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DEVELOPING MUSICIANSHIP AND 21st CENTURY LEARNING SKILLS USING THE LISK "CREATIVE DIRECTOR" SERIES

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DEVELOPING MUSICIANSHIP AND 21st CENTURY LEARNING SKILLS USING THE
LISK “CREATIVE DIRECTOR” SERIES

A Dissertation Presented

by

THOMAS E. REYNOLDS

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

September 2018

Music

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Thomas E. Reynolds, Templeton, Massachusetts

ABSTRACT

DEVELOPING MUSICIANSHIP AND 21st CENTURY LEARNING SKILLS USING THE

LISK “CREATIVE DIRECTOR” SERIES

SEPTEMBER 2018

THOMAS E. REYNOLDS, B.M.E., NEW ENGLAND CONSERVATORY OF MUSIC

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The Edward S. Lisk “Creative Director” pedagogical techniques have been found to be invaluable in the instrumental music classroom for teaching overall musicianship skills. As educators address the teaching of 21st century learning skills through all of the academic disciplines, many of the Lisk techniques for teaching overall musicianship skills also foster the teaching of 21st century learning skills. Twenty-first century learning skills can help students to go beyond the simple acquisition of knowledge by enabling them to think critically and creatively about what they have learned, as well as collaborate and communicate with others.

This collective case study was designed to examine the pedagogical strategies used to cultivate overall musicianship in the Lisk “Creative Director” band series and how these strategies facilitate the development of 21st century learning skills of instrumental music students. Teachers and selected students from band programs using the Lisk approach in three different school districts were observed in ensemble rehearsals and interviewed individually and in small groups. Students were able to identify and discuss the musicianship concepts and 21st century learning skills presented through their director's use of the Lisk approach. Teachers were able to describe how the Lisk approach enables them to effectively improve the

expressiveness, sound and performance quality of their ensembles. Of the four learning skills, it was found that critical thinking skills received the most emphasis and creative thinking skills received the least attention from teachers and students alike. The teachers and students agreed that the Lisk approach is a philosophy and a process for preparing students in comprehensive musicianship and 21st century learning skills that goes beyond the techniques surrounding the circle of fourths. All participants emphasized that the Lisk approach was beneficial to the development of musicianship skills and 21st century learning skills in their band programs.

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CHAPTER 1

INTRODUCTION

As a high school student, I was first introduced to the world of the wind band through my experience as a member of the Massachusetts Youth Wind Ensemble conducted by Frank L. Battisti, a prominent wind band conductor from the New England Conservatory of Music. I was moved by music such as Hindemith's "Symphony for Band," the Ives "Country Band March," the Bennett "Suite of Old American Dances," Husa's "Music for Prague, 1968," and Grainger's "Lincolnshire Posy." For the first time, I felt that music spoke to me in a very powerful way, and I realized that to perform these wind band pieces successfully, it was necessary for the musicians to possess advanced musicianship skills. Band was no longer just an enjoyable, ceremonial activity. It became an academic subject for me, and my curiosity for studying music as a serious subject began to increase exponentially. Because of the profound effect that this wind band music had on me, I decided to pursue a career in music education, allowing me to share my passion for music with school-aged students.

As a music education student at the New England Conservatory of Music (NEC), I began to explore the world of music education and the benefits of studying music. During my time at the Conservatory in the 1970s, there was a real interest among educators to understand how and why students learn. While at NEC, I was first introduced to the work of Edward S. Lisk, who was, at the time, the Supervisor of Music for the Oswego, New York City School District. Lisk was then developing what would become the "Creative Director" series known as "Alternative Rehearsal Techniques" (Lisk, 1987). This approach, grounded in research completed by Lisk and others, centered on the teaching of musicianship skills that empower students to facilitate their own learning. The more that I learned about this approach, the more I was convinced that it

could provide a bridge for all students to learn important things about music and musicianship while developing important skills in critical thinking, creativity, collaboration, and communication. This study examines the pedagogical strategies used to cultivate overall musicianship in the Lisk “Creative Director” band series and how these strategies facilitate the development of 21st century learning skills of instrumental music students.

The Lisk “Creative Director” series

Lisk created a unique approach to the teaching of instrumental music in his “Creative Director” series (Byo, 1990; Molnar, 2005). The goal of the Lisk approach is to broaden the spectrum of overall musicianship within instrumental music students to ultimately achieve success as independent, self-reliant learners (Lisk, 1987, 1991). The Lisk approach, known as “Alternative Rehearsal Techniques” (ART) is a departure from more conventional methods of teaching instrumental music (Molnar, 2005). Traditional instrumental methods tend not to utilize connected learning strategies for comprehension and understanding. Traditional band methods generally place the primary focus of a student musical ensemble upon teacher-centered rehearsal activities that lead to a teacher-directed final performance, rather than facilitating a student-centered learning environment where individual students are equipped with the musical skills, techniques, and concepts necessary to give a thoughtful, student-centered performance (Allsup, 2012; Lisk, 1987, 1991). The Lisk series presents an overall musicianship approach based upon research which is not generally found in other structured methods for the teaching of instrumental music (Lisk, 1987, 1991; Molnar, 2005). While Lisk utilizes elements of the musical approaches of Gordon, Dalcroze, Kodály, Orff, and Suzuki, such as the way that listening skills, counting, and note-reading skills are presented, ART develops these methods to another level (Lisk, 1987, 1991).

Given the many years that Lisk spent as a high school band director, Lisk came to the conclusion that the teaching of musicianship could be presented in such a way so that students could be more actively engaged in the process (Molnar, 2005). A key component of Lisk's effort was centered around his determination to understand how people learn and how the human brain functions (Lisk, 1987, 1991). After examining research, Lisk concluded that people need to develop mental images of concepts in order to enable and maximize comprehension. Consequently, Lisk developed rehearsal strategies based on the premise that if students are able to develop mental images about the musicianship skills that they are being asked to demonstrate, they will learn to understand those skills more clearly (Lisk, 1987, 1991; Molnar, 2005).

Lisk's review of a number of studies about the brain and mental imaging convinced him of the need to consider this research when developing overall rehearsal teaching strategies (Lisk, 1987, 1991). In studying the coordination of the hand and brain as a gateway to brain development, Wilson, a neurologist, reported that playing a musical instrument is a unique blend of physical and neurological function that leads to a unified physical and mental state which positively affects brain development and learning (1989). McGill University professor David Levitin stated in his (2006) publication, *This Is Your Brain On Music*, that the processes of music listening, performance, and composition utilize almost every identified area of the brain as well as nearly all neural subsystems.

Lisk was also fascinated by the work of psychologist Peter Russell, author of *The Brain Book* (1980), who stated that when people are involved in learning, there are four main areas of highest recall; the beginning, the end, activities that are linked to the beginning and things that are outstanding (Lisk, 1987, 1991). Learning falls off rapidly after the first ten minutes and then increases significantly near the end (Lisk, 2010, p. 20). This means that memory at the beginning

and end of a music rehearsal is at a higher level than the middle of the rehearsal. As a result, Lisk determined that the first 10 minutes of any rehearsal are most critical for the brain to retain information (Lisk, 1987, 1991).

Lisk felt that much could be taught about musicianship through a strategically-planned daily warm-up process, and that the beginning of every rehearsal associated with the warm-up was most critical in the development of a fine band program (Lisk, 1987, 1991). He also found that connecting warm-up exercises directly to the pieces in rehearsal that same day was a vital step for students to apply what they learn (Molnar, 2005, p. 16).

Lisk also emphasized that students' continuous assessments and evaluations of musical performances are important to their understanding of musicianship skills (Lisk, 2015, p. 69). As a result, he became an advocate for the development of new rehearsal techniques to create more effective methods of rehearsing instrumental ensembles, resulting in students' higher sensitivity to overall musicianship (Molnar, 2005).

