examining issue-relevant meanings from the collected data through direct interpretations, patterns, and naturalistic generalizations. Interviews were recorded and transcribed verbatim and filed with the field notes (Creswell, 2007, p. 163).

Triangulation Across Cases

Triangulation of the survey, lesson plans, and interviews contributed to the validation of the study. According to Stake (2006), the use of triangulation helps to ensure the interpretation of the collected data is correct by using multiple views to explain and acknowledge meaning. The process of triangulation was applied throughout the study while organizing and writing the final report (Stake, 2006, p. 37). Analysis of the data was guided through manual manipulations with a color-coded system to determine themes and patterns. By color coding, a visual diagram allowed a researcher to readily group similar items into themes and patterns and identify generalizations across the cases (Creswell, 2007, p. 173).

Member Checking

Member checking served to validate the data internally. Creswell (2003) noted that member checking helps to determine the accuracy of qualitative study findings (p. 196). A member-checking collaboration team consisting of the music coordinator for ABC Independent School District, the Georgia Music Educators Association Choral District IV chair, and two of the school district region chairs resulted in a team of four experts in the field to consult with throughout the study. After transcripts were transcribed, a copy was forwarded to each participant to check for accuracy.

Janesick (2004) compared qualitative data analysis to the fine arts discipline of dance performance. Janesick also discussed how important it is for qualitative researchers to "realize their interpretation skill of intuition, to make sense of the data, and to develop categories in the research, just as it is used in dance choreography" (p. 105). Member-checking collaboration supports researchers assessing collected data through a collection of perspectives. The coding process involved using multiple colors to help the member-checking committee visually review, map, analyze the collected data and confirm that I accurately illustrated the importance and significance of the data, similar groupings, and their relationship by theme or pattern. Direct interpretations taken from the interviews and surveys were reviewed and discussed through member checking, along with a critique of the content analysis of the cases to confirm that the study included an in-depth perspective, including the use of tables as recommended by Creswell (2007, p. 156).

Reliability of the Content Analysis

Data were described and justified by following the approach outlined by Creswell (2007). Using content analysis, the study involved preparing, organizing, and reducing the collected interview and survey data into themes through a method of coding and summarizing the codes, and inserting data into tables and interpretative narrative (Creswell, 2007, p. 148).

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Data Analysis

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Data analysis consisted of examining, categorizing, tabulating, or otherwise merging the data to focus on the initial proposal of the study (Yin, 2003).

Rubin and Rubin (2005) described several steps of data analysis. Coding involves sorting the collected data into groups by themes and patterns to be summarized, ranked, compared, combined, integrated, checked, and modified to systematically find meaning and significance (Rubin & Rubin, 2005, p. 224).

Four teachers participated in an in-depth interview. The responses from each interview were plotted to apply and calculate the frequencies or patterns from the individual responses. The data analysis methods used for this multiple case study followed Yin's (2003) analytic manipulations, including the following:

1. arranging information into patterns,

2. developing a matrix to categorize the collected data,

3. creating visuals using tables and figures, and

4. tabulating and examining the relationships between evidence and findings (p. 111).

Creswell (2003) noted that a concise, descriptive narrative should evolve from the data analysis to complete a qualitative study. According to a coding scheme, the interviewer records the responses (Creswell, 2003, p. 197). The interview portion of the data collection represented the qualitative descriptive design of the study. The questions measured the instructional strategies used by each participant. Data from the lesson plans were analyzed to determine how BRT and the NSME connect.

Summary

The inductive approach of the study involved searching for patterns and themes within the BRT and the NSME. The goal was to find connections between the two

variables through investigating the instructional strategies used by the 10 middle school general music programs.

The study involved examining the cognitive domain of BRT that addressed cognition as a thinking, active process. The standards-based metacognitive instructional strategies were critiqued to investigate how they assisted music teachers in their classroom practice. Aligning the learning objectives from the revised taxonomy and the NSME might give music teachers alternative teaching techniques to use.

Section 4 includes a discussion of the findings and the framework as described by Eisner (2002) that might influence academic competence and skill building and that might persuade and give adolescent learners the motivation to learn. Key components will be identified to illustrate the components that connect the instruction outlined in BRT to the NSME: (a) basic operations of reasoning; (b) domain-specific knowledge; (c) metacognitive knowledge; and (d) values, beliefs, and dispositions (NAfME, 2007, p. 4). A goal of the study was to reveal meaningful learning through the attitudes of adolescent learners to demonstrate positive learning experiences attained through skill development.

Section 4: Presentation and Analysis of Data

The purpose of the qualitative evaluative study was to determine the instructional methods used in the general music classroom to elucidate how classroom praxis aligns with standards-based metacognitive strategies from BRT and whether the learning objectives met the NSME. The reason for conducting the study was to determine whether the general music classroom is an effective setting to develop and integrate knowledge and learning as recommended by Wang et al. (2006). This section begins with an overview of the research questions that guided the study. Included are the rationale and procedures used in data analysis, the characteristics of the population and sample selection, the research participants, the details of the pilot study, the findings from the main study, and the conclusion from the data analyses.

The multiple case evaluative study provides an understanding of a complicated matter to add to previous research and knowledge (Yin, 2003). Qualitative data collection enabled a descriptive analysis of music instruction in a sample of middle school classrooms. An open-ended survey was administered to the 10 teachers and in-depth interviews were conducted with four teachers to determine the effectiveness of instructional strategies in the music classroom and how they align with the NSME. Additionally, content analyses were conducted on two lesson plans from each of the 10 middle school music teachers.

Teaching practices of the participants were examined from the collected data to determine how their lesson objectives align with BRT and link with the NSME. The findings could assist music teachers in helping students improve their overall comprehension skills and support a standards-based curriculum. Varying teaching

practices and instructional strategies were also identified from the triangulated sources to distinguish if there were differences or commonalities between the number of years teaching and the classroom experience of the participants. Study participants included novice, experienced, and veteran general music teachers in middle schools in Georgia. All participants were familiar with BRT, Gardner's MI theory, and the NSME. Findings are reported according to themes derived from patterns among the standards regularly used in the classroom, varying instructional practices that align with the cognitive domain lesson objectives from BRT and NSME, and how the participants incorporate BRT instructional strategies and NSME in their lesson plans.

The research questions were as follows:

RQ1: How effective were the instructional strategies in the music classroom and how did they align with the NSME?

RQ2: How could BRT have linked varying teaching practices with the NSME to assist music teachers and support a standards-based curriculum?

Ten middle school general music teachers completed the survey and submitted two lesson plans each, and four of the teachers were invited to participate in an in-depth interview to gain a deeper understanding of their teaching praxis. Data collected from the surveys, lesson plans, and interviews were used to determine which standards-based metacognitive instructional strategies were applied and how they were adapted in the classroom. Results gained from the data revealed the diversity of the teaching levels between novice, experienced, and veteran teachers.

Section 4 includes a discussion of the findings and the framework, as described by Eisner (2002), that might influence academic competence and skill building to persuade

and give adolescent learners the motivation to learn. Kratwohl (2002) stated that key components were identified to connect the lesson objectives with the instruction from the teachers' lesson plan outlined in BRT and the NSME: (a) basic operations of reasoning; (b) domain-specific knowledge; (c) metacognitive knowledge; and (d) values, beliefs, and disposition (p. 213). The outcomes of the study demonstrated meaningful learning through the attitudes of middle school adolescents and demonstrated positive learning experiences attained through skill development. The end results revealed that developing students who have acquired a basic and fundamental working knowledge of music are helped in becoming lifelong learners.

This study presents varying instructional strategies based on the years of experience, location, and demographics of the schools of each of the teachers. Table 4 outlines the demographics and details of the participants' gender, years of teaching experience, grade levels taught, and degrees earned. Profiles of each teacher provide an overview of their beliefs and philosophy regarding music education.

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Novice Teacher Biography Profiles

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Rural Novice Teacher A (RNTA)

Rural Novice Teacher A (RNTA) is a fifth-year middle school teacher. RNTA has taught Grades 6-8 in two Georgia cities and has earned a bachelor in vocal performance and a master of education in music education. The novice teacher's belief statement is "music is equivalent with life in many cultures and therefore it should be a necessity to developing the whole child."

Table 4

Participant Demographics and Profile

Pseudonym	Gender	Years of teaching experience	Grade levels taught	Degrees earned
Rural Novice (RNTA)	Female	5	6-8	B.A./M.Ed.
Rural Novice (RNTB)	Male	7	Elementary, 6-8	BMus/MMus
Suburban Central Novice (SCNTC)	Female	2	6-8	BMuTherapy/BMus
Suburban South Experienced (SSETA)	Female	18	6-12	B.S.
Suburban Central Experienced (SCETB)	Female	10	6-8	BMus Ed./MMus Ed.
Suburban North Experienced (SNETC)	Female	17	Pre-K-8	BMus /MMus
Suburban Central Veteran (SCVTA)	Female	20	K-12	B.S.Mus. Ed/M.A.Church Music/D.M.A. Music Psychology
Suburban South Veteran (SSVTB)	Female	41	K-12 & undergraduate	D.S/BMus/M.Adm.and Supervision/Specialist in Education and Technology
Rural Veteran (RVTC)	Female	28	K-5, 6-8, high school band	BMus/MMus
Urban Veteran (UVTD)	Female	30	Elementary, 6-8, 9-12	BMus

Rural Novice Teacher B (RNTB)

Teacher B (RNTB) had 7 years of teaching experience: 2 years at the elementary level and 5 years at the middle school level. This novice teacher started out as a K-12 substitute teacher and a special education paraprofessional and has earned a bachelor's degree and a master of music degree. RNTB believes that students need to be reached on different levels, and playing in the band and singing in chorus appeal to the intellect of the child.

Suburban Central Novice Teacher C (SCNTC)

Suburban Central Novice Teacher C (SCNTC) has been teaching Grades 6-8 for 2 years and has a bachelor degree in music therapy and a bachelor degree in vocal performance with the music education course add-on for teacher certification. SCNTC's

philosophy of music is that all students have the right to learn music education because it helps students with self-discipline and their academics. SCNTC also believes music education provides a cross-curriculum and artistic connection to life.

Experienced Teacher Biography Profiles

Suburban South Experienced Teacher D (SSETD)

Suburban South Experienced Teacher D (SSETD) is a teacher with 18 years of experience and a bachelor of science degree. SSETD has taught Grades 6-12 at four schools as a general music teacher and choral director. This teacher played in band during high school and college and credits having an instrumental background for enabling her to introduce the elements of music to students. SSETD stated that all children should have the opportunity to express themselves artistically, whether through drama, band, chorus, or music classes.

Suburban Central Experienced Teacher E (SCETE)

Suburban Central Experienced Teacher E (SCETE) has taught middle school general music and chorus for 10 years in Mississippi and Georgia. This participant has a bachelor and master of music education degree. SCETE's philosophy is that all children can learn, and if music is not important, then people should not listen to it.

Suburban North Experienced Teacher F (SNETF)

Suburban North Experienced Teacher F (SNETF) has 17 years of experience teaching music from Grades PreK-8. All her teaching experience has been in one school district. She holds a bachelor and a master degree of music. SNETF's philosophy of education is as follows:

Education inspires creativity. My desire is to share the joy of creative expression as a professional talent within the industry and inspire students to appreciate the arts using their cognitive skills to be creative and resourceful while developing their own sense of artistic expression in their chosen field of study and practice.

Veteran Teacher Biography Profiles

Suburban Central Veteran Teacher G (SCVTG)

Suburban Central Veteran Teacher G (SCVTG) is a 20-year veteran with a bachelor of science in music education, a master of arts in church music, and a doctorate of musical arts in music psychology. SCVTG has taught Grades K-12 at eight schools in both South Carolina and Georgia and believes that all students can learn and that music engages the right and left brain of the listener and learner. Music is a catalyst to help develop the minds of children and should be an integral part of their educational experience.

Suburban South Veteran Teacher H (SSVTH)

Suburban South Veteran Teacher H (SSVTH) has been in education for over 41 years, with instructional and administrative experience in North Carolina, Virginia, New York, and Georgia. This teacher holds four degrees: a bachelor's in music, a master's in administration and supervision, a specialist degree in education concentrating in education and technology, and a doctorate in science. SSVTH has taught music education grades K-16, which includes music education on the college level. This teacher's philosophy is that music is a universal language that bridges every culture and surpasses every obstacle when used and taught correctly.

Rural District Veteran Teacher I (RDVTI)

Rural District Veteran Teacher I (RDVTI) is a 28-year veteran and claims to still be passionate about music. She has taught general music in Grades K-5 and high school band, with the majority of experience teaching middle school general and choral music. RDVTI earned a bachelor and master of music education, received a music scholarship in band playing oboe, and was a member of a southern town's symphony orchestra for over 7 years. This teacher is confident that all students can learn but that it takes time and believes that when students sing and play they must use all their senses.

Urban District Veteran Teacher J (UDVTJ)

Urban District Veteran Teacher J (UDVTJ) is a 32-year veteran with a bachelor of music and some coursework toward a master of music degree. UDVTJ's teaching experience includes jobs in California, North Carolina, and Georgia, with 22 years spent teaching in high school, 8 years in middle school, and 2 years in elementary. UDVTJ also has experience working in corporate business. UDVTJ believes if teachers can instill the desire to learn in students, they can be successful in every endeavor.

<p align="center">Systems for Tracking Data and Emerging Understandings</p>

Data were tracked using the survey questionnaire responses, tape recordings and field notes from the interviews, and the hard copies of the 20 lesson plans submitted. Follow-up phone conversations provided opportunities to validate and confirm an accurate report of the collected data. A panel of experts were consulted throughout the study to advise and counsel on the correct and scholarly interpretation of the information received from each participant. All personal contact with the participants took place in public venues, such as libraries, bookstores, and coffee shops.

Recommendations from the member-checking committee included probing for active, hands-on learning challenges accompanied with focused in-depth listening and music-making exploration activities that are imperative for middle school music students. Students need opportunities to listen and to be taught how to listen and hear music with a critical ear, which will connect them socially to create a community of music makers (Davis, 2011). Data for the study were collected using the following protocol:

1. Pilot study interview to discuss study objectives and purpose and to investigate specific instructional strategies and lesson plan samples.