With the emphasis of overall musicianship development in the Lisk approach, certain learning skills need to be utilized by students to develop their musical comprehension (Evenhouse, 2014a, 2014b, 2015). Younker (2000, 2002) examined how overall musicianship is developed using critical thinking, creative thinking, collaboration and communication, which are known as 21st century learning skills. These skills will be outlined further in the next section. While the 21st century learning skills of critical thinking, creative thinking, collaboration and communication were not formally defined as a skill set when Lisk began his teaching career, he felt that these concepts were fundamental to all learning in music (Lisk, 1987, 1991).

Twenty-first century learning skills

Twenty-first century learning skills have become a part of the curricula of elementary and secondary schools and even colleges and universities (Trilling & Fadel, 2009). The term “21st century learning skills” is a contemporary label that refers to a group of abilities that students need to succeed in the present information age including the following: critical thinking, creative thinking, collaboration, and communication (Stuart & Dahm, 1999; Trilling & Fadel, 2009).

How were the skills of critical thinking, creative thinking, collaboration, and communication chosen to form 21st century learning skills? To answer this question, it is necessary to look back at history and reflect upon the demands of the modern workplace (Stuart & Dahm, 1999). Back when American society was in an Agrarian Age in the 17th and 18th centuries, agriculture was the main driver of the economy. This meant that the career needs of people were fairly simple and that the roles of critical thinking and creative thinking were not necessary for employment (Trilling & Fadel, 2009). As the Agrarian Age moved into the Industrial Age, shifting careers from farms to factories, manufacturing and inventiveness in technology started to drive the economy on a large scale. Continuing into the 20th century, more emphasis was placed by the economy upon manufacturing, machines, mechanical technology and mechanically skilled labor. The increased use of communication and problem-solving demonstrated a need for education to change with the shift to the Industrial Age. When the Industrial Age evolved into the Knowledge Age at the end of the 20th century and into the 21st century, more “brainpower rather than brawnpower” was required to get workers properly retooled to be able to function in the new careers of the 21st century (p. 12).

In 1991, “society shifted quietly from an Industrial Age to a Knowledge Age when money that was spent on goods – engines, machines, mining, construction, manufacturing,

transportation, energy, etc., was exceeded for the first time in history by the amount spent for information and communication technologies – computers, servers, printers, software, phones, networking devices and systems, etc.” (Trilling & Fadel, 2009, p. 3). That year, business expenditures exceeded those of Industrial Age expenditures by \$5 billion dollars, growing from \$107 billion to \$112 billion, representing a significant shift in priorities. Along with this growth in business expenditures, the careers of the Knowledge Age demanded that workers demonstrate higher order skills in critical thinking, creative thinking, collaboration, and communication in order to be productive contributors to the workforce.

Schools have not always kept up with the changes in society. The school calendar has its roots in the Agrarian Age when children were needed to work alongside their parents in the fields in the summer (Trilling & Fadel, 2009). While schools developed and evolved in the Industrial Age, education was still something that was concerned primarily with providing information and less about practical application of that knowledge. Now that society is in the Knowledge Age, education has become critically important to provide advanced training to people in order for them to achieve success in contemporary careers (Stuart & Dahm, 1999; Trilling & Fadel, 2009). The challenge that has been presented to 21st century schools is that of preparing students for jobs that are not in existence yet, using technologies that have not yet been created, and dealing with problems that society does not yet even know about (Schleicher, 2011).

Throughout the 20th century, teacher-centered instructional techniques were the norm in education (Molnar, 2005). Teachers were seen as the main providers of knowledge, and students were expected to assume subservient roles in the learning process, complying with rules, answering questions, remembering information, and performing well on tests, both teacher-created and standardized (p. 4). The present emphasis in schools on learning skills focuses on

developing independent, lifelong learners (Stuart & Dahm, 1999). As Adler states, “The primary cause of learning is the activity of the student’s mind. The best that the best teacher can do is to assist that activity” (Adler & Van Doren, 1990).

Intersection of 21st century learning skills and the Lisk approach

School administrators and teachers currently place a significant amount of attention on teaching 21st century learning skills (Manthey, 2008). Twenty-first century learning skills are defined as a group of abilities that students need to succeed in the present information age: critical thinking, creative thinking, collaboration, and communication (Trilling & Fadel, 2009). Many teachers, in all disciplines, are instructed to show how their work reinforces the school-wide goal of teaching 21st century learning skills (Schools, 2006). With the emphasis on teaching students “how to critically think and learn on their own,” music educators are now challenged to demonstrate how they contribute to this new teaching expectation (Oare, 2012, p. 69).

Generally speaking, music educators have been teaching 21st century learning skills for many years, even before these skills were known collectively with this label. Critical thinking, creative thinking, collaboration and communication have been linked with overall musicianship skills since the dawn of musical ensembles (Lisk, 1987, 1991). When students make music, they continuously make personal decisions about balance, blend, intonation, tone quality, rhythm, meter, dynamics, articulation, phrasing, and expression as instrumental ensemble musicians, and they use critical thinking, creative thinking, collaboration, and communication to make spontaneous judgments about musical performance problems (Lisk, 1987, 1991). In this way, they are continuously confronted with a variety of performance challenges and problem-solve on the spot to achieve the desired performance result. The honing of these overall musicianship skills also simultaneously refine 21st century learning skills.

The emphasis on 21st century learning skills has ramifications for music educators who use ART in all levels of education. The pedagogical techniques presented in the Lisk “Creative Director” series offer instrumental music teachers resources for the cultivation of critical and creative thinking, collaboration, and communication. It is a method grounded in developing the student’s decision-making process, so that students are not dependent upon the music director to constantly tell them what to do. Students become responsible for the quality of their musical performance.

One major component of 21st century learning skills includes the student’s use of critical thinking skills when evaluating and reflecting upon his or her own performance through self-assessment. Within this focus on critical thinking and evaluation, Daniel (2001) described strategies for developing self-assessment skills so that students will be able to evaluate their own work effectively. Music educators agree that “devoting time to assessment will eventually save time in class” (Goolsby, 1999, p. 31). There are a number of 21st century learning skills self-assessment strategies available to music educators that can ultimately lead to student improvement in 21st century learning skills, including the development of effective practice strategies, vocabulary and technique assessments, performance rubrics, and the use of audio and video recording in self-assessment, among others (Asmus, 1999; Daniel, 2001; Goolsby, 1999). These strategies all contribute to student independence and student ownership of the learning process, and music educators have emphasized that “one of the primary goals of music education in general is musical independence” (Goolsby, 1999, p. 35).

Purpose of Study and Research Questions

For instrumental directors to help students delve into the development of overall musicianship skills, they need to equip themselves with effective pedagogical techniques.

Significant approaches, methods, techniques, and theories for the teaching of music and understanding of how people learn have been developed by Dalcroze, Kodály, Orff, Suzuki, Gordon, and Gardner, among others.

The Lisk “Creative Director” series, and specifically his “Alternative Rehearsal Techniques,” is a blend of all of the approaches, methodologies, techniques, and theories listed above (Lisk, 1987, 1991). Because of the emphasis placed on connected learning, the development of the musical minds of instrumental music students, the “Creative Director” series is uniquely positioned to be a method that can contribute to the students’ development of 21st century learning skills (critical thinking, creative thinking, collaboration, and communication). Given the climate of contemporary education, the Lisk series may help music educators to demonstrate the importance of teaching instrumental music to achieve significant goals that have been outlined for general education. The purpose of this study is to examine the pedagogical strategies used to cultivate overall musicianship in the Lisk “Creative Director” band series and how these strategies facilitate the development of 21st century learning skills of instrumental music students. It considers the following questions:

1. Why do teachers use the Lisk approach and what do they find most effective about it?
2. How are the 21st century learning skills of critical thinking, creative thinking, collaboration, and communication cultivated in a Lisk-centered classroom?
3. What impact do students believe that the Lisk “Creative Director” series has had on the development of their musicianship skills and their 21st century learning skills?