2. Two lesson plans from each teacher.

3. A follow-up interview with four teachers to discuss, examine, and critique lesson plan execution and results.

Patterns From Survey Questionnaire Findings

The survey design used numbers 0, 1, 2, 3, and 4, with each number being represented by a word: *always* (4), *frequently* (3), *sometimes* (2), *seldom* (1), and *never* (0). The tabulation of the total numbers from each rating scale quadrant provided the data to measure the statistics of the responses (see Appendix B). The 10 teacher participants were at varying stages in their music teaching careers (see Table 5). Three were novice teachers with a range of 1 to 7 years of teaching experience. Three were experienced teachers with 10 to 18 years of experience, and four were veteran music teachers with 20 or more years of experience. Two teacher participants reported health issues or experiences with natural disasters, and eight participants indicated willingness to participate in a case study serving as an extension to this study. Seven of the teachers

began teaching immediately after college between the ages of 22-25; two started teaching at ages 27 and 28, and one teacher began her career at age 33.

Eight out of 10 music teachers indicated that their principals *always* believed diverse teaching practices are essential for achieving school goals. One of the two remaining teachers indicated her principal *sometimes,* while the other stated her principal *frequently* believes teaching practices are essential. Two of 10 indicated that opportunities to practice new teaching strategies learned from staff development, in-services, or workshops occurred only *sometimes*. Six participants indicated that they were provided with opportunities to practice newly learned teaching strategies *frequently* and the last two responded they were *always* given opportunities to practice newly learned teaching strategies. Four teachers noted that they receive ongoing learning opportunities in their teaching content areas *frequently* and five responded *always*. One novice teacher did not respond to this question and shared that she had "no comment." Seven participants stated they *frequently*, while three indicated they *always*, received teacher support through workshops, study groups, and collegial activities, such as peer coaching, planning, and reviewing and analyzing student work.

Two of 10 music teachers perceived that they were quite familiar with a rating of *frequently* and four gave a rating of *always* to describe their knowledge of BRT, whereas four teachers expressed unfamiliarity or no knowledge at all of BRT. Three survey participants mentioned that they include the BRT cognitive levels creating, evaluating, and analyzing within their music lesson plans and classroom activities a minimum of four times per week. Three use BRT cognitive levels in their lesson plans a minimum of three times, while two teachers only used them once a week, and two responded that they never

used the BRT at all to engage their students in learning. Eight teacher survey participants

stated that their lesson plans and classroom activities *always* align with the NSME and

the other two said they *frequently* align their plans and activities with the NSME. Seven

of 10 teachers expressed *always* in relation to the importance of aligning the NSME,

BRT, and student learning; one teacher responded *frequently* and two stated that

sometimes it is important.

Table 5

Survey Questionnaire Findings

	RNTA	RNTB	SCNTC	SSETD	SCETE	SNETF	SCVTG	SSVTH	RDVTI	UDVTJ
Principal-diverse teaching practices-achievement	4	4	2	4	4	4	3	4	4	4
Opportunities to practice new staff dev. strategies	2	3	2	3	3	4	3	3	4	3
Teachers' ongoing learning in areas of subject matter	3	4		3	4	4	4	3	4	3
Teacher support: workshops, peer coaching, study groups, joint planning of lessons, examination of student work	3	4	3	3	3	3	3	4	4	3
Knowledge of Bloom's taxonomy	3	0	1	4	4	1	0	3	4	4
Use Bloom's taxonomy in lesson plans and classroom activities	1	1	0	3	4	4	0	3	4	3
Cognitive levels that you used in classroom to engage students	C, E	C, E, An, Ap, U, R	C, E, An,	C, E, An, Ap, U, R	C, E, An, Ap, U, R	C, E, An, Ap, U, R		C, E, An, Ap, U, R	C, E, An, Ap, U, R	C, E, An, Ap, U, R
Regular alignment of lesson plans, classroom activities, NSME	4	3	4	3	4	4	4	4	4	4
Importance of NSME, Bloom's taxonomy, student learning alignment	4	2	4	4	4	4	2	4	4	3
Interest in case study on classroom practices	Y	Y	Y	Y	N	N	Y	N	N	Y
Teaching experience										
Number of years	5	7	2	18	10	17	20	40	28	32
Age at start of career	25	24	33	24	28	24	27	23	22	22
Health issues or national disasters	N	N	N	N	N	N	N[a]	N	Y	Y

Note. Numerical values 1-4 represent the number of occurrences in the classroom each week. C = creating, E = evaluating, An = analyzing, Ap = applying, U = understanding, R = remembering, NSME = National Standards for Music Education.

Patterns From Teacher Lesson Plans

Lesson plans of the 10 general music teachers were evaluated to gain a deeper understanding of their teaching praxis. Each teacher submitted two lesson plans with classroom activities that aligned with the cognitive domain of BRT. The activities were critiqued and aligned with the NSME in a content analysis of each lesson. The focus was to investigate, analyze, and translate music education activities into educational criteria and to address the procedural and metacognitive processes critical to music education (Hanna, 2007). The lesson activities were grouped to align with Bloom's cognitive domain, which involves six major types of thinking: remembering, understanding, applying, analyzing, evaluating, and creating (Anderson et al., 2001, pp.67-68). Remembering assists with the recall of relevant facts from the long-term memory. Understanding involves building understanding from instructional messages, either written, verbal, or nonverbal. Applying involves the procedures required to carry out and use methods in specified circumstances, while analyzing involves dissecting information into parts to determine the relationship between the parts to design an overall purpose or structure of a given situation. Evaluating involves the process of making judgments on standards and criteria, and creating puts the elements together to form the whole to reorganize and design a new structure.

Both research questions were addressed throughout the critique and alignment of the lesson plans. Research Question 1 was as follows: How effective are the instructional strategies in the music classroom and how do they align with the NSME? Research Question 2 was as follows: How can BRT link varying teaching practices with the NSME to assist music teachers and support a standards-based curriculum? Instructional

strategies and how teaching practices were addressed in the taxonomy table to indicate how the lesson activities are aligned with the six cognitive domains of BRT. The NSME and how the lesson activities support a standards-based curriculum were addressed in the content analysis that follows each teacher's lesson plans. The purpose for the content analysis was to summarize and connect the lesson plan alignment of the cognitive domain of BRT with the NSME.

The lesson plans were categorized on a taxonomy chart that aligned the activities under an appropriate cognitive domain type of thinking. Activities aligned under the *remember* domain type included the introduction and discussion of styles, genres, artists, history, and cultures related to music. Students were instructed with activities such as listening to and singing songs and recognizing musical notes, values, rhythms, and melodies. Recalling key vocabulary terms was a common practice within this type.

The second domain type that emerged from the music teacher lesson plans was from the second cognitive level of BRT, *understanding*. Lesson activities within this domain type consisted of understanding and analyzing music patterns. Another effective practice was chanting, clapping rhythms, and identifying and matching musical notes to demonstrate learned knowledge.

The third domain type, *applying*, emerged from teacher lesson plans in activities such as composing and improvisation of music. Examples of the activities given in the lessons included creating eight-measure rhythm patterns, choreographing music, movement in different meters, and reading and role playing according to student interpretation. Classroom activities that aligned with the fourth, fifth, and sixth cognitive domains, *evaluation analyzing, and creating*, were shown through student presentations

of completed original music arrangements. Students used selected rubrics and checklists to critique and analyze peer musical arrangements using correct musical terminology. Some of the class activities outlined through the lesson plans were peer-critiqued or self-assessed. In one lesson analyzed, students self-evaluated, practiced, and critiqued their original eight-measure musical patterns and accurate singing using the solfège syllables.

Novice Teachers' Lesson Plans

Rural Novice Teacher A (RNTA)

The first standards-based lesson plan submitted by RNTA was detailed. The seventh-grade lesson included learning targets, standards, assessment, lesson opening, instructional activities, guided and independent practice, and lesson closing. The learning target for Lesson Plan 1 was for students to know/do/understand/describe the characteristics of traditional music in South African culture (see Table 6). Standards used were NSME 1, which stressed singing accurately with good breath control, tone quality, expression, and technical accuracy within simple harmonic settings (NAfME, 2007, p. 2). NSME 9 laid the foundation for the lesson to help the students understand music in relation to history and culture, distinguish characteristics of representative music genres, and learn styles from a variety of cultures (NAfME, 2007, p. 2). Specifically this standard supported the lesson's topic, South African culture, by integrating activities for students to compare and identify South Africa's musical role and function, its musicians, and its respective performance conditions. The instructional activities for this lesson were divided into four categories: knowledge and understanding, personal engagement, application, and reflection and evaluation.

Table 6

Lesson Plan 1 Taxonomy Table: RNTA (Topic: Music and Culture of South Africa)

	The cognitive process dimension					
Knowledge dimension	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer, Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts		Discuss the characteristics of *South African* culture and music				
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music		Teacher assistance to ensure that students understand the article material			Teacher-led critique and assessment of performance through prompts to increase student effectiveness while singing	Perform a two-part choral selection, *Mbude* "The Lion Sleeps Tonight," using correct pitches, rhythm, level of energy, and posture
C. Procedural: Skills, techniques, & methods, performance criteria		Read an article, "Music of your Word" about South African music and culture and answer corresponding questions in music				
D. Metacognitive: Strategic knowledge knowledge of cognitive demands for different tasks self-knowledge		Student independent work to answer questions from article using self-knowledge and personal cognition			Student evaluation of Mbude performance with rubric to assess technique using self-knowledge and personal cognition	

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

Lesson Plan 2 for RNTA was outlined for a sixth-grade general music class to support the lesson topic, Music of the Classical Era (see Table 7). NSME 6 provided the listening, analyzing, and describing musical framework for this lesson (NAfME, 2007, p. 2). Students were instructed to identify specific music events during the listening activity to describe the characteristics of musical elements of the music era. This teacher-led lesson began with a lecture on the characteristics of the music styles during the Classical Era and required the class to take notes. NSME 9, which outlines understanding history and culture also supported the lesson activities (NAfME, 2007, p. 2). Students read an article, listened to musical excerpts from the Classical Era to connect the standards to the lesson topic, defined vocabulary terms, and participated in a teacher-led discussion to ensure that they understood the subject.

RNTA Lesson Plan Critique and Analysis

In both lesson plans, RNTA introduced students to various genres and cultures of music using lectures, whole-class reading, definition of vocabulary terms, discussions, and listening activities. Standards 1, singing, 6, listening, analyzing and describing music, and 9, understanding history and culture supported the lesson topics (NAfME, 2007, p. 2). The activities, whole-class and individual listening, singing, and reading activities, aligned with all six of Bloom's revised cognitive domains.

Table 7

Lesson Plan 2 Taxonomy Table: RNTA (Topic: Music of the Classical Era)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Recall and recognize Classical Era vocabulary terms	Understand and discuss the Classical Era time period and musical styles				
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music		Understand and define words from the article "The Classical Period from Bach to Rock"	Teacher lecture on the characteristics and musical styles of the Classical Era			
C. Procedural: Skills, techniques, & methods, performance criteria	Read the article "The Classical Period from Bach to Rock"		Teacher guided discussion on the read article using essay prompt questions	Student listening activity of classical music excerpts; Haydn's Surprise Symphony and Mozart's Symphony No. 40	Teacher evaluation through observations, work samples and discussion	
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge			Students take notes on several concepts including the forms of music most popular during the Classical Era, naming the sonata and the symphony using self-knowledge and personal cognition			

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

Rural Novice Teacher B (RNTB)

Lesson Plan 1 for RNTB focused on the performance standards that developed performance skills and musical techniques with an eighth-grade music class (see Table 8). NSME 1, singing was introduced to develop and strengthen singing skills using a varied repertoire of music. Students learned to sing with technical accuracy, good breath control, and attention to tone quality throughout their ranges in unison and harmony (NAfME, 2007, p. 2). NSME 2 incorporated the playing of the keyboards, was listed as a resource for the lesson, along with NSME 3, reading and notating music, to reinforce learned knowledge of standard notation symbols for pitch, rhythm, dynamics, tempo, articulation, and expression (NAfME, 2007, p. 2). The lesson included instructional sequences on the importance of knowing how to interpret basic notes and rests in simple meters, read and sight sing simple melodies in the treble clef, identify and understand notation in bass clef, and record their musical ideas and the musical ideas of others, using basic terminology and notation.

In Lesson Plan 2, RNTB followed and basically repeated the same lesson format as Lesson Plan 1 (see Table 9). Standards 1 and 3 singing, reading, and notating music were the foundation instructional concepts for the whole-class activity (NAfME, 2007, p.2). This lesson encouraged the students to recall and demonstrate learned knowledge of the basic elements of music as it applies to singing a song. The instructional focus was to sing with accuracy familiar and newly introduced choral music to engage the class and strengthen vocal technique, breath support, listening to, and reading notated music. The class structure centered primarily on a choral class setting.

Table 8

Lesson Plan 1 Taxonomy Table: RNTB (Topic: Performance Skills and Musical

Techniques)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts						
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music		Read through the basics to organize and discuss the time and key signature and identify repeating patterns, pitch, rhythm, tone, dynamics, tempo, articulation, and expression in the lyrics and notated music		Teacher-led activity: Pass out and learn a new song to develop technical accuracy, good breath control, and attention to tone quality Learn new song by listening to melody played on piano and a recorded version that incorporates learned note values: whole, half, quarter, and 16th notes and rests in simple meters		
C. Procedural: Skills, techniques, & methods, performance criteria			Physical warm-up exercise (stretching) Vocal warm-up exercise (singing warm-up scales in unison, 2-part, and 3-part harmony)	Students sing the song by rote with teacher assistance		Students take a 2-minute break to stretch, stand, or talk before proceeding to closing activity
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge			Sing a familiar song ("Do-Re-Mi" from the Sound of Music) using self-knowledge and personal cognition	Sight-read through the new song using self-knowledge of learned simple melodies in the treble clef along with the recognition of bass clef notation		Closing activity: Student will sing a solo in front of class or sing a familiar song using self-knowledge and personal cognition

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

Table 9

Lesson Plan 2 Taxonomy Table: RNTB

	The cognitive process dimension					
Knowledge dimension	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Recall and review the basics of new song - time & key signature, identify repeating patterns in the lyrics and notated music					
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music	Review learned vocal technique as it applied to the new song			Teacher-led activity: learn more pages of new song using proper vocal technique Learn new pages of song by listening to melody played on piano, and a recorded version		
C. Procedural: Skills techniques & methods, performance criteria	Physical warm-up exercise (stretching and body percussion) Vocal warm-up exercise (singing warm-up scales in unison, 2-part & 3-part harmony)			Students sing new pages of the song by rote with teacher assistance	Students take a 2-minute break to stretch, stand or talk before proceeding to closing activity	
D Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge	Sing a familiar song ("Do-Re-Mi" from the Sound of Music) using self-knowledge and personal cognition			Sight-read through the new pages of the song using self-knowledge and personal cognition	Closing activity: Student will sing through the whole song "Do-Re-Mi" using self-knowledge and personal cognition	

Note. From A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

RNTB Lesson Plan Critique and Analysis

Singing was the main instructional focus for both of the lessons submitted. The students sang familiar and new choral literature to strengthen and demonstrate proper vocal technique. The whole-class activities included reading notated symbols in the

written copies of the music to build musicianship skills. The teacher instructed the class using both piano and recorded music.