Significance of the Study

In spite of the passing of 30 years, there is not a great deal of research available that examines the Lisk “Creative Director” series and its effect upon student learning. Since the

“Creative Director” series represents a departure from traditional instrumental teaching techniques, there is a learning curve for teachers wishing to utilize these pedagogical techniques. A need exists for more research on this approach in order to aid in music teacher preparation.

With the emphasis upon 21st century learning skills in contemporary schools, the “Creative Director” series could enable instrumental music teachers to demonstrate a clear relationship between students’ acquisition of these skills and the learning of overall musicianship skills to demonstrate the value of music education in the total education process. Musicianship judgments made by students in music ensembles require that they use 21st century learning skills, so it is important for music educators to understand the role that they play in helping students to acquire these important skills. The “Creative Director” series is also grounded in creating aural and visual imagery as a vehicle to student learning. Lisk pointed out that “research has proven that by creating strong vivid images, recall is increased by two and a half times. Visual images are much better remembered than words” (Lisk, 1987; 1991, p. 7) . The emphasis on using visual imagery to teach aural concepts is a powerful aspect of this approach and it can have significant ramifications on the teaching of overall learning skills.

Definition of Terms

21st Century Learning Skills: A set of abilities that is essential for students to develop in order to succeed in the information age of the 21st century (Stuart & Dahm, 1999; Trilling & Fadel, 2009).

Critical Thinking: An intellectual process that involves making clear, reasoned judgments through assessment (Trilling & Fadel, 2009).

Creative Thinking: An intellectual process used to develop ideas that are unique and worthy of further elaboration (Trilling & Fadel, 2009).

Collaboration: Participating or assisting in a joint effort to accomplish an end (Cox, 2009; Trilling & Fadel, 2009).

Communication: Engaging in an exchange of information or ideas (Trilling & Fadel, 2009).

Musicianship: The development of knowledge, skill, and artistic sensitivity in performing music in a holistic way (Lisk, 1987, 1991).

Overview of the Study

Chapter two contains a review of literature related to this study. It is organized around three areas: 21st century learning skills, student musicianship learning in musical ensembles, and examining the Lisk “Creative Director” series to teach overall musicianship skills. Chapter three describes the methodology used in this study. It illustrates the various stages of this study including data sources, collection, and related issues. The perspective of the researcher is also addressed. This chapter contains a record of processes used for coding data, methods of triangulation, and ensuring integrity. Chapter four contains the results of the study, examining the presentation, interpretation, and analysis of data that demonstrates various relationships of student musicianship skills and 21st century learning skills in each of the three participating schools in this collective case study. Chapter five contains the cross case comparative results of the study, examining the presentation, interpretation, and analysis of data that demonstrates various relationships of student musicianship skills and 21st century learning skills, comparing the individual results from all three participating school cases with one another. Chapter six addresses the research questions, provides implications for additional research and practice and describes the conclusions that were reached as a result of this study.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

This review of literature is organized into three sections. The first section explores literature related to 21st century learning skills. The second section of this chapter examines the intersection between 21st century learning skills and music education including theories, beliefs, and an historical context. The third section of this chapter addresses methods for teaching musicianship through the Lisk “Creative Director” series including theories and beliefs, approaches to the teaching of these skills, and how 21st century learning skills are both used and developed through the teaching of musicianship in this approach.

Twenty-first Century Learning Skills

Twenty-first century learning skills have been identified by education and business leaders as a necessary component for helping students to achieve success, as well as a means by which to facilitate students’ ownership and responsibility for their education (Oare, 2012). This ownership and responsibility translates into greater independence and self-reliance as students progress through their education. The four basic elements of 21st century learning skills are critical thinking, creative thinking, collaboration, and communication (Schleicher, 2011). In the following sections, I explore those four skills and how they have become components of a 21st century education.

Critical thinking. Many years before the dawn of the Knowledge Age, some prominent educators argued that one of the fundamental goals of education should be the development of thought processes within students rather than treating them as repositories of information (Whitehead, 1929). Critical thinking is defined as “reasonable reflective thinking that is focused

on deciding what to believe or do [with newly acquired information]” (Ennis, 1962, pp. 473-474). Authorities describe critical thinking as a process where students begin with information comprehension and then develop reasoning skills and the ability to think for themselves (Bloom, Krathwohl, & Masia, 1956; Ennis, 1962; Johnson, 2011; Link, 1985; Sternberg, 1985).

McCarthy (2000) stated that education can only be effective if that which is taught is associated with a creative act and that critical thinking leads to an analysis and understanding of the role of that creative act in determining the degree of effectiveness of that learning experience.

The basic premise of critical thinking is that knowledge must be used as it is being learned instead of waiting to master content fully before using it (Schleicher, 2011; Trilling & Fadel, 2009; Younker, 2002). Dewey (1933, 1991) referred to reflective thinking skills, in which he believed that learning improves in proportion to the thought process of reflection. Critical thinking increases student ownership in their learning through self-motivation (Trilling & Fadel, 2009). Students learn to remember, understand, analyze, evaluate, and create through critical thinking and problem solving. They employ effective reasoning skills, use systems thinking, and learn to make judgments and decisions as well (Stuart & Dahm, 1999; Trilling & Fadel, 2009).

Creative thinking. Creative thinking is a thought process that moves between divergent (imaginative) and convergent (factual) thinking over various stages (Koutsoupidou & Hargreaves, 2009). Koutsoupidou and Hargreaves link creativity with imagination and a certain amount of unconscious thought developing a level of thought that parallels a free spirit.

Creativity and innovation skills allow students to invent, create, question, display patience, demonstrate trust, and learn from mistakes and failures (Schleicher, 2011; Trilling & Fadel, 2009). When students work creatively with others, they use a wide range of techniques, create novel ideas, and elaborate, refine, analyze, and evaluate to maximize creative efforts

(Trilling & Fadel, 2009). As students work creatively with others, they develop, implement, and communicate new ideas effectively, become open and responsive to diverse perspectives, demonstrate originality and inventiveness, and view failure as an opportunity to learn. Students implement innovations when they act on creative ideas in a field where innovation will occur.

Collaboration. Collaboration has been listed as an educational priority for a long time, but schools have not put much emphasis upon it until recently. To collaborate with others, students need to develop an ability to work effectively and respectfully, exercise flexibility and willingness to be helpful, learn to compromise to achieve group goals, and assume shared responsibility for collaborative work (Stuart & Dahm, 1999; Trilling & Fadel, 2009). Collaboration skills allow students to network with other learners, both socially and intellectually, allowing for powerful collective solutions among groups of people (Cox, 2009). Collaboration allows for team-based inquiry and problem-solving. Educators place collaboration as a central element of 21st century learning skills (Cox, 2009).

Communication. Communication skills are basic to 21st century learning skills (Schleicher, 2011; Stuart & Dahm, 1999; Trilling & Fadel, 2009). Cultivating good communication skills through writing, reading, and speaking have always been essentials of education (Manthey, 2008). To communicate clearly, students must articulate thoughts, listen effectively, use communication to inform, instruct, motivate, and persuade, use multiple media and technologies, and must learn to communicate in diverse environments (Stuart & Dahm, 1999; Trilling & Fadel, 2009). The demand for good communication skills has never been higher than it is presently, and educators are working hard to improve the quality of these skills to match 21st century expectations (Juzwik et al., 2006).

Summary of 21st century learning skills. Twenty-first century learning skills have

become an important part of the curricula of elementary and secondary schools. Brief introductions to the 21st century learning skills of critical thinking, creative thinking, collaboration, and communication were presented, including theories and beliefs, an historical context, and a rationale for why these skills are deemed to be important to students as they prepare for the workplace of the 21st century (Schleicher, 2011; Stuart & Dahm, 1999; Trilling & Fadel, 2009). Educators have made a commitment to improve the quality of teaching through the cultivation of 21st century learning skills in all students in order to meet the challenges of the 21st century (Cox, 2009; Juzwik et al., 2006; Schleicher, 2011; Stuart & Dahm, 1999).

Twenty-First Century Learning Skills and Music Education

While schools strive to infuse 21st century learning skills in all aspects of contemporary education at the elementary and secondary levels, arts education, and particularly music education, is uniquely positioned to provide opportunities for students to utilize these learning skills to their fullest potential (Broudy, 1990). The arts have challenged human thought from the earliest records of mankind, where it was believed that “the formal, sensory, and expressive characteristics, i.e., aesthetic properties, (of the arts) play a role in the activities of plants and animals as well as in those of the human species” (p. 23).

There has been much discussion over the years regarding the role of music education in a public school curriculum. (Broudy, 1990) It was recognized that in musical contexts, the processes of demonstrating musicianship through comparing, evaluating, reflecting, judging, and classifying provided evidence of the use of critical thinking (Bundra, 1993; Richardson, 1998) and encompassed elements of both generalizable and subject-specific thinking skills (Johnson, 2011, p. 259; Woodford, 1995). Within the context of concert bands, Mantie (2012) explained that a philosophical difference exists between those who view bands as the main medium of

music education and others who view bands as a part of a student's total music education. He stated that teacher-centered teaching practices are more prevalent among teachers who view band as music education, where the main purpose for band is only to serve as a vehicle for musical performance for an ensemble of student musicians. Mantie contrasted this with teachers who employ more student-centered teaching approaches who advocate that the purpose of band is not just to function as a performance ensemble, but rather, as an opportunity for personal growth among its members, making the band performance experience only one component of music education that is broader in scope.

Teacher-centered techniques were the tradition in music education from its inception right through the 20th century (Molnar, 2005). This tradition evolved from school performing groups in existence primarily for entertainment reasons to school musical ensembles that were focused primarily upon the musical education of students (Battisti, 2002). The role of the music teacher primarily centered upon the dispensing of technical performance expectations and knowledge to students, while the role of the students was to demonstrate learning through performing with accurate note execution, memorizing information, and answering questions about that information, all while passively complying with a rigid set of rules and regulations (Molnar, 2005). As music education progressed people began to feel that change was needed to move the scope of instruction beyond the rigidity of correct note execution and memorization. One of the first programs to advocate the need for a change in these teaching strategies in the twentieth century was the Contemporary Music Project ("The Ford Foundation Annual Report," 1957; Mark, 1996). The program began in 1957 when the Ford Foundation funded a proposal by the Music Educators' National Conference to support a project that would educate teachers to present more contemporary music in their classrooms ("The Ford Foundation Annual Report,"

1957; Mark, 1996; Molnar, 2005). Students were encouraged to assume more responsibility for their own musical growth through this program, and teachers were encouraged to avoid inhibiting that growth by turning more responsibility for learning over to the students (Mark, 1996). This approach of giving students direct ownership for their musical performance growth was a bold philosophical shift in instructional practice that is developed even further in the Lisk “Creative Director” series (Molnar, 2005).

Convincing instrumental music teachers to modify teaching techniques to improve instruction has been challenging, although progress is being made in this area (Molnar, 2005). A study by Blocher, Greenwood, and Shellahamer (1997) demonstrated that directors spent less than 3% of their rehearsal time on conceptual teaching behaviors, including transfers or connections between instructional categories and providing in-depth insights into the ways such musical concepts relate to others (p. 464). These same directors showed little interest in modifying their traditional rehearsal practices because of concerns that their ensembles’ performance results would be negatively impacted. The directors in this study were more focused upon perfecting single concert performances of their student ensembles, rather than emphasizing student musicianship skill development resulting in long-term learning that would be reflected not only in immediate performances but future ones as well.

However, a more recent study conducted by Whitaker (2011) suggested that band director attitudes about improving instruction have improved. In this study, the verbal and non-verbal teaching behaviors of six high school band directors of programs considered to be exemplary were observed, along with their students’ perceptions of those behaviors. Whitaker found that directors spent more academic time in rehearsals than with the presentation of directions or pausing to reflect upon what was being taught. Performance was found to comprise

over 50% of classroom time with all but one program. Whitaker reported that students perceived that they received more disapproving feedback from their directors than encouragement. However, the students were less critical of the teaching behaviors of their teachers than the band directors themselves. Whitaker noted that the band directors expressed the benefits that they found by participating in this study, as they were self-critical of their teaching behaviors and they reflected upon how they could improve their teaching as a result.

To improve instruction, teachers need to direct learning in such a way so that students are given some personal ownership of their learning, engaging them in the process (Molnar, 2005). As McBeth pointed out, “When a teacher can direct the learning process into clear and precise channels with time proven methods, the learning is not only faster but results in a higher level of achievement” (Lisk, 1987; 1991, p. viii).

The following sections describe relationships between the four basic elements of 21st century learning skills and music education.

Critical thinking. Critical thinking skills help students to assess and reflect upon the quality of their own musical performance skills, as well as to develop strategies about how to improve them (Shuler, 2011). Shuler states that music teachers help to develop critical thinking skills in students through the higher order thinking verbs that describe the artistic processes - creating, performing, and responding.

In an extensive literature review on critical thinking, both in general education and in music education, Younker (2002) compared research defining the concept of critical thinking, how the instruction of critical thinking skills benefits the teaching of all disciplines across the curriculum, and how instruction in music could foster critical thinking skills in children.

Younker suggested that students utilized critical thinking skills of evaluation, comparison, and

reflection, in the process of improving overall musicianship skills. In another study of university music majors' thought processes, strategies and reflections as they composed through singing, Younker (2000) found that the students demonstrated aspects of critical thinking, including identifying, applying, generating, analyzing, synthesizing, and evaluating, skills identified by Paul (1993) as the second dimension of critical thinking skills.

Students can develop critical thinking skills that can be used to cultivate students' social skills, problem-solving skills, and cognitive skills, as well as impacting academic achievement across the general curriculum through music education (Topoğlu, 2014). With complex choices and decisions that students make every day, music instruction helps students to hone their critical thinking skills in ways that helps them to identify important questions, analyze and process various types of information, and examine contrasting points of view (Evenhouse, 2014b).

Students were able to use critical thinking skills while listening to music to share their own ideas and responses with others (Bundra, 1993; Johnson, 2011). In a study by Bundra (1993) that examined the thought processes of elementary school children during music listening experiences, it was observed that students demonstrated an ability to communicate their own thoughts while listening to music, and they were able to both make judgments about the music and describe their own ideas regarding the listening process. Through constantly asking how students felt at various times in the music, giving both oral and written responses, Bundra found that students used critical thinking to enhance their overall musicianship skills through comparison, evaluation, reflection, adjudication, and classification. Johnson (2011) arrived at a similar conclusion about the use of critical thinking skills in his study on the instruction of music listening skills in fifth grade students. The use of critical thinking skills helped these students in the verbal responses to the music they heard. Johnson suggested that educators can engage

students to make intelligent musicianship decisions as performers by teaching music more thoughtfully through critical thinking.