Suburban Central Novice Teacher C (SCNTC)

SCNTC opened Lesson Plan 1 (see Table 10) with four essential questions. The four questions were: (a) What are the different types of pianos and keyboards, (b) How do we properly care for our keyboard instruments, (c) What are the different instrument families, and (d) What family does the keyboard belong to? These were good review assessment prompt questions to engage the students in discussion and connect the lesson content with the use of the keyboards. The students were instructed to practice and learn to play various songs and scales on the Yamaha Music in Education (MIE) technology-assisted keyboard. SCNTC featured an invited vocal guest to perform for the class to listen to, analyzing the performance and describe what they heard, which is NSME 6. The live performance provided the students an opportunity to evaluate the musical performance, which is NSME 7 (Conway, 2008, p. 34). Teacher assessment and evaluation consisted of listening to individual student performances of the assigned rhythms and playing "Twinkle, Twinkle Little Star" and "Mary Had a Little Lamb" on the Yamaha MIE keyboards.

The concept for the second lesson included rehearsing to strengthen articulation, vocal tone, and color, along with maintaining tempo and rhythm accuracy (see Table 11). The lesson format was divided into three instructional categories: before the learning, during the learning, and after the learning. An additional category, cross-curriculum reinforcement, was incorporated to show how disciplines outside the arts such as language arts, mathematics, and social studies supported the lesson content.

Table 10

Lesson Plan 1 Taxonomy Table: SCNTC (Topic: Keyboard Techniques)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts						
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music		Review and explain the essential questions: "What are the different types of pianos and keyboards?" "How do we properly care for our keyboard instruments?" "What are the different instrument families?" "What family does the keyboard belong to?"	Students will practice and learn the keyboard hand positions, proper fingerings, all white key notes and black key groupings		Teacher will listen to and assess each student play their song individually	
C. Procedural: Skills, techniques, & methods, performance criteria			Students will practice and learn to play C-major scale, "Twinkle, Twinkle Little Star," "Mary Had a Little Lamb," "Hot Cross Buns," and "Lean on Me" on the Yamaha MIE keyboards	Students will listen to, analyze, and be able to describe a live vocal guest performance		
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge					Teacher will evaluate and assess students playing "Twinkle, Twinkle Little Star" and "Mary Had a Little Lamb" on the Yamaha MIE Keyboards using self-knowledge and personal cognition	

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

Table 11

Lesson Plan 2 Taxonomy Table: SCNTC (Topic: Vocal and Choral Techniques)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Remember and recall vocabulary terms: ritardando, time signature, measure, and barline					
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music		(Before the learning) Explain and discuss essential question: "What will we be evaluated on at LGPE?"	Student will listen to vocal lines played on keyboard by teacher	Teacher-led discussion on the methods used at LGPE regarding proper vocal technique (vocal tone and color)		(After the learning) Teacher-led discussion on how disciplines outside the arts (language arts, mathematics, and social studies) connect with music to create cross-curriculum studies
C. Procedural: Skills, techniques, & methods, performance criteria			(During the learning) Students rehearse LGPE songs: "Something Told the Wild Geese," "Goodnight, a Russian Song," and "Down by the Riverside"	Teacher will instruct rehearsal using differentiation grouping (whole class singing) and independent study (sectionals) of the choral music		
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge						Students will sing learned music using self-knowledge and personal cognition as a whole class and by sections

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

SCNTC Lesson Critique and Analysis

SCNTC submitted Lesson Plan 1, which included four essential questions, to prompt the lesson, and the work period introduced several songs that the students would be learning to play. Both activities were engaging and encouraged higher order thinking skills. Lesson Plan 2 presented a detailed lesson format as a standards-based lesson with activities to strengthen vocals and use of the keyboards. Discussions were initiated with the students to connect how music linked with disciplines outside the arts, like mathematics and social studies, along with other arts disciplines, such as visual arts, band, and drama.

Experienced Teachers' Lesson Plans

Suburban South Experienced Teacher D (SSETD)

SSETD's Lesson Plan 1 consisted of a detailed format outlining a cooperative group PowerPoint presentation project using NSME 9, music history and culture, for an eighth-grade general music class (see Table 12). The lesson involved understanding music in relation to history and culture (NAfME, 2007, p. 2). The instructional objective required students to identify and describe historical and cultural characteristics of a varied repertoire, including world music (NAfME, 2007, p. 2). The essential question posed to connect the topic and the instructional agenda was as follows: "How can you learn to fully appreciate different genres and their contribution to contemporary music?" Technology, including laptop computers, the World Wide Web, other online resources, and an LCD projector, was available to support the group project assignment: choose and research a specific style, culture, and genre of a selected artist to create a three-slide PowerPoint presentation.

Table 12

Lesson Plan 1 Taxonomy Table: SSETD (Topic: History and Culture of World Music)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Introduce, review terms: style, culture, history & rubric for PPT	Discuss essential question "How can you learn to fully appreciate different genres and their contribution to contemporary music?" with group members for PPT			Critique & check for correct content of PPT draft using rubric	Cooperative groups complete PPT presentations
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within & outside of music	Assigned cooperative groups discuss the list of preselected styles of unfamiliar music for PPT	Understand & interpret specific facts regarding major music time periods, historical & cultural characteristics of the varied musical styles			Teacher evaluates & checks cooperative group PPT drafts using rubric guidelines	
C. Procedural: Skills, techniques, & methods, performance criteria	Choose a style, genre, and artist to research	Use computers to research and collect data for PPT	Implement photos, music, and slide custom accessories to PPT	Organize 3 slides w/T & peer assistance to sequence PPT	Cooperative groups make necessary revisions, if needed	Cooperativegroups present original PPT on a selected artist, composer and genre of music
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge	Share known knowledge of selected genre, style, culture as it relates to topic for PPT	Implement photos, music, and slide custom accessories to PPT			Critique & self-evaluate final PPT draft. Each group member will work on their verbal contribution of the presentation	Groups present original PPT on a selected artist, composer & genre of music using self-knowledge & personal cognition

Note. PPT = PowerPoint. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

Lesson Plan 2 for the eighth-grade music class incorporated the technology-assisted keyboard lab using NSME 4, improvising melodies, variations, and accompaniments (see Table 13). The main objective was to improvise simple harmonic accompaniments, simple rhythmic and melodic variations, and short melodies with existing accompaniments consistent to given style and tonality (NAfME, 2007, p.2). The lesson's essential question was "How can a melody be changed to suit the performer's style?" to connect topic and engage the students in discussion to teach and reinforce keyboard techniques. Special needs to fulfill this lesson required keyboards to be set in automatic bass I, IV, and V7 chordal sequence for the accompaniment. Students were paired at the keyboard: one to play the bass chord accompaniment and the other to play a simple melody.

SSETD Lesson Plan Critique and Analysis

SSETD outlined two lessons that introduced students to various musical tasks through cooperative group projects. Students were engaged in activities that incorporated metacognitive behaviors that promote and employ critical thinking skills. Both lesson plans only listed one NSME, whereas the instructional sequences included several other standards. Lesson Plan 1 included NSME 6 (listening to, analyzing, and describing music) and NSME 7 (evaluating music and music performances; Conway, 2008, p. 35). Students were instructed to listen to selected musical styles and to evaluate and implement photos, music, and slideshow accessories to complement the PowerPoint project. Lesson Plan 2 required the student teams to play the keyboard, which meets NSME 2 (performing on instruments, alone and with others, a varied repertoire of music; NAfME, 2007, p.2), NSME 6 (listening to, analyzing, and describing music; NAfME,

2007, p.2,), NSME 3 (reading and notating music; NAfME, 2007, p.2), and NSME 5

(composing and arranging music within specified guidelines; NAfME, 2007, p.2). Each

student team had to listen to and read notated melodies to improvise, arrange, and create

an original melodic and I, IV, and V7 chord accompaniment presentation.

Table 13

Lesson Plan 2 Taxonomy Table: SSETD (Topic: Keyboard Improvisation Techniques)

	The cognitive process dimension					
Knowledge dimension	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Review the project rubric guidelines	Discuss the essential question "How can a melody be changed to suit the performer's style?"			Teacher critique & check for correct content to assist teams complete their arrangements	
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music	Play two versions of "When the Saints Go Marching In" using traditional & improvised accompaniments, simple harmonic, rhythmic, and melodic variations, and short melodies	Teacher and students take selected melodies and change the meter using the features on the keyboard.	Student teams must improvise the melody & alter the rhythms of each song to match the meter			
C. Procedural: Skills, techniques, & methods, performance criteria	Teacher & students select two melodies from a given list of melodies to add a chordal I, IV, & V7 accompaniment					Student teams present their completed arrangements to the class
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge		Play "When the Saints Go Marching In" in various meters and explain what was done to get the desired result	Teacher and students explain what they did to alter the melody of their song			Students critique each arrangement using learned musical terminology

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

Suburban Central Experienced Teacher E (SCETE)

SCETE sequenced Lesson Plan 1 using NSME 4 (improvising melodies, variations, and accompaniments; NAfME, 2007, p.2) and NSME 5 (composing and arranging music within specified guidelines; NAfME, 2007, p.2) to instruct an eighth-grade general music class (see Table 14). The instructional activity involved improvising melodies, variations, and accompaniments on the MIE keyboards, along with composing and arranging music within specified guidelines. The lesson objective was to identify music notes and their values and read, count, and clap basic rhythm patterns as a whole-class oral activity. The students were instructed to compose and create an eight-measure rhythm pattern independently to culminate the lesson using the MIE keyboards with existing accompaniments, consistent to given style, meter, and tonality (NAfME, 2007).

SCETE outlined Lesson Plan 2 to demonstrate knowledge and competency using NSME 1, 3, and 5, which incorporated singing in the eighth-grade general music class (see Table 15). NSME 1 is singing alone or with others, a varied repertoire of music, NSME 3 is reading and notating music, and NSME 5 is composing and arranging music within specified guidelines (NAfME, 2007, p.2). The lesson objective was to identify music notes and their values, identify syllables of the solfège system, sing basic rhythm patterns using the solfège system, sing major and minor scales with accuracy, and sing "Joshua Fit de Battle" with accurate pitches and rhythm. Students learned basic note and rhythm values and counted, read, and sang aloud with a group using the solfège system.

Table 14

Lesson Plan 1 Taxonomy Table: SCETE (Topic: Keyboard Improvisation Techniques)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Review, identify and recognize basic music notes, values, and rhythm terms and symbols			Analyze basic music notes, values, and rhythm patterns	Teacher critiques and assesses whole class activity for correct notes, values, and rhythm patterns	Play given basic music notes, values and rhythm patterns
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music		Understand, explain, and discuss basic notes, values, and rhythm patterns			Teacher gives an assignment to create an 8-measure rhythm pattern	
C. Procedural: Skills, techniques, and methods; performance criteria	Review and recognize basic music notation and techniques		Chant, clap given rhythm patterns. Identify and match notes, values on worksheet		Teacher and students evaluate music notation for correct technique and skill on independent rhythm pattern assignment	Compose and create an 8-measure rhythm pattern using basic music notation
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge	Recall and discuss learned knowledge of basic music notes, values and rhythm patterns	Classify, compare and match notes, values, and rhythm patterns			Students self-evaluate, practice, and critique their 8 measure assignment	Perform original rhythm patterns using self-knowledge and personal cognition

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

Table 15

Lesson Plan 2 Taxonomy Table: SCETE (Topic: Learning the Solfège System)

	The cognitive process dimension					
Knowledge dimension	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Review and Recall basic music notes, values and rhythms		Apply the solfège hand signs to selected rhythm patterns			
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music	Recognize and recall the concepts of the solfège system			Analyze how to apply the solfège system with basic music note values and rhythm patterns		
C. Procedural Skills, techniques, and methods; performance criteria	Identify and sing basic rhythm patterns and pitches of the major, minor, and chromatic scales		Sing rhythm patterns and pitches of major, minor, and chromatic scales with accuracy using the solfege syllables		Evaluate music through critiquing accurate singing using the solfège syllables	Perform "Joshua Fit de Battle" using the solfège system
D. Metacognitive Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge	Recognize and recall known and self-cognition of basic music notes, values and rhythm patterns using the solfège system					Perform "Joshua Fit de Battle" by using self-knowledge and personal cognition

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

SCETE Lesson Plan Critique and Analysis

Both lesson plans reinforced basic music notation, including notes, values, and rhythm patterns, that are key elements of music. SCETE incorporated NSME 1 (singing), which is a whole-class activity (NAfME, 2007, p.2). Each lesson provided multiple activities, like , keyboard improvisation and singing using the solfège system, and promoted creativity and independent work to readily assess and measure improvement. The use of worksheets in Lesson Plan 1 provided a written assessment to evaluate and critique learned musical knowledge. The lesson plans covered lecture/modeling, discussions/questions, singing, counting/chanting, full chorus, sectionals, and sight reading. Materials such as audio and visual equipment and classroom folders were used on a regular basis in the class. Evaluation, teacher-led and student assessments, singing, essential questions, counting, quiz-aural skills, major test-musicianship, project/paper, and daily work were all components for both standards-based lesson plans.