Increased use of critical thinking was found in students experiencing a student-centered approach to music education rather than those who were exposed to music instruction using traditional group teaching techniques (Froseth, 1971). A study by Froseth examined the effectiveness of traditional group teaching techniques versus individualized group instrumental music instruction in thirty-four sixth graders in a Midwestern school. Traditional group teaching techniques encompassed teacher-centered group lessons where the teacher taught the exact same materials to all students in the group in the same way at the same rate, regardless of ability. Individualized group instruction encompassed student-centered, student-directed techniques where instructors varied the rate in which musical concepts were taught according to ability, with students offering ideas about successful performance to themselves through critical thinking. Froseth found that, while the control group of traditionally-trained students practiced more on their own, the experimental group of those trained through individualized, non-traditional group techniques made more musical progress, as these students were motivated to evaluate their own unique musical strengths and weaknesses through critical thinking at the same time as they were functioning as a musical ensemble.

In reflecting upon the concept of teaching children to listen in music, it was Byo's (1990) opinion that when student musicians make musical decisions through critical listening, they are becoming actively engaged in the process of developing musicianship skills. Byo further pointed out that in a study of student musicianship skills conducted by Johnson, the music listening responses of student participants led him to conclude that critical thinking instruction had a significant and positive effect on student participants' musicianship skills. Critical thinking skills

can be applied to even the most basic of student listening skills required in a musical ensemble, such as the tuning regimen (Lisk, 1987, 1991). In a study by Molnar (2005) reviewing the effects of the Lisk rehearsal techniques on the musicianship of junior high school bands in Western Pennsylvania, it was found that the students in those bands utilized the cerebral processes associated with Lisk's approach to tuning and intonation skills to critically assess their tuning when they considered the relationship their tuning had on the entire musical ensemble.

Critical thinking in music requires students to take risks, think independently, and develop strategies to utilize knowledge acquired through this process (Woodford, 1996). Woodford posited that critical thinking in music is enhanced through immersion in musical experiences and increased understanding of music fundamentals. He also pointed out that students learn humility and honesty through this process since they need to be able to admit mistakes through the critical thinking process. Critical thinking does not automatically transfer to other domains without teachers encouraging students to apply these skills across a wide range of disciplines so that students will make connections between them. Woodford also stated that the amount to which critical thinking skills are applied in music is directly related to the depth of musical experiences that students have. As students obtain enough experience and practice, critical thinking skills may transfer more easily and automatically between disciplines for them.

When students apply critical thinking to musical performance, they are analyzing, weighing, and considering alternative points of view in interpretation (Reahm, 1986). Reahm observed that when teachers act as conductors of musical ensembles, students should be provided insights into the critical thinking processes used by a conductor in addressing musical interpretation of any given work. He concluded that the use of critical thinking allows students to

recognize that music may be performed in unique ways given the critical thinking processes applied by the conductor and all ensemble members during the performance process.

In examining the development of critical thinking and problem solving skills in students, Pogonowski (1987) posited that the way teachers permit students to experience musical and educational issues will determine the degree to which the students apply critical thinking skills. He also observed that critical thinking in music enables students to expand the depth of their learning experiences that will open up new understandings in developing interpretative musical integrity.

When students understand the roles that different musical compositions play in various cultures and ideologies, students' critical thinking skills are enhanced as they process their own understandings of interpretative musical integrity, allowing them to consider multiple factors in their own critical thinking experiences (Green, 2003). Green examined the relevance of ideology on critical thinking in music education. She suggested that student understanding about cultural and gender diversity, different musical styles as classical, jazz, popular, and world music, class background, and ethnicity all have an impact upon the critical thinking of students as they shape interpretations of the musical challenges that they encounter.

Listening to music requires students to use critical thinking in an active way when they process the styles, patterns, and meanings that they derive from this process (Topoğlu, 2014). Some elements of teaching critical thinking in music are domain specific, so not all critical thinking skills in music transfer completely to general critical thinking skills. It should not be assumed that all music instruction fosters critical thinking skills, as music lessons need to be intentionally designed to force students to think critically. Critical thinking skills are

fundamental to help students assess, evaluate, and reflect upon the quality of their musical performances as they strive for artistic integrity in their work.

Critical thinking skills play a significant role in shaping students' musical performance skills, from both technical and interpretative perspectives (Byo, 1990; Green, 2003; Reahm, 1986; Shuler, 2011; Younker, 2002). These skills aid students' problem-solving abilities, lead to more in-depth analyzation, facilitate communication about musical issues, and improve the scope and depth of their overall learning (Bundra, 1993; Evenhouse, 2014b; Johnson, 2011; Pogonowski, 1987; Reahm, 1986; Topoğlu, 2014). Critical thinking also fosters risk-taking, independent thinking, and personal qualities such as humility (Woodford, 1996). Student-centered instruction in music also enables students to fully utilize critical thinking skills (Froseth, 1971; Lisk, 1987, 1991).

Creative thinking. Creative thinking skills help students to innovate and formulate new ideas and ways of doing things as well as provide them with inventive ways to look at performance challenges, especially in the areas of emphasizing overall student creativity, appreciating contemporary music, and cultivating taste and discrimination (Mark, 1996). In the ever-changing society of the 21st century, students need to utilize creative thinking, including thoughtful questioning, thinking on their feet, and using imagination to function successfully (Evenhouse, 2014b). Fostering creative thinking facilitates learning, and students who are able to create and perform music independently become effective creative thinkers (Priest, 2002; Shuler, 2011). Creative thinking is driven by a problem with a need for a solution (Webster, 2002).

In a study that examined ways to improve creative thinking in students, interviews with selected elementary, middle, and high school students were conducted by Strom and Strom (2002). They found that teachers need to provide more opportunities for students to engage in

creative thinking as much as possible, as the cultivation of creative thinking skills in schools is rapidly growing in popularity throughout the world. They pointed out that human beings continually seek stimulation, and musical performance is one area that can address this need. Through creative thinking, students constantly try to infuse imagination into times when boredom sets in.

As previously mentioned, Blocher, Greenwood, and Shellhammer (1997) evaluated the teaching behaviors of 21 middle and high school band directors. They determined that teacher behaviors have a direct impact upon how students learn and the extent to which students are able to use creative thinking in particular and 21st century learning skills in general. The authors further suggested that some teachers focus only upon performance results with their students without much consideration of anything else, while others facilitate creative and critical thinking skills as they work to develop an understanding about the music within their students. Teachers need to use creative, in-depth techniques to teach students about rhythm, style, quality of sound, blend and balance, and intonation utilizing such techniques as the Lisk approach to cultivate creative thinking (Byo, 1990). Molnar (2005) reviewed the effects of the Lisk rehearsal techniques on the musicianship of junior high school bands in Western Pennsylvania, and found that the students in those bands utilized creative thinking in approaching intonation, balance/blend, dynamics, phrasing, and expression/interpretation as they utilized creative techniques of the Lisk approach to these concepts.

Creative thinking can play a significant role in the teaching of expression in musical ensembles (Karlsson & Juslin, 2008). Karlsson and Juslin examined the manner in which musical expression is taught to students, by observing five music teachers and twelve students of varying ages from elementary and secondary schools through adulthood, teaching in various

ensemble settings dealing with musical expression. They concluded that there was a need for more emphasis on creative thinking and teaching as very little was being taught about expression and creative thinking to the students, with an emphasis almost always placed upon teaching performance technique.

Another creative music teaching approach that can stimulate creative thinking and expression in performers may be found in a study by Woody (2002) which focused upon the effects of emotion, imagery, and metaphor on the acquisition of musical performance skills by comparing the emotional responses of ten music professors to three contrasting melodies. Woody found that all of them responded consistently to the emotional moods and imageries painted by the melodies as well as to the use of metaphors that would affect the expressive interpretation of these contrasting melodies. Woody pointed out that the stimulation of creative imagination in musical performers through the use of imagery and metaphors is a valid educational tool to help performers interpret and successfully communicate the emotional essence of any musical composition.