Suburban North Experienced Teacher F (SNETF)

The concept of Lesson Plan 1 (see Table 16) incorporated choreographed dance movements in different meters to emphasize and teach the musical element, meter, or time signature. Standards used were NSME 6 (listen, analyze, and describe music), NSME 9 (understanding music in relation to history and culture), and Elementary Music Standard 2.10 (moving alone and with others to a varied repertoire of music), a language arts objective (Petress, 2005, p. 112). SNETF outlined the lesson sequence in five categories. Before the learning introduced a teacher-focused mini-lesson and included an opportunity to answer the essential question and discuss the difference between music and dance with the New England dances compared to hip-hop or Latino dances. The

essential question for the lesson discussion was "What is the same? What has changed?"

The mini-lesson reinforced the standards and the elements of music.

Table 16

Lesson Plan 1 Taxonomy Table: SNETF (Topic: Time Signatures/Meter, and

Choreographed Movement)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Recall music vocabulary terms: accented beat, meter					
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music		(Before the learning) Explain and discuss the difference between music and dance with the New England dances compared to hip-hop or Latino dances. Essential question discussion, "What is the same? What has changed?"		Listen to recordings of New England dance music. Move to music in simple meter		Synthesis: Create your own dance
C. Procedural: Skills, techniques, and methods; performance criteria			(During the learning) Assign teams. Learn choreographed movement to a New England song			Practice dance pieces
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge	Define locomotor and nonlocomotor movement using self-knowledge and personal cognition		Work with partners to choreograph music in different meters, applying metacognitive ability			(After the learning) Closing activity: Students partner and play drums to a selected song, using self-knowledge and personal cognition

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

During the learning included instructions on how to complete the student-centered activity or task, discuss real-life connections, and assign pair or group project members to learn choreographed movements to a New England song in different meters. After the learning included debriefing a student-centered activity focus, where the students partnered and played drums to a selected song, which allowed students to make connections to the standards and elements of music. Lesson Plan 1 incorporated movement and dance to fulfill the instructional agenda. The notes/comments, extended best practices, and instructional methods categories were teacher-related resources not posted on the taxonomy table. These three categories included the vocabulary terms, the supplementary materials that the teacher used as discussion topic, if applicable to the lesson, along with the specific sequences used in the lesson, such as scaffolding, grouping, processes, and assessment.

Lesson Plan 2 focused on expressive qualities that support how the cumulative arts can be used in relation to history and culture (see Table 17). SNETF followed the same lesson plan sequence with NSME 9 (understanding music in relation to history and culture), NSME 8 (understanding relationships between music, the other arts, and disciplines outside of the arts), and NSME 1 (singing alone and with others a varied repertoire of music; NAfME, 2007, p.2). The lesson objective was to examine a political figure, President Barack Obama, through music and drama activities and verbally discuss the essential question, "What questions would you ask Obama today?"

Table 17

Lesson Plan 2 Taxonomy Table: SNETF (Topic: Music and Drama)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Recall vocabulary term: Biography		Read script excerpts: *Seasons of Love from Rent, A Dream to Reality (The Biography of Barack Obama)*			
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music			Listen to 5 songs: "Be First," "Siyahamba," "This Little Light of Mine," "I Have a Dream," "Lift Every Voice and Sing"	Read aloud script in whole group	Form tableaux to interpret and evaluate 3 parts to script	
C. Procedural: Skills, techniques, and methods; performance criteria			Rehearse and sing music with attention to detail, dynamics, pitch, harmony	Break down script in 3 parts (early childhood, college years, election)	Title and critique tableaux with lines from the script	
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge	Recall self-knowledge and personal cognition to answer application: "What questions would you ask Obama today?"		Rehearse speech volume, diction and energy using self-knowledge and personal cognition		Analyze and critique with metacogniti on ability to comprehend script using tableaux	Read through script and perform different characters with self-knowledge and personal cognition

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

SNETF Lesson Plan Critique and Analysis

SNETF followed a very concise, detailed lesson plan format to outline diverse instructional strategies. Instructional materials and activities incorporated disciplines outside of music, such as choreography dance movement in Lesson Plan 1 and drama in Lesson Plan 2. These activities supported each lesson's content objectives and promoted hands-on engagement through whole-class, individual, and group activities. Lesson Plan 1 utilized NSME 4 (composing and arranging music within specified guidelines) and NSME 5 (reading and notating music) to support the instruction (NAfME, 2007, p.2). Lesson Plan 2 used NSME 6 (listen to and analyze a musical recording or video in terms of form, voicing, and dynamic contrast) and utilized writing skills as the lesson foundation (NAfME, 2007, p.2). The listening activity was a sound to illustrate the elements of music and the emotions and thoughts that music communicates. The lesson agenda also required the class to read music aloud (NSME 3) and evaluate music and music performances (NSME 7) to help the students reflect on and interpret the nature of performance in music through reading, discussion, and writing (NAfME, 2007, p.2). SNETF connected both lessons with cross-curriculum activities (drama and dance), along with the prompt questions that engaged the students to participate as a whole class.

<div align="center">

Veteran Teachers' Lesson Plans

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Suburban Central Veteran Teacher G (SCVTG)

The objective for SCVTG's Lesson Plan 1 was to instruct students to compose an eight-measure song using seven steps (see Table 18). The opening assignment was to use a story the teacher wrote to compose an eight-measure song. Students were instructed to use the original story written by the teacher using learned musical language concepts.

After composing the first four measures, the students wrote the story using musical notation in order, starting at Measure 4, 3, 2, and 1, making for an eight-measure song.

Table 18

Lesson Plan 1 Taxonomy Table: SCVTG (Topic: Musical Story Composition)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Recognize and recall vocabulary terms, melody, seven steps notes and rests with values					
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music	Teacher-led: Essential Questions discussion, "What does the word compose mean? Do you know of a great composer?"	Teacher-led: memorization drills for the "Seven Steps": 1 = quarter note, 2 = half note, 3 = whole note, 4 = eighth note, 5 = 4/4 time signature, 6 = quarter rest, 7 = double bar line.		Students read, analyze, and organize seven steps hints given in the story.		
C. Procedural: Skills, techniques, and methods; performance criteria		Teacher-led: Explain the procedure for using the Seven Steps notated within the Language Concepts original story written by the teacher.				Students compose an 8-measure song using the Seven Steps hints in the Musical Language Concept story. After composing the first 4 measures, students will write the song starting at measure 4, 3, 2, then 1 to make an 8-measure song.
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge						

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

The essential questions for discussion were "What does the word 'compose' mean? Do you know of a great composer?" These prompt questions supported understanding their role in the assignment along with teacher-led drills to help the students memorize seven musical language concepts: 1 = quarter note, 2 = half note, 3 = whole note, 4 = eighth note, 5 = 4/4 time signature, 6 = quarter rest, 7 = double bar line. The musical language concept for this lesson addressed expressions in music, musical notation, and arranging. Prerequisite knowledge for recall included learned musical terms, melody, and musical notes and rests, inclusive of the seven step notations. NSME 4 (composing and arranging music within specified guidelines) and NSME 5 (reading and notating music) were the standards used to support the instruction (NAfME, 2007, p.2).

The following is the original story, written by the teacher, using the musical language concepts:

5 days ago, I received news that my sister was coming home from Kuwait for 2 days. This made me happy and nervous at the same time. She had been gone for a year and 4 days. I wondered what would be the start of our conversation. I had so much to talk about. 4 things came to mind: How long was the trip? How were the people? Did she like the food? Finally, did she go to church? 4 other questions came up but I suppose too many question would bore her to death. Be(4) realizing it, tears came to my eyes in anticipation of her arrival. Just 4 more days, I kept saying to myself . . . I began counting 1 . . . 2 . . . As I recalled how many years she was ahead of me in age . . . Will I recognize her when she steps off the plane? I thought about this for 6 minutes. Sure! She's my sister! 3 days had gone by and my nerves were a wreck. But suddenly on the last day I became

calm. I wanted to look presentable so I decided to wear 1 of my favorite pair of shoes, 2 matching earrings, and 1 yellow jacket (my favorite color). 7 seconds after her plane landed I smiled.

Lesson Plan 2 followed the same format but included a lesson sequence to describe the detailed procedures to develop a long-term musical project to perform and record a whole-class arrangement (see Table 19). The main instructional objective was for students to listen to selected musical examples to critique how various composers have utilized the climax in their music. Composer musical examples presented helped the students determine how to compose the lesson project climax in a selected song "Banuwa." Two essential questions, "Why do we perform the music of the other cultures? Do they have relevance in our lives? were posed regarding the relevance of performing the music of other cultures. The topic to develop an enduring understanding of composing music focused around discussing the common fibers represented in music of every culture and to connect how music is a universal language.   Musical concepts incorporated into this lesson included listening, arranging, partner work, and singing. The social concepts that connected and supported the students as a team were group singing, democratic discussion, and collaborative creativity. Prerequisite musical knowledge required for Lesson Plan 2 included melody, harmony, descant, and the bass lines of "Banuwa." Materials used were Banuwa strips with the descant vocal lines, a bass xylophone, shakers, and various small instruments. Five National Standards for Music Education (NSME) supported this musical project, NSME 1, singing, NSME 5, composing and arranging, NSME 3, reading and notating music, NSME 6, listening,

analyzing, and describing music, and NSME 9, understanding music as it relates to history and culture (NAfME, 2007, p.2).

Table 19

Lesson Plan 2 Taxonomy Table: SCVTG (Topic: Banuwa Project)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts						
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music	Recall and sing the descant and bass lines of "Banuwa" using a bass xylophone, shakers, and various small instruments	Essential question discussion: "Why do we perform the musics of the other cultures? Do they have relevance in our lives?		Teacher-led listening exercise of music from different cultures followed by a discussion regarding the musical climax: "How have various composers approached the climax in their music?"		
C. Procedural: Skills, techniques, and methods; performance criteria	Teacher-led transition activity: Provide pitch (E) and begin singing learned arrangement of "Banuwa"	Teacher facilitate a student-led decisions to group arrange the end of the class project	Teacher-led transition activity: Allow students to listen to recording while forming a circle	Students view and analyze visual graphs of climaxes during listening exercises: "Shiny Stockings", "Bolero", Everybody's Perfect", "Surprise Symphony"	Teacher records an arrangement as an example for the class	
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge	Review concept of democratic classroom and cooperative collaboration using self-knowledge and PC		Students make connection of the listening examples using self-knowledge and PC		Teacher facilitates student-led evaluation of their recording using self-knowledge and PC. Choose things to work on, improve, and re-record.	Closing activity: Review rules and origin of "Ye Toop Doram" game song. Play game using self-knowledge and PC

Note. PC = personal cognition. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

SCVTG Lesson Plan Critique and Analysis

SCVTG utilized instructional strategies and engaging critical thinking activities in both lesson plans that helped the students to understand the relationships between music, the other arts, and disciplines outside the arts (NAfME, 2007, p. 2). The lesson sequence outline encouraged the classes to summarize common characteristics through various collaborative listening exercises and connected interconnected values and subject matter between music and other core curricula such as history and language arts. Creativity was the learning experience of each lesson plan. Lesson Plan 2 provided opportunities for students to demonstrate learned knowledge included singing the "Banuwa" melody, harmony, and descant in tune; rotating turns to play the bass line on the bass xylophone correctly; and identifying the climax in various musical examples and how it functions in a piece of music.

Suburban South Veteran Teacher H (SSVTH)

Lesson Plan 1 was detailed and presented a sequential overview of instructional practices (see Table 20). The format was divided into several categories to guide the lesson, starting with the students investigating and completing a critical analysis (NSME 7) of the musical "The King and I." The main objectives for this lesson also included listening to, analyzing, and describing what the music heard, as outlined in NSME 6. NSME 7, critiquing and analyzing music and musical performances, and NSME 8, understanding the relationships between music, the other arts, and disciplines outside the arts were incorporated in the lesson to connect other core content areas (NAfME, 2007, p. 2). The lesson focus was for students to recognize the characteristics of the musical elements in music that represent diverse genres and cultures. The essential question for

discussion and evaluation was "How are you inspired by the music from the musical 'The King and I'?" The written script, CD of the music from the musical, and DVD of the musical of Act I of "The King and I" were resources available to support and reinforce instruction. SSVTH used a guiding question to engage the class in discussion, "What does Anna sing to her son when she talks about being afraid?" along with vocabulary terms to connect how the written script relates to the music in the musical.

Lesson Plan 2 involved activities designed to strengthen and develop skills and performance techniques that are critical in the music classroom (see Table 21). The lesson content featured NSME 1 (singing alone and with others a varied repertoire of music; NAfME, 2007, p.2). The essential question posed was "How are you inspired by the music of other people?" and the guiding probing question for extended class discussion was "How does singing impact your life?" Varied singing, sight reading, and rhythmic exercises were incorporated throughout the lesson to instruct the class to prepare for upcoming performing opportunities: (a) demonstrate and discuss appropriate singing posture and breathing techniques; (b) identify changes to vocal anatomy that occur through middle school years; (c) identify and discuss aspects of voice change as reflected in vocal range, tone, and vocal agility; (d) identify and begin to develop pure vowel sounds and clear consonants; and (e) utilize aural skills to match pitch, improve intonation, and sing with attention to ensemble balance and blend (Eisner, 2002).

Table 20

Lesson Plan 1 Taxonomy Table: SSVTH (Topic: Musical Theater Analysis and Critique)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts		Discuss vocabulary words and how they relate to the musical: brass, percussion, woodwinds, strings, keyboards, overture, ternary, reprise, ballet, opera, pyrotechnics				
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music	Review and identify characters, listen to musical selections, assess costuming, choreography, and storyline of the musical through the written script, CD of the music selections, and the DVD of the musical "The King & I"	Guiding Question for discussion and investigation: "What does Anna sing to her son when she talks about being afraid?"		Essential Question: "How are you inspired by the music from the musical "The King and I"?"		
C. Procedural: Skills, techniques, and methods; performance criteria		Identify ternary (ABA) form while listening to selected musical numbers, critiquing costuming, scenery, etc. from the musical		Act I, Scene I, students view, explore, analyze, and critique possible foreshadowing that happens during the scene, and discuss possible outcomes		Discuss and write an essay on the conflict in the musical-"Who are the contending characters? How is the conflict resolved?"
D. Metacognitive Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge						Select 4 characters and write about their main motivation throughout the musical and how this goal affects the characters around them, using self-knowledge and personal cognition

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

Table 21

Lesson Plan 2 Taxonomy Table: SSVTH (Topic: Vocal Technique)

	The cognitive process dimension					
Knowledge dimension	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Review and recall vocabulary terms: repertoire, singing, posture, pure vowel sounds, clear consonants, intonation, balance, blend, dynamics, tempo, phrasing conducting, patterns, triads, major, minor, chromatic	Discuss the essential question, "How are you inspired by the music of other people?"				
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music		Explain and discuss the guiding probing question for extended class discussion was "How does singing impact your life?"	Utilize learned aural skills to match pitch, improve intonation, and sing with attention to ensemble balance and blend	Identify, analyze, and discuss aspects of voice change as reflected in vocal range, tone, and vocal agility		
C. Procedural: Skills, techniques, and methods, performance criteria	Individual and whole class sight reading and rhythmic skill-building exercises from a written source		Sing and rehearse LGPE, Black History, Music in our Schools Month, and upcoming performances and concerts.	Critique and evaluate selected music performances: Statewide 6th Grade Honors Chorus and the Morehouse College Concert		
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge						Practice major, minor, chromatic scales, plus study selected music symbols. Rehearse package #1 from Teacher vocal music website from sight reading kit using self-knowledge and personal cognition

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

SSVTH Lesson Plan Critique and Analysis

Lesson Plan 1 engaged the students visually and aurally and instructed them to interpret and compose a written analysis and evaluation of the musical content, theatrical contributions through the music, scenery, costuming, and choreography of the musical "The King and I" theater production. The instructional sequence encouraged students to recall, evaluate, critique, and produce a content analysis using the musical presentation and learned musical knowledge. Each lesson connected and linked the lesson topic, standards, and objectives through a detailed outline. NSME 6 (listening to, analyzing, and describing music) was an integral part of the lesson sequence (NAfME, 2007, p. 2). Students were instructed to listen to and analyze the music, scenery, costuming, and script of "The King and I" in terms of form, voicing, and dynamic contrasts and were required to utilize writing skills to describe the elements of music and the emotions and thoughts that the music communicated. SSVTH initiated activities and exercises in Lesson Plan 2 for students independently and as a whole class to develop their vocal performance skills, reinforce key musical terminology, and strengthen aural skills vital to young musicians.

Rural District Veteran Teacher I (RDVTI)

RDVTI outlined and guided the instruction through activities and assignments along with the essential questions (see Table 22). Music textbooks were integrated and used regularly in this general music class in addition to a written essay assignment. Group and individual activities were incorporated for the learning experience. Students played a rhythm activity with rhythm sticks from an overhead projector as a whole-class activity while the teacher gave the students a vocabulary test, an independent activity.

Table 22

Lesson Plan 1 Taxonomy Table: RDVTI (Topic: 180 Days of Character)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts		Understand and classify vocabulary terms from music book				
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music			Apply and journal notes on rhythm notation from overhead		Teacher-led introduction and discussion of (WOW) Word of the Week "attitude"	
C. Procedural: Skills, techniques, and methods; performance criteria		Summarize, write, and explain essay question "One example I saw this summer that demonstrated good character was…"		Analyze and discuss Essential Question "What is notation?" and the WOW "attitude" discussion	Teacher gives students a vocabulary test	Students played a rhythm activity with rhythm sticks from an overhead projector using whole, half, quarter, eighth, and 16th notes and rests in simple meters
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge	Remember and recall learned rhythm sequences in drilled rhythm exercises using rhythm sticks using self-knowledge and personal cognition		Apply learned rhythm notation to write 8 measures of rhythm using self-knowledge and personal cognition	Study for vocabulary test using self-knowledge and personal cognition		Role play WOW "attitude" activity

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

Vocabulary words were introduced along with a character-related activity assignment titled "180 Days of Character," which highlighted a specific attribute to engage students in a Word of the Week discussion For this lesson, the Word of the Week character attribute was "attitude," the musical element focus was "rhythm," and the essential question was "What is musical notation?" RDVTI applied several standards, NSME 2 (performing on instruments), NSME 3 (reading and notating music), and NSME 8 (understanding the relationship between music and other arts and disciplines outside the arts; NAfME, 2007, p.2). The activities incorporated to demonstrate cross-curriculum studies, such as English-language arts through the writing journal and mathematical activities such as the rhythm drill, were part of the instructional sequence.

Lesson Plan 2 introduced a new Word of the Week: "choices" (see Table 23). A video presentation on self-discipline was included to address the character aspect of the lesson agenda. Students were given the vocabulary words for the week and the essay assignment: "Write down and analyze the words from one of your favorite songs." "Is the song optimistic or pessimistic?" "In your analysis, include the reasons why you like the song." The essential questions were "Define choices" and "What are music notes?" Several assignments were given to the class from the music books. NSME 8 (understanding music as it relates to other arts and disciplines outside the arts) and NSME 9 (understanding music as is relates to history and culture) supported this lesson (NAfME, 2007, p. 2).

Table 23

Lesson Plan 2 Taxonomy Table: RDVTI (Topic: Favorite Songs Critique)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts		Explain and discuss previous WOW: attitude				
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music		Watch a short video "Choices" and the discuss the moral asset of the new WOW (choices) and the essential questions "Define choices" and "What are music notes?".	Apply and write in journal personal notes on the WOW: "Why is it important to make the right choices"			
C. Procedural: Skills, techniques, and methods; performance criteria				Analyze lyrics to learned songs and discuss facts and musical elements needed to complete the essay assignment: "Write down and analyze the words from one of your favorite songs. Is the song optimistic or pessimistic? In your analysis, include the reasons why you like the song."	Teacher gives students a vocabulary text	
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge						Students complete selected assignment from music textbooks, pp. 30, 80 and "smilin," p. 18, using self-knowledge and personal cognition

Note. WOW = word of the week. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

RDVTI Lesson Plan Critique and Analysis

RDVTI submitted lessons that outlined a strong focus on student engagement in writing across the curriculum and class discussions. Each lesson addressed a musical concept through the use of rhythm sticks, which is NSME 2 (performing on instruments), and applied rhythm notations through the use of the music textbooks, which aligned with NSME 3 (reading and notating music; NAfME, 2007, p. 2).

Lesson Plan 1 used NSME 2 (performing on instruments) and NSME 3 (read and notate rhythm notes) to instruct the class (NAfME, 2007, p. 2). The lesson instructed the students to recognize standard rhythmic notation symbols, demonstrate learned knowledge in a written assignment, and produce an eight-measure rhythm sequence using whole, half, quarter, eighth, and 16th notes and rests in simple meters. This assignment connected with NSME 5 (compose using specified guidelines) through the rhythm composition project using specified guidelines (NAfME, 2007, p. 2).

Lesson Plan 2 included NSME 6 (listening to, analyzing, and describing music), which instructed the class to analyze and describe a favorite musical song and required the class to recognize characteristics of musical elements in music that represent diverse genres and cultures. Both lessons integrated NSME 8 (understanding music as it relates to other arts and disciplines outside the arts) because it promoted understanding relationships between music, the other arts, and disciplines outside the arts, particularly linking nonmusical disciplines such as mathematics, reading, and language arts (NAfME, 2007, p. 2). The essay, role playing, Word of the Week discussions, and essential questions created ongoing cross-curriculum connections between music and language arts, a discipline outside the arts, and drama, another arts discipline.

Urban District Veteran Teacher J (UDVTJ)

UDVTJ outlined a detailed instructional sequence on a social-political statement unit for Grades 6-8 (see Table 24). Three essential questions were posed to engage the students in a writing and discussion platform that utilized their higher order thinking skills: "How is music used in society?" "How can music be a sociopolitical tool in society?" "How do the lyrics in some songs influence society and vice versa?" The lesson objective was to understand how music is and has been used in society beyond entertainment and how music has changed or influenced history. Standards linked to this lesson include NSME 5 (composing and arranging music within specified guidelines), which allowed the students to use a variety of traditional and nontraditional sound sources and electronic media when composing and arranging. NSME 6 (listening to, analyzing and describing music) required students to listen, analyze, and describe music that represented diverse genres and cultures, and NSME 7 (evaluating music and music performances) was used to assess the evaluation and critique skills of the student group composition performances and identified various uses of music in daily experiences as a sociopolitical tool in society. NSME 8 (understanding music as it relates to other arts and disciplines outside the arts) and NSME 9 (understanding music as it relates to history and culture) were also implemented to support the historical and cultural content of the lesson (NAfME, 2007, p.2). Students gained an understanding of the relationships between music, the other arts such as drama, visual arts, and dance, and disciplines outside the arts such as social studies, language arts, and visual arts, by providing comparisons and a detailed summary of various genres and styles of music, along with exploring how music relates to history and culture (NAfME, 2007, p.2). The lesson activities included small

cooperative grouping for the culminating project to discuss and choose songs that make a sociopolitical statement and then to compose original lyrics that make a statement about something they strongly believed.

Table 24

Lesson Plan 1 Taxonomy Table: UDVTJ (Topic: Politics and Music)

	The cognitive process dimension					
Knowledge dimension	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts				Develop a music vocabulary from the listening activity of suggested songs		
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music			Listen to suggested songs: "Get Up, Stand Up"& "Buffalo Soldier" by Bob Marley, "War" by War, "What's Going On" by Marvin Gaye, "I Am Not My Hair" & "If Old People Would Talk to Young People" by India Arie, "Coal Mine" by Hugh Masekala, Stevie Wonder's tribute to Katrina Hurricane victims, music by Fela, Miriam Makeba, Sergio Mendez, etc.		Teacher-led essential question and evaluation through written assignments and discussion: How is music used in society? How can music be a sociopolitical tool in society? How do the lyrics in some songs influence society and vice versa?	Divide into small cooperative groups to discuss other songs from personal favorites that make sociopolitical statements
C. Procedural: Skills, techniques, and methods; performance criteria		Compare old-school lyrics to current songs, world events, when the songs were written and current events that may or may not apply to the lyrics today, and tell how they are alike or different, what messages they project.		Analyze and answer questions about the subject matter and how it may influence listeners, society, various groups, etc.	Teacher evaluation and critique of class discussions and original group presentations	Cooperative groups select song lyrics to quote and present their conclusions to the class

(table continues)

	The cognitive process dimension					
Knowledge dimension	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge		Delve into other societal issues such as peer-pressure, self-esteem, society's definitions of beauty/ugliness, etc. using self-knowledge and personal cognition		Using self-knowledge and personal cognition, discuss known current events how song lyrics that make a strong political statement might affect society.		Cooperative groups present their original lyric compositions that make a statement about something they strongly believe with background music using self-knowledge and personal cognition

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

The objective focus of Lesson Plan 2 was to instruct students how to create and count rhythms in four using learned notes and rests (see Table 25). The essential question for the lesson was "How do we count simple and complex rhythms in four meter using whole, half, quarter, eighth, and 16th notes and rests?" Vocabulary terms used in this lesson were rhythm, meter, syncopation, beat, and common meter. The assignment to support the instruction was to instruct students to create an original four-eight-measure rhythm pattern using given notes and rests and to play (clap) the original rhythm on their instrument. The standards used for this lesson included NSME 2 (performing on instruments), which was extended because the students made their instruments, NSME 3 (reading and notating music) by recognizing standard notation symbols for rhythm and accurately identifying whole, half, quarter, eighth, and 16th notes and rests in simple meters, and using standard notation to record their musical ideas. NSME 4

(improvisation) supported the creative concept and instructed the students to improvise rhythm patterns in four meter through NSME 5 (composition and arranging the project within specified guidelines). The opening activity used NSME 6 (listening to, analyzing, and describing music) for a teacher-led listening exercise of two or three short musical selections of waltz excerpts from princess movies for the students to determine and discuss meter (NAfME, 2007, p. 2). UDVTJ used prompt questions such as "How did you determine meter? How do you feel meter in 3?" to initiate discussion.

UDVTJ Lesson Plan Critique and Analysis

UDVTJ exhibited in both lesson plans engaging learning experiences that related music with politics for the students to explore, create, play, listen, and perform. In the extended activities, essential questions, and overall lesson topics, the culture and demographic environment was a consideration in how each lesson was applied. Both lesson plans provided activities where life experiences and music preferences were a focus or part focus in the lesson. Lesson Plan 1 incorporated writing, reading, listening, and creating various styles of music from diverse artists and cultures to address current concerns and issues with historical events. Student opinions were encouraged and validated in this lesson, particularly during the discussions surrounding the connection between music and the sociopolitical movement. This topic of discussion linked the music with cross-curriculum social and historical studies. Lesson Plan 2 included hands-on activities, starting with the original rhythm project. UDVTJ set the project up with reinforcement activities such as the rhythm bingo game to support and ensure student success of the rhythm project.

Table 25

Lesson Plan 2 Taxonomy Table: UDVTJ (Topic: Simple and Complex Rhythms)

Knowledge dimension	The cognitive process dimension					
	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
A. Factual: Music vocabulary, symbols, note values, rhythms, instruments parts	Recall and recognize vocabulary terms, rhythm, meter, syncopation, beat, common meter	Students will discuss essential questions: "How do we count simple and complex rhythms in four meter using whole, half, quarter, eighth, and 16th notes and rests?" "How did you determine meter? How do you feel meter in 3?"				
B. Conceptual: Concepts of music, theory, time periods, musical styles, specific components that apply to composing, critiquing, arranging, improvising, or listening both within and outside of music		Teacher-led activity for students to recite and classify examples of favorite songs and to determine and explain the meter, if in 4, stating that it is common meter	Students will individually write original 4-8 measures in four meter		Teacher will divide class into small groups to compete for correct answers.	Students individually perform their 4-8 measure rhythm composition
C. Procedural: Skills, techniques, and methods; performance criteria	Students will play rhythm bingo to reinforce, recall, and remember learned notes/rests values. Also will use Flash card games, clap/play original rhythms to music of choice and play rhythm tic-tac-toe to strengthen performance techniques.			Groups will choose an incomplete rhythm from "rhythm bowl" (a container with measures in 4 with only part of each measure complete). Groups will work cooperatively to decide how to complete their project.	Teacher will assess progress during each stage of activity and at the performance presentations. Quizzes will be given or peer-evaluations be encouraged.	Groups will write their rhythm project on the board and then perform the rhythm correctly to earn 5 points for each measure performed correctly.