The cultivation of creative thinking skills in students must be a prime goal of school musical ensembles (Allsup, 2012; Webster, 2002). Allsup emphasized in a theoretical framework that schools have a moral obligation to prepare young people to be independent thinkers and actors so that they may respond to an ever-changing world in creative and fresh ways, and school musical ensembles need to address this moral obligation by being designed to facilitate such independent learning. Allsup encouraged music educators to reimagine learners as ends unto themselves, facilitating student and teacher creativity, instead of just looking at students as existing for the sole purpose of populating ensembles. Webster (2002) suggested that developing musical creative thinking skills in students must be at the core of the professional activity

provided by music educators. Student improvisation is key to using musical creative thinking skills, as it is created on the spot in the moment (Priest, 2002). Priest suggested that when students play a melody by ear instead of reading its exact notation that they are applying musical creative thinking skills.

In a literature review by Andrews (2011) that examined the contributions of Gunild Keetman, (a noted German music and movement educator) to the world of critical pedagogy, Andrews concluded that true learning only takes place when students and teachers experience a transformation in the traditional ways in which they learn. Music lessons designed through critical pedagogy stimulate musical imagination, intelligence, creativity, and performance skills within students, teaching them to think creatively when they make music.

Different perspectives exist on the creative thinking process. In a theoretical framework, Kratus (1990) described the creative thinking process as comprised of three objectives: person (originality, fluency, flexibility), process (how creation occurs), and product (results of creative activity). Kratus suggested that one role of teaching the concept of creativity in the music program is to develop musically creative students. In linking the creative thinking process to improvisation activities in musical ensembles, Priest (2002) pointed out that students should experience both being callers and responders in order to fully utilize their creative thinking skills in music to the greatest degree possible. Just like the characteristics of an improvised jazz solo, the results of creative thinking in music are not predictable, making them innovative products unto themselves (Kratus, 1990).

However, Hickey and Webster (2001) suggested that creative thinking in music should be examined with four basic parameters in mind – person, process, product, and place. They also identified common traits of a creative person that include such things as risk-taking, open-

mindedness, having a sense of humor, being perceptive, being open to ambiguity, and being able to work with fantasy. When all four of these parameters are considered at the same time within the discipline of music, and an understanding of how each parameter singularly affects the total whole, creative thinking in music may be clearly defined and understood.

The cultivation of musicianship skills in students demands that they be able to creatively think in musical sound (Webster, 2002). Creative thinking in music is engaging the mind to actively think in sound to generate some type of creative music product. Students need creative thinking skills to complete aesthetic decision-making in music and to be musically independent.

Creative thinking skills provide students with new ways to address ideas and performance challenges (Evenhouse, 2014b; Mark, 1996; Shuler, 2011). They are fundamental to developing musical expression and imagination in students (Andrews, 2011; Strom & Strom, 2002; Woody, 2002). Music educators need to emphasize the teaching of creative thinking skills especially in the area of musical expression (Allsup, 2012; Blocher et al., 1997; Byo, 1990; Karlsson & Juslin, 2008; Kratus, 1990; Molnar, 2005; Priest, 2002). Creative thinking skills cultivated in music education are important as practical human life skills (Hickey & Webster, 2001; Webster, 2002).

Collaboration. The development of collaborative abilities among student musicians has been an important aspect of music education since musical ensembles were first integrated into schools, although the degree of emphasis on collaboration skills in school music ensembles has varied over the years (Lisk, 1987, 1991, 2010). Ensembles function organically and collaboratively so that the members may all experience some ownership of a final collaborative musical product (Gordon, 2007). Eventually, students will be in real life situations where they will have to collaborate with others in places such as with office colleagues, so it is important for

students to experience the value of the collaborative abilities in school settings that may be learned from music ensemble and music classroom experiences (Evenhouse, 2014b).

Collaborative music making experiences such as performing ensembles had a direct positive influence upon students' musical performance and their perception of musical expression in a study by Kinney (2004), who compared two groups of collegiate musicians, one with high school performing ensemble experience and the other with no high school ensemble experience. Both groups were asked to play similar musical examples that were evaluated by the same adjudicators. Based upon comparing the adjudicated results of the musical performance categories between the groups, Kinney found that the group with high school ensemble experience played much more musically and expressively than the group that did not. While this cannot be directly attributed to the role of collaboration in the large ensemble, it does suggest that students with high school performing ensemble experience know how to collaborate with one another to perform more musically and expressively than groups that have no ensemble experience.

The emphasis on collaborative learning and student-centered instruction of the Lisk approach was found to have had a positive effect on the students' approach to musical performance techniques and expression in a study by Molnar (2005), who reviewed the effects of the Lisk rehearsal techniques on the musicianship of junior high school bands in Western Pennsylvania. The study compared two junior high school bands, playing the same piece of band literature, one designated the experimental group that received Lisk approach warm-up techniques and one designated the control group that utilized more traditional warm-up techniques in rehearsals. Molnar found, comparing five designated musical categories in pre- and post-testing, that the experimental group demonstrated significant improvement in intonation

and expression, while the control group did not show significant improvement in any category. The students in the experimental group using the Lisk approach used more collaborative listening techniques with one another to perform with better intonation and ensemble expression than the students in the control group.

While studying transactive communication (developing and/or extending ideas) between groups of ten and eleven year old music students working in pairs, Hewitt (2008) observed that transactive communication contributes to a collaborative learning environment that provides a framework in which children can be exposed to other peoples' ideas. The study examined how students worked with one another writing paired melodies using computer-based composition software. Hewitt (2008) found that the individual differences between the students, levels of musical skills, or friendships between them did not have a significant difference on the transactive, collaborative communication between them.

In a study of forty-two young people in the United Kingdom ranging in age from eleven to seventeen years old, examining the types of dialogues that took place among them as members of collaborative musical teams working to compose music with computers, Dillon (2003) found that musical suggestions, musical extensions of earlier suggestions, positive support and questions made up the majority of topics discussed by these team members. These types of dialogues resulted in collaborative team members having a shared understanding of the compositional task in which they were collaborating. Dillon also noted that, while studying collaboration in musical ensembles, participants continually reflected upon what they had created in their rehearsals and they generated new ideas that were both tested and modified in order to improve their overall performance.

Different roles of collaboration adopted by various members of successful string quartets were identified in a study by Murnighan and Conlin (1991) that focused upon the work group dynamics of a number of successful and failing string quartets in Great Britain. The authors observed that members of successful musical ensembles assumed different roles of collaboration, especially in chamber music ensembles such as string quartets, that would include a group leader first violin, a second violin that often times is subservient, a follower viola, and a violoncello that acts figuratively and literally as the bass. Members of these chamber groups tended to be friends and they often interacted socially with one another. A similar study by Davidson and Good (2002) on the social and musical coordination of a single student string quartet in Great Britain, concluded that the group consistently shared the content of what they were performing and developed a process where cooperation and feedback with each other lead to the final musical product to be performed. Quartet members tended to work out conflicts when there was interpretative disagreement (Murnighan & Conlon, 1991).

To understand how choices about musical interpretation were made collaboratively in high school instrumental chamber ensembles, Berg (1997) observed high school students in their interactions with one another as they played through pieces of chamber music and then collaborated with one another to discuss various interpretative options. Berg found that students interacted with one another on a high developmental level through collaboration with one another using a myriad of techniques including varied social participation, rehearsal strategies, and exchanging musical ideas, all ultimately facilitating student learning.

Fifth grade students used collaboration to solve group musical challenges in a study by Wiggins (1994) that examined how students solved compositional problems with peers in a fifth grade general music classroom. Wiggins observed that the group began to collaborate on music

composition by considering an overview of how the piece would look and developing a plan where different students assumed different roles and responsibilities of different sections so they could all be woven together to make a total whole. Class members organized a basic process of constructing the composition, and they understood the process at its most basic level. Constructive peer interaction among class members provided a good example of successful collaboration.