(continued)

Knowledge dimension	1. Remember Recognize Recall	2. Understand Interpret Exemplify Classify Summarize Infer Compare Explain	3. Apply Execute Implement	4. Analyze Differentiate Organize Attribute	5. Evaluate Check Critique	6. Create Generate Plan Produce
		The cognitive process dimension				
D. Metacognitive: Strategic knowledge, knowledge of cognitive demands for different tasks, self-knowledge			Groups cooperatively decide how to complete and perform their original rhythm piece using self-knowledge and personal cognition. Students may manage this activity with one being scorekeeper, 1 or 2 being rhythm judges, etc.	Groups will creatively organize their project using a variety of notes and rests to earn points using self-knowledge and personal cognition. (Ex: Four measures with 4 whole notes don't warrant points)		

Note. From *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (p. 28), by L. Anderson, D. Krathwohl, P. Airasian, K. Cruikshank, R. Mayer, P. Pintrich, J. Raths, and M. Wittrock, 2001, New York, NY: Longman. Copyright 2001 by Pearson Education. Adapted with permission.

Patterns From Interview Findings

In-depth interviews were conducted with four of the 10 participating teachers to yield a greater understanding of their teaching practices. RDVTI, a 28-year veteran, SSVTH,who has been in education for over 41 years, SNETF, who has 17 years of experience teaching music, and SCNTC, who has been teaching for 2 years, agreed to be interviewed. All interviews were conducted in public venues and lasted approximately 30 minutes. Each interview was audio recorded, transcribed, and guided by a main interview question: What instructional strategies are being implemented in your general music classes that align with the National Standards for Music Education? Five interview questions were posed during the interviews:

1. How effective are these instructional strategies in your general music classroom?

2. How do they help your students consistently improve their overall music comprehension skills?

3. How familiar are you with the cognitive domain of Bloom's revised taxonomy? Howard Gardner's MI theory?

4. What role do cognition, metacognition, thinking, and learning play in your general music curriculum objectives?

5. What is the relationship between using metacognitive strategies in the music classroom and the National Standards for Music Education?

Activities related to the six cognitive levels of Bloom's Taxonomy Cognitive Activity (BTCA) were separated into four themes: (a) application (BTCA 3); (b) understanding: constructing meaning (BTCA 2); (c) creation (BTCA 6); and remembering (BTCA 1), analyze (BTCA 4), and evaluate (BTCA 5), which were not considered major themes as related activities were mentioned six or fewer times. The activities were categorized based on the number of times they were mentioned or referred to during the interview (see Table 26).

Theme 1: Application

Theme 1 was associated with BTCA 3 (application). Activities related to the application level of the BRT were those most frequently reported among the middle school music teachers. The activities that required application were mentioned 20 times during teacher interviews.

SCVTG shared how she incorporated BTCA 3 (application) in her classroom:

Well, I have a show choir, and we actually compete. So, movement is a very

important part. I think they do more dancing than the dance group. And with

concert music, we do signing movements. I think that applying movement into a

performance is very important. I even use movement with my warm-ups and

vocalizes.

RDVTJ stated,

I don't teach performances. Performances are an outgrowth of what's been taught

in the class, and my entire lessons are based on the standards. I take it from

National Standard for Music Education 1, singing, to the National Standard for

Music Education 9, relating music to history and culture, to see how I can

incorporate all of them in a lesson to get the outcome to where they're applying

each of the standards in a performance to demonstrate learned elements of music.

Theme 2: Understanding

Theme 2 activities, associated with BTCA 2 (understanding: constructing

meaning), were most frequently used and were mentioned 19. Activities related to

NSME 2 (performing on instruments, alone and with others, a varied repertoire of music)

provided opportunities for students to construct and demonstrate meaning to creating

music using learned musical knowledge on various instruments, such as Yamaha

keyboards, rhythm sticks, hand drums, and body percussion (NAfME, 2007, p. 2).

SCNTC stated,

An instructional strategy I use for math, I have them add notes, count the values,

similar to how you would do a math problem. I do that the first part of the class

to include reading and writing and then the last part, we play and compose in the

keyboard lab. My students also write original lyrics and then notate the music to go with the lyrics. They explain how they composed their piece, like how many counts does a half note get, and the melodic contour to demonstrate how they have learned the actual notes written on the staff, so that's a lot of writing. We role play learned musical techniques through skits. This is done per class every day.

SCETE shared her perspective:

I use a variety of different activities to provide opportunities for my students to learn and construct meaning to develop their musical skills. For instance, if I'm going to do a unit on tone color, I'm going to try and bring it in focus using band instruments. Kids are not familiar with the instruments of the band or the orchestra, so to teach tone color, I'll use an instrument to demonstrate the sounds, which teaches them what the instrument is and how it sounds. I even brought in a guy from the Atlanta Symphony to come in and demonstrate his instrument. I use books and videos, and at the end of the unit, I always try to schedule a symphonic concert visit. I also suggest they go to a football game to hear and see the marching band, because many of them have never seen one. So, if I'm doing something in class, I want it to relate to real life.

RDVTJ discussed a strategy:

I use a game called History Trivia, which deals with National Standard for Music Education 9, which is understanding music in relation to history and culture, and I ask a question on the board to get them to write their answers, an open-ended question that asks, Who in your opinion is the most famous jazz musician in our

culture and in the United States? And they'll tell me who they are and I'll ask them why. Their responses are, no one response is the same, so, so many responses come, but uh, mostly it's Duke Ellington and Louis Armstrong, which are the ones most people know. So, connecting with his life and the way they lived with the music of the culture as a trivia question is a standard for when they first walk in to get them thinking about history and how music plays a role in its relationship with our culture.

Theme 3: Creating

Theme 3 included classroom exercises related to BTCA 6 (*creation*) that emerged from teacher interviews and occurred 10 times. SCVTG has students work in cooperative partner groups to compose their own songs with music. Students also compose their own rap lyrics with their own beats on the keyboards.

RDVTI stated,

I use what we call "each one, teach one." We have four keyboard stations with headphones in my room and the students are allowed to rotate in and out while I'm teaching and learn or read about piano and keyboard skills. I teach the first lesson and once they've mastered the concept, then they have to teach the next one and if they run into problems, I tell them to go back to your teacher. They realize that a good teacher will make a good student and a bad teacher will make a bad student. So the students take their time to learn and master each concept and they also have to think about how they're going to teach it to the next student.

Theme 4: Remembering (BTCA 1), Analyze (BTCA 4), and Evaluate (BTCA 5)

Theme 4 activities associated with remembering (BTCA 1), analyzing (BTCA 4), and evaluating (BTCA 5) were not major themes, as related activities were mentioned six or fewer times. SCETE noted, "I perform classical music for my students and we do classical music listening exercises and listening maps, then we evaluate [what] they have heard." SCNTC shared how her students analyze music activities:

I do videos and sometimes I have them watch YouTube or read an article, along with it I have them, for example, compare and contrast, in a written journal or graphic organizer, artists like Lauryn Hill from her beginning at 13 when she performed at the Apollo Theater with her performance on MTV's Unplugged series.

National Standards for Music Education Interview Implementation

The NSME were practiced through classroom activities. Activities related to NSME 6 (listening to, analyzing, and describing music), mentioned 25 times, were the main practices most prevalent in the teacher interviews (NAfME, 2007, p.2). RDVTI discussed classroom practices such as

We do a lot of listening skills, listening and analyzing, which describes National Standard for Music Education 6. Good thing I do, because I know they watch TV, I have NBC, ABC, CDs that have all the top themes from TV shows, to something that relates to their real lives, to get them to think about, for example, the song that comes on that most people see is Will Smith, Bel-Air. We'll listen to that one and then we'll talk about the different rhythms in it, those type of different cognitive thinking skills, to get them to use their ears, to hear the

different things that come in, what they hear every day because it comes through their mind every day when they listen to it on TV.

NSME 2 (performing on instruments, alone or with others, a varied repertoire of music) was mentioned 16 times during the interviews (NAfME, 2007, p.2). SCNTC shared,

I utilize some interactive instructional strategies, such as peer teaching, particularly in the keyboard lab. The students sit in groups of two, so they can work together to compose, create, and learn keyboard techniques. I find they're able to retain the information better, especially when they are working with each other, with their peers. They share things they've learned from each other and sometimes they retain it better.

Exercises such as NSME 5 (composing and arranging music within specified guidelines) were mentioned 12 times during the teacher interviews. SCETE stated,

Well, it's cross curriculum when my students have to write their lyrics to original songs, which is language arts. And with history and culture, I do a big lesson on rap. So, we'll first learn about the history and culture of hip hop music, where it originated, and I talk about hip hop versus rap. I explain how hip hop is actually a culture and rap is part of the music of the culture. So, giving them that understanding, they create their own graffiti, which is also a part of the hip hop culture and also brings in visual art.

Activities aligned with NSME 1 (singing, alone and with others, a varied repertoire of music), NSME 3 (reading and notating music), NSME 4 (improvising melodies, variations, and accompaniments), and NSME 7 (evaluating music) were seldom

mentioned during the teacher interviews. These activities were mentioned 7 times or less.

Table 26

Interview Activity Patterns

Bloom Taxonomy or National Standard	*n*
Remembering (BTCA 1)	3
Understanding (BTCA 2)	19
Applying (BTCA 3)	20
Analyzing (BTCA 4)	5
Evaluating (BTCA 5)	6
Creating (BTCA 6)	10
NSME 1	7
NSME 2	16
NSME 3	1
NSME 4	5
NSME 5	12
NSME 6	25
NSME 7	6

Note. BTCA = Bloom's taxonomy cognitive activity. NSME = National Standards for Music Education.

Summary

This section contained data collected from 10 middle school general music teachers from rural, suburban, and urban school districts in Georgia. Each teacher completed a survey questionnaire that investigated how and what NSME was being used regularly in their classrooms and provided two lesson plans that aligned instructional activities with the objectives defined in BRT. Each lesson plan was evaluated to determine the relevance of the lesson objectives of the BRT cognitive domain and how it aligned with the NSME. Significant associations were identified and organized to integrate the NSME and the six levels of the cognitive domain of BRT to translate music education outcomes into educational criteria and to address the procedural and metacognitive processes critical to music education (Hanna, 2007). Four teachers agreed

to in-depth interviews that yielded a greater understanding of their teaching practices. The findings provided evidence that may improve general music instruction by using a more effective teaching method of supporting and aligning classroom activities with the NSME. Tables presented an outline supported by discussion, research questions, design appropriateness, sampling frame, data collection and analysis, and validity and reliability of the research.

Certain patterns and themes were revealed within the BRT and the NSME. Connections between the two were identified through an investigation of the instructional strategies used in the 10 middle school general music programs. The study involved examining standards-based metacognitive instructional strategies to show how they can assist music teachers in their classroom practice. An examination of the instructional strategies revealed that aligning the revised taxonomy learning objectives and the NSME provides music teachers various teaching techniques to use and addresses cognition as a thinking, active process. Section 5 contains a conclusion to the study and includes recommendations. Section 5 also includes implications for social change that may have important meaning to middle school general music educators.

Section 5: Conclusions and Recommendations

The research problem emerged from a review of several studies (Aiello, 2003; Norton et al., 2005; Stewart & Williamson, 2008) regarding instructional strategies that can be valuable in music education, although researchers are still not quite clear how music educators are applying the strategies. The study involved investigating the efficacy of instructional strategies used in middle school general music classrooms to determine how these strategies align with the NSME and link with BRT. The findings in the current study may assist music teachers in helping their students improve their overall music comprehension skills and support a standards-based curriculum. Data collection included a survey that inquired about the teaching experience of 10 middle school teachers and their familiarity and regular use of the NSME and BRT. Each teacher submitted two lesson plans for a content analysis of how their classroom activities align with the NSME and the six cognitive domains of BRT. Four music teachers agreed to an in-depth interview to discuss their classroom activities and teaching practices. Emergent themes were derived from the triangulated artifacts.

Section 5 includes an overview of the study, an interpretation and review of the findings as they related to each research question, implications for social change, and recommendations for dissemination of the results and for further research studies. This section concludes with a reflection and a summary.

Overview of the Study

There are many advantages to blending musical learning experiences with the total educational curriculum. Gordon (2009) posited that learning should support genuine

proficiency that requires students to become effective, intellectual contributors to construct personal interpretations of the topics of interest (p. 47). Aiello (2003) and Gruhn and Rauscher (2002) revealed that blended musical instruction can bridge cognitive, social, and emotional developments and support long-term effectiveness. Therefore, music teachers may enhance learning experiences in classroom practice when blending musical and cognitive activities, which could increase comprehension, information processing, and cognitive skills and engage students in learning experiences linking academic areas.

Metacognitive strategies are of value in music education (Aiello, 2003; Gruhn & Rauscher, 2002). The two research questions were as follows:

RQ1: How effective are the instructional strategies in the music classroom and do they align with the NSME?

RQ2: How can BRT link varying teaching practices with the NSME to assist music teachers and support a standards-based curriculum?

In response to RQ1, the current study involved investigating the familiarity of middle school general music teachers with the NSME and BRT. Ten teachers with varied years of teaching experience from suburban, rural, and urban school districts participated in the study. Each completed a survey questionnaire and submitted two lesson plans that I analyzed and critiqued with lesson objectives as referenced in the cognitive domain of BRT and aligned with the NSME. Eight participants indicated their willingness to participate in a case study serving as an extension to the study, upon request. The other two reported health issues or experiences with natural disasters and

only consented to the request to participate in the initial study. Four of the teachers

participated in interviews to discuss how they integrate the national standards and the six

cognitive domains of BRT in their classroom and to gain a deeper understanding of their

teaching praxis.

In response to RQ2, the study supported the recommendations that music

educators should consider the relationship between metacognition and music instruction

(Hanna, 2007). The six cognitive domains of BRT supported standards-based

instructional strategies and addressed cognition as a thinking, active process. A variety

of BRT learning objectives, linked with the NSME, provided classroom activities that

extended beyond the traditional general music classroom experience. Gardner's (2006)

MI, Piaget's (1962) cognitive development, and Vygotsky's (1978) ZPD theories

contributed to the constructivist perspective, the conceptual framework, and the

foundation for the study.

An evaluative multiple case study design was appropriate for addressing the

problem by allowing varied data collection techniques such as in-depth interviews (Yin,

2003). Yin (2003) posited that case studies are appropriate when examining the global

nature of a program or a policy. The case study approach works well when research

questions are broad and multifaceted and need to be addressed using multiple methods

(Keen & Packwood, 2008).