As a result of studying the interactions of an undergraduate string quartet, Davidson and Good (2002) concluded that there are many factors that need to be considered when examining the effectiveness of collaboration in a musical ensemble. These factors include concerns about particular social dynamics in any given group, anxiety related to performances, and demands related to issues of musical and social coordination. Players depend on a highly complex collection of interpersonal skills when functioning in small musical ensembles. Extra-musical interpersonal dynamics heavily influenced such collaboration, with different members assuming certain specific roles - one was a technical advisor, one was very independent, one dominated the group, and one only provided feedback to a certain ensemble member.

In a study of jazz musicians and ensembles learning music through collaboration, Sawyer (2008) determined that musical jazz improvisation is a good example of collaboration between people through music. The consideration of trading fours and eights, and picking up material from one musician to another is a traditional aspect of musical collaboration in jazz. There is ongoing interplay between group members that happens almost spontaneously (Davidson & Good, 2002). In jazz ensembles, issues of interpersonal interactions arise as a performance takes place in real time. Improvisation is a balance between structure and freedom and meaningful

collaboration among musicians and is a key component of successful jazz improvisation (Sawyer, 2008).

Collaborative conversation is based upon common knowledge and comprehension of content – shared knowledge, beliefs, and assumptions (Davidson & Good, 2002). Clark and Brennan (1991) pointed out in a theoretical framework that the collaborative conversation in a musical ensemble is comprised of a number of areas, including a recognition of more than one activity going on or co-presence in an ensemble, visibility to one another, listening or audibility among group members, musical communication happening during the same time period or co-temporality, and more than one musical event happening at the same time, or simultaneity. Children learn more effectively in collaborative and creative classrooms, and musical ensembles provide an effective vehicle for this type of learning (Sawyer, 2008).

The development of collaboration skills within student musicians is of fundamental importance to the success of the school music ensemble (Gordon, 2007; Kinney, 2004; Lisk, 1987, 1991; Molnar, 2005). The students' ability to be more musically expressive, use thoughtful interpretation, and improve performance technique were found to be enhanced by the collaborative efforts of all ensemble musicians (Berg, 1997; Davidson & Good, 2002; Dillon, 2003; Hewitt, 2008; Kinney, 2004; Molnar, 2005; Murnighan & Conlon, 1991). Collaborative roles among different ensemble members evolved in small chamber groups and music classrooms (Davidson & Good, 2002; Sawyer, 2008; Wiggins, 1994). Musical communication between players in both jazz and non-jazz idioms was enhanced through collaboration (Clark & Brennan, 1991; Davidson & Good, 2002; Sawyer, 2008).

Communication. Communication skills help students to share and process ideas with other people, both verbally and non-verbally, through media such as music (Shuler, 2011). More

and more communication is carried out through media, and the arts actually comprise that media. Shuler (2011) argued that communication is the primary purpose of music. Communication skills are developed in all musicians through the performance of music (Evenhouse, 2014b). The artistic processes of creating, performing, and responding facilitate the communication process emphasized in 21st century learning skills.

Music can act as a powerful tool of communication that has a positive impact upon mood, behavior, speech, interaction with others, and the ability to perform tasks associated with daily living, as found by Chavin (2002), who conducted a study of three different adult patients with Alzheimer's Disease. In this study, the patients were exposed to recordings and performances of their favorite music by music therapists in an attempt to engage the patients in positive behaviors and thinking. Music therapists have noted that there are people who have a great deal of difficulty expressing themselves verbally, but are able to express their thoughts, feelings, and preferences successfully through music (Chavin, 2002).

Spontaneous and free communication between people can be easily compared to musicians who communicate with one another using jazz improvisation, as found in a literature review by Pavlicevic (2000), who explored human communication in sound from the perspective of the music therapy profession. In the most fundamental form of jazz improvisation, one musician expresses an idea, the other responds and provides a creative answer, and the banter carries back and forth until it evolves into a complete musical composition. When musicians are engaged in musical improvisation, an acute sense of personal sensitivity and responsiveness in people can result, helping them to communicate in more precise ways. The mechanisms of non-verbal communication are a natural resource in human communication. When people understand

elements of non-verbal communication, their understanding of overall communication can open further.

Powerful messages can be communicated non-verbally, and verbal and non-verbal communication between musicians can enable exciting and effective performances (Lisk, 1987, 1991, 1996a, 2010, 2015). A study of the general and specific types of non-verbal communication between two professional pianists by Williamon and Davidson (2002) found that non-verbal communication techniques between musicians include such things as gestures, eye contact, and facial expressions. They determined that over 90% of a typical chamber rehearsal is spent by the musicians in ensemble playing, spontaneously using non-verbal means of communication with one another, while only a small percent of time was left over for limited dialogue among them. It was concluded that a sense of deep expressive and communicative assurance can be the result of musicians communicating together through performance.

In a study of eight high school students exposed to informal learning experiences in the instrumental music classroom, whose past music experiences were based upon traditional notation-based instruction, Jones (2014) found that verbal communication skills are also important between musical performers, especially when they are used to foster collaborative group discussions about musical issues. Such group discussions allowed the music students to communicate positively with one another and make their thoughts heard by all. Good communication skills among students facilitated the development of collaboration skills such as group discussion, consensus, and decision-making.

In developing communication skills among students, Jacobi (2012) presented strategies using Kodály teaching techniques to facilitate note reading and literacy, and acknowledged that it is important for students to experience a variety of visual, aural, and kinesthetic activities that

activate their musical intelligence. She stressed the importance of using the Kodály principles of introducing sound before sight, starting from the known and moving to the unknown, and using syllables to connect pitches and lyrics to develop music literacy. She included melodic shapes, body signals, and recognizable icons as devices to build children's ability to understand pitch placement and communicate musically with one another.

Music can transport people to another place and time, and it can powerfully affect moods (Chavin, 2002). While it is a universal language, not all people respond to music in a universal way. As a result, the value of music as a vehicle of clear communication between people is varied. However, music as a communications tool is still potentially a powerful way to facilitate communication between people. Music can help people to better understand the basic elements of communication and the functions of language that ultimately help them to be more effective in using all the available tools of communication.

Communication skills help students to effectively share ideas with other individuals and/or groups of individuals both verbally and non-verbally (Chavin, 2002; Evenhouse, 2014b; Shuler, 2011). As a tool of communication, music can have a positive impact on an array of behavioral and psychological human conditions, as well as facilitating group decision-making (Chavin, 2002; Jones, 2014; Lisk, 1987, 1991, 1996a, 2010, 2015; Pavlicevic, 2000; Williamon & Davidson, 2002). Music is an important form of non-verbal communication (Chavin, 2002; Shuler, 2011). Communication through music also can have positive impacts on the development of other forms of communication, such as in reading literacy (Jacobi, 2012).

Summary of the 21st century learning skills and music education relationship. This review of the literature addresses 21st century learning skills and music education. The suitability of music education to the teaching of 21st century learning skills has been identified as important

in a public school curriculum (Broudy, 1990; Bundra, 1993; Johnson, 2011; Richardson, 1998; Woodford, 1995). By making the teaching of music more student-centered, students gain more ownership of their learning and instruction can be more thoughtful, inventive, and meaningful (Johnson, 2011; Mark, 1996; Molnar, 2005; Wenger, 1998).