Interpretation and Summary of the Findings

Survey Questionnaire

A survey incorporating a combination of closed and open-ended questions was used to determine the teaching strategies, present school demographics, and years of teaching experience and to elucidate the worldview of general music teachers. The participants were three novice teachers with a range of 2 to 7 years of teaching experience, three experienced teachers with 10 to 18 years of experience, and four veteran music teachers with 20 or more years of experience. School demographics included a suburban, a rural, and an urban school district with diverse populations and socioeconomic statuses. Biographical information from the teachers indicated that their worldviews were very similar in their commitment to education, the belief that all students can learn, and the importance of teaching with metacognitive instructional strategies that incorporate hands-on, engaging activities.

Interviews

Four themes emerged from the one-on-one interviews. The first theme was associated with application (BTCA 3; applying: carrying out or using a procedure through executing, or implementing) and was mentioned 20 times. Theme 2, understanding (BTCA 2; constructing meaning from different types of functions, whether they are written or graphic messages), was mentioned 19 times. Creating (BTCA 6) was the third theme that emerged from teacher interviews and occurred 10 times throughout the discussions. The fourth theme combined remembering (BTCA 1), analyze (BTCA 4), and evaluate (BTCA 5). All six of the domains, (a) application (BTCA 3), (b)

understanding (BTCA 2), (c) creation (BTCA 6), and (d) remembering (BTCA 1),

analyze (BTCA 4), and evaluate (BTCA 5), were linked with the NSME.

Lesson Plan Content

Specific characteristics and patterns were established from the lesson plan content

analysis. Instructional strategies were organized as outlined under the six cognitive

domains of BRT. The six cognitive domains are (a) remember, recognize, recall; (b)

understand, interpret, exemplify, classify, summarize, infer, compare, explain; (c) apply,

execute, implement; (d) analyze, differentiate, organize, attribute; (e) evaluate, check,

critique; and (f) create, generate, plan, produce (Anderson et al., 2001, p. 66). Activities

from the lesson plans were categorized under each of the six domains and cross-linked on

a taxonomy table with the four knowledge dimensions of BRT: (a) factual: music

vocabulary, symbols, note values, rhythms, instruments, parts; (b) conceptual: concepts

of music, theory, time periods, musical styles, specific components that apply to

composing, critiquing, arranging, improvising, or listening both within and outside of

music; (c) procedural: skills, techniques, and methods; performance criteria; and (d)

metacognitive: strategic knowledge, knowledge of cognitive demands for different tasks,

self-knowledge (Anderson et al., 2001).

The first cognitive domain was BTCA 2 (*understanding*), which involved

constructing meaning from different types of functions such as written or graphic

messages, visuals, or poster boards; writing and notating original lyrics; and

demonstrating sounds on instruments to teach what they are and how they sound.

Fieldtrips to the theater and the symphony and books and videos that relate to real life are

examples of how the teachers instructed and engaged students. These instructional resources provided visual, graphic, and written forms of ways to help students experience and understand the culture and history of given topics as they relate to music. Additional activities were incorporated to help the students understand and interpret historical and cultural characteristics of music, such as integrating cross-curriculum units. For example, students were instructed to write original rap lyrics, which connected language arts, history, and culture lessons on the origin of rap music. The class explored the history and culture of hip hop and rap music to gain an understanding of the rap genre. The lesson culminated with a cooperative group project activity of designing graffiti, which is also a part of the hip hop culture and linked visual art and integrated the language of hip hop.

The second cognitive domain used consistently in the classroom was BTCA 3 (*application*), which represented applying—carrying out or using a procedure through executing or implementation. Activities and lesson objectives utilized in the classroom included show choir competitions with choreographed dance movement, concert music performances with signing movements, and movement to accompany warm-ups and vocalizations. The teachers expressed that performances were an outgrowth and demonstration of musical techniques taught in the class. Choral literature teaches various musical techniques that are learned and applied, such as diction, proper vowel placement, and breath and posture support, in addition to proper stage protocols. Lessons were based on the standards to encourage students to execute during a performance while implementing learned performance strategies on stage.

The third cognitive domain regularly used by most of the teachers was BTCA 6 (*creating*), which involved putting elements together to form a coherent or functional whole and reorganizing elements into a new pattern or structure through generating, planning, or producing. The teachers implemented projects to encourage the students to write and compose original songs and music. Several of the projects discussed during the interviews or used in the lesson plans included creating rhythm patterns that were counted and notated on the musical staff along with group projects where the students composed and played original compositions on the keyboards.

Three of the NSME were implemented consistently in the 10 classrooms on a regular basis. NSME 2 (performing on instruments, alone and with others, a varied repertoire of music) was the most frequently used standard in the classroom (NAfME, 2007, p. 2). The teachers shared lesson activities that incorporated interactive instructional strategies, such as peer teaching, particularly in the keyboard lab, because the students sit in groups of two and can easily work together. Teachers stated that as students shared musical concepts with each other, the students seemed to retain learned information better. One of the teachers called this teaching strategy "Each One, Teach One." This teacher's classroom was arranged in four keyboard stations with headphones and eight students were rotated in and out every 20 minutes to create an independent project. Remaining students learned basic piano and keyboard skills through whole-class exercises facilitated by the teacher. After basic keyboard concepts were mastered, the students would become teachers and would each have an opportunity to teach and reinforce learned knowledge with their keyboard partner. This instructional strategy also

supported NSME 5 (composing and arranging music within specified guidelines;

NAfME, 2007, p.2), which was the second most frequently used standard in the

classrooms.

NSME 6 (listening to, analyzing, and describing music) was the third standard

consistently incorporated in the music classrooms of the 10 teachers (NAfME, 2007, p.

2). Activities related to the standard supported teacher-modeled performances of

classical music along with classical music listening exercises and listening maps for

student activities, such as "What do you Hear?" Activities such as watching videos and

sometimes allowing the classes to watch YouTube were incorporated with exercises that

compared and contrasted music artists such as Lauryn Hill. One lesson activity shared

during the interviews started with comparing Lauryn Hill's career from age 13 when she

performed at the Apollo Theater with her later performance on MTV's Unplugged series.

Each teacher used a variety of instructional strategies to help music students generalize

and find similarities, such as using a Bach cantata to strengthen listening and analysis

skills.

Other activities that supported NSME 6 (listening to, analyzing, and describing

music) featured selected television shows (NAfME, 2007, p. 2). One teacher instructed

students to analyze the top theme songs from shows on major networks such as NBC,

ABC, and CBS. The students listened to music samples from compact disks that had top

television show theme songs and were directed to relate the songs with something in their

real lives. For example, one of the theme songs was Will Smith's "Fresh Prince of Bel-

Air." In this lesson, the students listened to the song and then discussed the different

rhythms and how it connected with music they listen to, which encouraged them to think. The students were listening, critiquing, and analyzing the music to hear the different sounds, while also comparing and contrasting the music to music they hear every day.

Findings

The findings were based on the research questions and literature review that guided the study. Research Question 1 sought to determine the effectiveness of the instructional strategies in the music classroom and how they aligned with the NSME. Research Question 2 sought to determine how BRT could help to link varying teaching practices with the NSME to assist music teachers and support a standards-based curriculum.

The data collected from the survey, interview, and lesson plan analysis resulted in a translation of music education outcomes based on the NSME into educational criteria and addressed the procedural and metacognitive processes critical to music education (Hanna, 2007). The outcomes included optional ways to achieve effective standards-based learning through the positive attitudes of adolescents acquired through learning experiences related to skill development.

Klein et al. (2006) noted that learners who participated in integrated instruction were more likely to gain knowledge, be engaged in metacognitive activities, and achieve advanced academic success than those in the traditional classroom. Hanna (2007) noted the BRT was an instrument to interpret music education practices into accurate educational objectives.

The BRT cognitive domain was used as an aid in understanding classroom instruction. Findings revealed that the quality of instruction can be improved through multiday project models, such as curriculum interdisciplinary and integrative units, promoting related educational objectives that focus on a specific topic and provide a context of interpreting daily activities and assessments (Anderson et al., 2001, p. 110). Teaching should include a process of instructing a specific curriculum element for a specific reason that will eventually be measured and assessed. Consider the following example: Students will explore and discover (cognitive process) the various rhythm and percussion sounds (knowledge) as an individual and partnered project. Anderson et al. (2001) noted that placing an objective into the taxonomy table framework helps teachers to have a better understanding how the lesson objectives align with the standards, which facilitates learning and translates the standards into a common language (p. 7). Findings from the study addressed the research questions and contributed to the body of knowledge on the effects of using metacognitive instructional techniques and Bloom's revised cognitive domain categories in compliance with NSME.

Novice teachers showed some evidence of being committed to exposing their students to a standards-based curriculum that included diverse hands-on activities during each lesson. A few of the lesson plan formats and classroom activities omitted essential elements such as materials used during the lessons, historical connections to lesson content, or specific forms of assessment used to critique and measure or evaluate improvement. Another area of concern realized from the interview and lesson plans was

the lack of connections between the lesson subject and actual student experiences and the limited use of the NSME within the lessons.

Experienced teachers' classroom practices reinforced basic music notation, including notes, values, and rhythm patterns, that are key elements of music. Each teacher incorporated NSME 1 (singing) as a whole-class activity, along with cross-curriculum units that promoted creativity and independent work from the students that could readily be assessed to measure improvement (NAfME, 2007, p. 2).The teachers included worksheets to provide a written assessment to evaluate and critique learned musical knowledge. Overall, the experienced teachers followed a very concise, detailed lesson plan format to outline diverse instructional strategies. Instructional materials and extension activities supported the content objectives of each lesson and promoted hands-on engagement through whole-class, individual, and group activities. The lessons connected cross-curriculum activities and prompted questions that encouraged the students to use their higher order thinking skills.

The four veteran teachers exhibited instructional strategies that incorporated multiple standards linked with critical thinking activities that helped the students to understand the relationships between music and other arts, and core content areas (NAfME, 2007). The sequence of the veterans' lessons encouraged the classes to summarize common characteristics through various collaborative listening exercises and connected interrelated principles and topics between music and other core curricula. Creativity was the ultimate learning experience of each lesson plan, such as instructional strategies that include having a daily classroom routine, allowing cooperative learning

groups (ensembles, skits, composing, etc.), posting a schedule and sticking to it, using a timer, allowing questions only at a certain time during class, questioning, and waiting for students to think (but using a timer).

Detailed sequential overviews of instructional practices were credited to the veteran teachers through activities designed to strengthen and develop skills and performance techniques that are critical in the music classroom. The instructional sequence encouraged students to recall, remember, evaluate, critique, and produce a content analysis using a video presentation and learned musical knowledge. Specified standards connected and linked the lesson topic and objectives through a detailed outline. Each veteran teacher initiated activities and exercises for students independently and as a whole class to develop vocal performance skills, reinforce key musical terminology, and strengthen aural skills vital to young musicians.

All participant teachers discussed integrating music textbooks and written essay assignments along with group and individual activities. Novice teachers explored instructional strategies that encouraged students to connect with current interests more than the experienced or veteran teachers. An example was the graffiti art designs that accompanied the rap lyrics and beats. Experienced and veteran teachers provided extended activities, essential questions, and overall lesson topics that considered the culture and demographic environment in the application of each lesson. All the teachers encouraged the students to use their personal life experiences and music preferences as a component to enhance the learning experience. Classroom activities that embraced writing, reading, and listening to various styles of music from diverse artists and cultures

empowered the students to address current social concerns and historical issues. Student opinions were encouraged and validated, which supported and linked the musical topic with cross-curriculum studies. One cross-curriculum sample unit involved incorporating adverbs and prepositional songs for a language arts connection, along with referring to songs about other countries to link with social studies. One of the veteran teachers collaborates with non-arts teachers covering a certain unit, such as a study on Africa. Then the class will learn African songs and study the language. The chorus class will then perform for the social studies class.

Implications for Social Change

The significance and implications of the current study could increase public awareness of the importance of music. Music "systematically develops a form of intelligence that affords a humanizing self-knowledge of feeling as a pervasive quality of mental life and affords meaningful, cognitive experiences unavailable in any other way" (Reimer, 1989, p. 28). Elliott (1995) noted music is valuable because it brings about challenges that cognitively propel students to engage in critical thinking thought processes that otherwise would not be available and should be brought to the attention of other art forms.

Standardized testing in core subject areas is the mantra of current education reform initiatives and disregards music education. Conclusive reports on the No Child Left Behind Act of 2001 claimed that the arts should be included as a vital component of the school curriculum and that students who have been in music classes earned higher scores on college entrance exams (Petress, 2005, p. 9). It is imperative that the arts be

recognized as promoting learning and cognition. The goal of education must go beyond

test scores in reading and math to ensure successful outcomes. Among other things, the

arts could promote social engagement, which is a skill that supports and improves overall

learning (Marzano, 2005). There are many advantages to blending music with the overall

academic curriculum. Music can nurture adolescents through cognitive, social, and

emotional developmental exchanges with teachers and peers. Connecting musically with

adolescents in the classroom allows teachers to use analogous concepts from other

disciplines, the arts, and traditions to nurture the learning environment. Uniting school

music and the adolescent world could help to maintain musical creativity. Adolescents

need to be able to find alternative solutions and diverse information processes to discover

new ways to understand, think, learn, grow, and mature.

The Texas Commission on Drugs and Alcohol Abuse, a NAfME-cited source ,

reported that its studies addressing the elements of success in society revealed secondary

school students who played musical instruments showed lower consumption or abuse of

illegal substances (Petress, 2005). According to Petress (2005), music instruction could

introduce activities that increase intellectual development and that could aid in creating

jobs and improving the quality of life for communities (p. 2). Medical professionals,

corporate leaders and organizations, along with neurological research studies suggest that

music instruction may have a strong effect on lifelong attention skills and reveal

significant improvement in the areas of abstract reasoning and spatial temporal skills

(Gruhn & Rauscher, 2002; Rauscher & Hinton, 2003, 2006). Siegler and Alibali (2005)

explained that music education embraces every discipline, celebrates world history and

culture, enhances creative innovation, and provides artistic ways to problem solve.

Music education also enables adolescents to demonstrate essential knowledge and skills;

make new concrete and abstract discoveries; and unite cognitive, affective, and

kinesthetic experiences applicable beyond the music classroom (p. 177). The conceptual

framework derived from the current study may provide educators with a variety of ways

to organize learning objectives that will motivate students to learn and achieve academic

and social success (McKeown & Gentilucci, 2007). The arts can promote social

engagement, which is a skill that supports and improves overall learning (Marzano,

2005).

Recommendations for Action

The results of this study indicated that all the participants practiced methods of

instruction that were understandable; were standards based, hands-on, and engaging; and

promoted connecting critical thinking skills through musical learning experiences.

Findings supported that standards-based instruction aligned with the cognitive domain of

the revised taxonomy; addressed cognition as a thinking, active process; and provided a

variety of learning objectives that extended beyond the traditional general music

classroom experience. School administrators, policy makers, parents, and community

partners of education need to become aware of the effect music education has and how it

connects higher order thinking abilities. The 2000 *Arts Education Policy Review* stated

that classroom activities aligned with the NSME can heighten awareness of curriculum

design and provide ways to improve music education (Byo, 2000, p. 30). All advocates

for education need to be aware that BRT provides standardized assessment criteria applicable to music education (Anderson et al., 2001).

Dissemination of the findings may benefit novice and experienced teachers and support the teaching practices of veteran educators. All the participating teachers will receive a copy of the study findings, as well as lesson plan templates with the activities discussed in the content analysis and interviews. It is recommended that discussions continue with novice teachers to investigate and review their teaching practices and to assist with developing standards-based lesson plans. Instructional strategies of experienced and veteran teachers need to be assessed routinely to evaluate how they are aligning the learning objectives in the revised taxonomy with the NSME. The information gained needs to be shared to equip music teachers with instructional tools to begin using alternative teaching techniques. Findings and results of this study need to be submitted and presented at local, regional, state, and national conferences and published in professional publications. Action should be taken because music educators might benefit from implementing teaching practices that align with the NSME, and how BRT can link varying teaching practices with the NSME to assist music teachers and support a standards-based curriculum.

Limitations

Case studies provide little basis for scientific generalization and are not represented by experimental sampling (Yin, 2003, p. 10). This evaluative study provided a generalizing analysis of only ten middle school general music programs. The quality of this study was limited to the valid and reliable instruments used. The scope of the data

collection may have been restricted due to the inability to observe actual classroom instruction and the accuracy of the survey responses.

Recommendations for Further Study

The current study was limited to 10 middle school general music teachers. Future studies should include a larger number of teacher participants, or a replication of the study should be conducted with new sets of participants. All of the participants in the study were middle school teachers; therefore, it is recommended to replicate the study using participants from novice, experienced, and veteran teachers in elementary and high school. Further research is necessary to investigate, analyze, and critique the plethora of instructional strategies available for use in the music classroom Application of the findings needs to be shared with novice, experienced, and veteran music teachers for use in their classrooms. Although the findings acknowledged use of most of the standards, aligned with engaging hands-on activities, such singing, playing, and creating, it is important that more significant BRT lesson objectives be introduced that align with the standards used on a less regular basis.

Researcher's Summary and Reflection

This research project has had a profound effect on me. As a music teacher, I was delighted by the enthusiasm of my colleagues who willingly accepted the invitation to participate in the study. The data collected through the survey questionnaire, lesson plans, and interviews provided valuable information. I was pleased at the response and level of commitment of all the participants. All the original 10 participants were able to continue through the completion of the study.

The participants' teaching practices were compelling, and their compassion and allegiance to music education was evident in the classroom activities incorporated to help their students. The one-on-one interviews provided opportunities to spend time with each participant and to ask about the participants' experiences with aligning the NSME with BRT. My perceptions of the novice teachers changed the most during the study. Originally, I assumed they would be nervous and their teaching practices would exhibit topic disconnection, particularly with the NSME. However, the novice teachers were very conscientious of how important it was to align the standards with instructional strategies. Overall, the novice teachers related activities with real life issues and current events. The experienced teachers showed a clear understanding of linking and bridging current and real-life issues with music history and culture, while the veteran teachers were more detailed in connecting with traditional music practices.

The purpose of the qualitative evaluative study was to determine the instructional methods used in general music classrooms to elucidate how the classroom praxis aligned with the standards-based metacognitive strategies from BRT and how the learning objectives met the NSME. The process of conducting a qualitative multiple case study and conducting the analysis was at times very demanding. The interviews were insightful and exhilarating to conduct. The guided interview questions kept the interviews on track and often led to discussions on additional instructional and extended professional perspectives. The results of the study revealed that the teachers' methods of instruction were clear and concise, included relevant curriculum choices, demonstrated positive teacher attitudes, and provided supportive classroom environments that were creative and

fun. Dissemination of the results will add to the body of knowledge regarding teaching

practices using metacognitive instructional strategies that align the NSME with BRT

lesson objectives.

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Appendix A: Consent Forms: Teacher Participants

Letter of Informed Consent

_____

(Date)

Dear colleague

I am currently enrolled as a graduate student at Walden University. As a requirement for my Doctorate of Education concentrating in Teacher Leadership, I will be conducting a research project entitled "National Music Education Standards with the Bloom's Revised Taxonomy". The purpose of this research is to learn about the teaching practices and instructional strategies being used by middle school general music teachers and the level of experience the teachers have with the National Standards for Music Education and Bloom's Revised Taxonomy. I am requesting your permission to include you as a participant in this project.

This project will begin in May, 2011 and end in September, 2011. The project will involve an open-ended survey questionnaire, a follow up discussion with selected master teachers, and a content analysis of thirty lesson plans to obtain data and to determine the extent to which teachers are using higher order learning objectives based on the cognitive domain of Bloom's revised taxonomy. As a part of this research, I will need to look at two lesson plans from your general music classes.

Possible benefits for the participants of this project are to elucidate effective methods a music teacher can use to improve student comprehension, support a standards-based curriculum, and offer alternative music instructional strategies that could enhance learning and improve student achievement, in addition to establishing better teaching practices for the general music educator. There are no foreseeable risks or discomforts for participants in this project. Your name and all other personally identifiable information will be kept confidential. The name of your school will not be included in the final report.

Your participation in this project is voluntary. There is no compensation for participating in this study. You will not be penalized or lose any benefits to which you are otherwise entitled if you decide that you will not participate in this research project. If you decide to participate in this project, you may discontinue participation at any time without penalty or loss of benefits. You have the right to inspect any instrument or materials related to the proposal. Your request will be honored within a reasonable period after the request is received.

If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Director of the Research Center at Walden University. Her phone number is 1-800-925-3368, extension 1210.

Walden University's approval number for this study is **09-15-10-0094644** and it expires on **September 14, 2011.**

*(Researcher's name)*_____Vada M. Coleman_____
(Researcher's school) _____Walden University_____
(Researcher's phone number) _404.394.1021_ *(researcher's email address)* _vcoleman@waldenu.edu__
(Institutional contact's name [major professor, advisor, dissertation chair,]) __Dr. Marilyn Simon__
*(Institutional contact's affiliation [college, university, etc.])*___Walden University_____
*(Institutional contact's phone number)*_____858.259.0345_____
*(Institutional contact's email address)*_____msimon@waldenu.edu_____
_____ _____ _____

Participant's Name (please print) Participant's Signature Date:

Appendix B: Survey Questionnaire, Teacher Participant

Name _____

School_____

Directions: Thank you for taking the time to complete this survey. When marking your responses, please fill in bubbles completely. You may use either a pen or pencil. Completing this survey may take up to 10–15 minutes. *Please highlight and bold the response that most accurately reflects your experience at your school.*

Never = 0
Seldom = 1
Sometimes = 2
Frequently = 3
Always = 4

1. My principal believes diverse teaching practices are essential for achieving our school goals.
     0 1 2 3 4
2. I have opportunities to practice new skills gained during staff development, inservices, and workshops.
     0 1 2 3 4
3. Teachers are provided opportunities to gain deep understanding of the subjects they teach.
     0 1 2 3 4
4. At my school, teacher learning is supported through a combination of strategies (e.g., workshops, Peer coaching, study groups, joint planning of lessons, and examination of student work).
     0 1 2 3 4
5. I am familiar with Bloom's revised taxonomy.
     0 1 2 3 4
6. I use Bloom's revised taxonomy learning objectives with my lesson plans and classroom activities
     0 1 2 3 4
     a. One to two times a week   _____**yes** _____**no**
     b. Three to four times a week   _____**yes** _____**no**
     c. Four or more times a week   _____**yes** _____**no**
7. Mark the cognitive levels that you use in your classroom to engage the students with learning   and describe an activity:
     _____Creating
Example:

     _____Evaluating
Example:

     _____Analyzing
Example:

     _____Applying
Example:

_____Understanding

Example:

_____Remembering

Example:

8. I regularly align my lesson plans and classroom activities with the national standards for
music education.   **0 1 2 3 4**

       a. One to two activities a week   _____**yes** _____**no**
       b. Three to four activities a week   _____**yes** _____**no**
       c. Four or more activities a week   _____**yes** _____**no**

9. List which of the nine national standards are used in your class and describe an activity:
       _____Singing, alone and with others, a varied repertoire of music.

Example:

       _____Performing on instruments, alone and with others, a varied repertoire of music.

Example:

       _____Improvising melodies, variations, and accompaniments.

Example:

       _____Composing and arranging music within specified guidelines.

Example:

       _____Reading and notating music.

Example:

       _____Listening to, analyzing, and describing music.

Example:

       _____Evaluating music and music performance.

Example:

       _____Understanding relationships between music, the other arts, and disciplines outside the arts.

Example:

       _____Understanding music in relation to history and culture.

Example:

9. How important do you think aligning the national standards for music education with the Bloom's
revised taxonomy is in assisting and supporting student learning?
0 1 2 3 4
        4 Very Important   **3** Important   **2** Somewhat Important   **1** Not Important

10. Would you be interested in participating in a case study research project that will examine instructional
      strategies used in your general music classroom that align with the national standards for music
      education and the Bloom's revised taxonomy?   _____**yes** _____**no**

11. Please answer the following inquiries, if you are interested in participating in the study:
      a. Years of teaching experience _____

b. Age began teaching _____

c. Have you experience in the last 12 months any crisis situations, such as:

- Health issues that might hinder participation (Pregnancy, acute illness, etc.)
- Victim of a natural disaster (Flood, Storm, etc.)

Appendix C: Interview Guide and Questions

<u>Main Interview Question</u>
What instructional strategies are being implemented in your general music classes that align with the National Standards for Music Education?

<u>Interview Guiding Questions</u>
1. How effective are these instructional strategies in your general music classroom?

2. How do they help your students consistently improve their overall music comprehension skills?

3. How familiar are you with the cognitive domain of Bloom's revised taxonomy? and Howard Gardner's MI theory?

4. What role does cognition, metacognition, thinking, and learning play in your general music curriculum objectives?

5. What is the relationship between using metacognitive strategies in the music classroom and the national standards for music education?

Appendix D: Interview and Survey Coding Matrix

RESEARCH QUESTION
What instructional strategies are being implemented in the general music classes that align with the National Standards for Music Education?

Interview Repore (ir)
ir.iwe   Interviewee
ir.iwr   Interviewer

Intructional Interaction (ii)
ii.iwri   Interviewer Instructional Interaction
ii.iwei   Interviewee Instructional Interaction
ii.rq   Research Question What instructional strategies do you implement with your
    general music classes that align with the National Standards for Music
    Education?-
ii.q#1 Question 1 - Do you feel that they help the students consistently improve their
     overall music comprehension skills?
ii.q#2 Question 2 - What measurement tools are in place to assess how effective these
     instructional strategies are in your general music classroom?
ii.q#3 Question 3 - How familiar are you with the cognitive domain of the revised
    Bloom's taxonomy? and Howard Gardner's MI theory?
ii.q#4 Question 4 - What role does cognition, metacognition, thinking, and learning
    play in your general music curriculum objectives?
ii.q#5 Question 5 - What is the relationship between using metacognitive strategies in
    the music classroom and the national standards for music education?

National Standards for Music Education Implementation (NSME)
NSME#1   Singing, alone and with others, a varied
              repertoire of music
NSME #2 Performing on Instruments, alone and with
              others, a varied repertoire of music.
NSME #3 Improvising melodies, variations, and accompaniments
NSME #4 Composing and Arranging music within specified guidelines
NSME #5 Reading and notating music
NSME #6 Listening to, analyzing, and describing music
NSME #7 Evaluating music and music performances

NSME #8   Understanding relationships between music, the other arts, and disciplines
               outside the arts
NSME #9   Understanding music in relation to history and culture

Bloom's Taxonomy Cognitive Activity (BTCA)

BTCA1   Remembering: Retrieving, recalling, or recognizing knowledge from memory

BTCA 2   Understanding: Constructing meaning from different types of functions be they written or graphic messages activities

BTCA 3   Applying: Carrying out or using a procedure through executing, or implementing

BTCA 4   Analyzing: Breaking material or concepts into parts, determining how the parts relate or interrelate to one another or to an overall structure or purpose

BTCA 5   Evaluating: Making judgments based on criteria and standards through checking and critiquing

BTCA 6   Creating: Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing

Curriculum Vitae

Vada M. Coleman
vcoleman@waldenu.edu

Objective:

Assistant Professor of Music Education, Instructional Coach

Education:

M.S., Education, Walden University, Bloomington, IN., 2003
Concentration: Middle Level Education
Thesis: Music, Nature's Brain Food

B.Mu, Vocal & Choral Studies, Music Education, Georgia State University, Atlanta, GA., 1994

Experience:

Teacher, 1995-1997
Cobb County School System
Courses: Choral & Exploratory Music

Teacher, 1997- Present
Dekalb County Schools
Courses: Choral & Exploratory Music

Awards and Honors:

- Lead Secondary Choral Teacher, GMEA Honors Chorus Co-Chair, 2006-Present
- Nominated Who's Who Among America's Teachers, 2005 & 2006
- Lifetime Member, Golden Key National Honor Society
- Recipient, Haskell Boyter Choral Scholarship
- Regents Honors Scholarship
- Winner, Habitat for Humanity Gospel Talent Search
- Certified "Talents Unlimited" Educational Program
- Certified, Yamaha Music in Education Instructor
- Teacher of the Month, October, 1999