Each of the 21st century learning skills has a direct connection to music education. Critical thinking skills are used by students to evaluate their own performance abilities and that of their peers in group settings as they process how to improve their performances to satisfactory levels. (Shuler, 2011). Creative thinking enhances musical expression and emotion in student performers (Karlsson & Juslin, 2008; Woody, 2002) and creative thinking skills help students to create new musical ideas through improvisation as well as innovative ideas in the areas of musical problem solving, appreciating contemporary music, and cultivating taste and discrimination (Mark, 1996). Students solve problems in musical composition and performance through collaboration, whether or not those problems are highly structured in musical notation or based in informal learning (Jones, 2014; Wiggins, 1994) and collaboration among student musicians is an important aspect of musical ensembles that has remained a priority since these ensembles first appeared in schools (Lisk, 1987, 1991, 2010). Communication skills enable students to convey verbal and non-verbal ideas with people they know and don't know, and music can serve as a conduit for that communication (Lisk, 1987, 1991; Shuler, 2011).

All researchers appeared to be in consensus that the 21st century learning skills were valuable both to the teaching of music and the learning process in general. No research was found that indicated anything to the contrary. It was not clear from the research if certain skills were more important than others. Since the concept of 21st century learning skills is a relatively new phenomenon in education, subsequent research in this area may inform future thought.

Developing Musicianship with the Lisk “Creative Director” Series

Although the concept of 21st century learning skills did not exist at the time that Lisk was a high school band director, he recognized the importance of integrating critical thinking, creative thinking, collaboration, and communication skills into his pedagogical practice as a way to improve the teaching of musicianship (Lisk, 1987, 1991). He believed that it was important for instrumental music students to develop proficient musicianship skills in order to achieve success as performers and that musicianship needed to be taught in such a way as to more actively engage students in the process (Molnar, 2005). Throughout his career, Lisk observed many band directors using rote teaching techniques that he felt were not helping students achieve satisfactory levels of musical learning (Lisk, 1987). He developed a series of pedagogical strategies based upon many years of study and research on successful methods of teaching instrumental music, looking for the very best elements of every method that he examined (Lisk, 1987, 1991).

Lisk (1987, 1991) defined the concept of musicianship as a musician’s collective approach to the musical elements of balance, blend, intonation, tone quality, rhythm, improvisation, meter, dynamics, articulation, phrasing, and expression. He realized that when performing music, musicians are confronted with making personal decisions on a continuous basis, and this is true especially for ensemble players. Membership in performance ensembles has been shown to enable students to perceive and perform expressive musical qualities at a higher level than those who had not participated in such ensembles (Kinney, 2004). Lisk determined that playing a musical instrument requires an intricate combination of intellectual, visual, physical, and auditory control coupled with a perceptive decision-making process – “intelligence in action” (2010, p. 3). As the 21st century arrived, it became evident that the

thought processes that go into making these performance judgments paralleled critical thinking skills that schools emphasized in their students as part of 21st century learning skills (Younker, 2002).

The Lisk “Alternative Rehearsal Technique-A.R.T.” book of the “Creative Director” series was the culmination of many years of effort to develop a method of teaching instrumental music based upon his extensive research on music education methods and his extensive experience as a music educator. It organized the sequential teaching of various musicianship skills in nine chapters that allowed for a certain amount of flexibility in presentation as well (Lisk, 1987, 1991).

In designing the “Creative Director” series, Lisk examined some of the most successful methodologies, techniques, and theories that emphasized the importance of teaching musicianship skills, such as those developed by Dalcroze, Kodály, Orff, Suzuki, and Gordon, among others (Lisk, 1987, 1991). The Lisk “Creative Director” series, and specifically his “Alternative Rehearsal Techniques – A.R.T.” includes elements of all of these methodologies and approaches, and an in-depth examination of the “Creative Director” series will point to these influences. The key components of each of these methodologies and approaches to musicianship and their influence on Lisk follow.

The Dalcroze approach focuses on eurhythmics, solfège, and improvisation, with an emphasis on inner hearing, breathing, movement, and an ability to feel musical expression without being tied down to notation (Anderson, 2012; Jaques-Dalcroze & Rubinstein, 1921; Pope, 2010). Free expression emanating through movement is key (Jaques-Dalcroze & Rubinstein, 1921). Dalcroze visualized an overall conception of what it means to be a human being, and how the competencies of human beings are developed through music (Juntunen &

Westerlund, 2011). Dalcroze solfège envelopes the ear and the mind in chords, functional harmony and key relationships, along with scales, intervals, and melodies, all of which are internalized in a holistic human approach (Thomsen, 2011). Along with the internalization of musicianship concepts, Lisk utilized Dalcroze's approach to musical expression through movement, vocalization, and improvisation throughout his own approach (Lisk, 1987, 1991).

The Kodály approach provides skills in music literacy through singing with an emphasis on cultural folk songs of a mother tongue using solfège, movement, and rhythmic syllables (Howard, 1996; Malitowski, 2007). Kodály often quoted the composer Robert Schumann, who expressed a belief that “an excellent musician had (1) well-trained hands (or technique), (2) a well-trained heart, (3) a well-trained intellect, and (4) well-trained ears” (Rappaport, 1985, p. 52). Using the Kodály approach to teach students to read musical notation, students are reached visually, orally, and kinesthetically through their senses, and this variety reinforces recent brain research indicating that learning improves dramatically when many different types of strategies and techniques are utilized, building more memory pathways (Jacobi, 2012). Lisk borrowed Kodály's concepts of teaching notation through singing, movement, and rhythm syllables as a way to reach students through their visual, oral, and kinesthetic senses in his own method (Lisk, 1987, 1991).

The Orff Schulwerk approach for teaching music is focused upon elemental movement, speech and sound, simple sequences, structures, ostinatos, rhythms, singing, and recorder, ukulele, and pitched and unpitched percussion instrument playing with the child being at the center of creative learning (Andrews, 2011; Malitowski, 2007). Orff believed that “critical music pedagogy is centered around sharing and dialogue, asking how we might reconnect music education to real life; it encourages critical thinking, critical action, and critical feeling”

(McLaren, 1998, p. 45). Orff felt that rhythm was the strongest element of music (Malitowski, 2007). He also emphasized the need to stimulate the creative musical imagination in students (Andrews, 2011). Lisk utilized Orff's approach to the teaching of rhythmic structures, ostinatos, and movement throughout his method as well (Lisk, 1987, 1991).

The Suzuki method focuses on the development of happiness in education, cultivating a positive attitude and environment, relating music to the mother tongue, and experiencing creative activity through instrumental music, with an emphasis on repetition and the use of instruments specifically sized for young children (Malitowski, 2007; Reynolds, 1999). After World War II, Suzuki was looking for a new generation of Japanese children to feel happiness and positive accomplishment (Malitowski, 2007). He believed that tone in music becomes alive when expressed through a performer (Hendricks, 2011). Suzuki placed great emphasis on the need to encourage active student involvement and positive teacher feedback (Duke, 1999). He also believed that it was important to dispense with written notation so that students could perform more expressively (Mehl, 2009). Lisk made extensive use of the emphasis that Suzuki placed upon active student involvement, expression, and the dispensing of musical notation in his method as well (Lisk, 1987, 1991).

Gordon's Music Learning Theory is an approach to teaching music that centered around a concept that he termed "audiation" – hearing in the mind. His approach also relies heavily on singing to improve intonation and phrasing, teaching familiar tunes by ear, and postponing reading in early instruction (Dalby, 1999; Liperote, 2006). The premise behind the method was the internalization of various concepts of pitch and intonation, rhythm, and expression (Gordon, 2007). Gordon was also very concerned with the assessment of student work to make certain that students truly understood what was being taught, and he contributed a number of standardized

assessment tests that allowed him to collect and analyze data about student learning effectively (Gordon, 2007). Lisk extensively utilized Gordon's concepts of audiation, as well as Gordon's system of tonal solfège and rhythm syllables throughout his entire method as well (Lisk, 1987, 1991).

Gardner's theory of multiple intelligences involves the cultivation of students' skills in a variety of areas and ways, including music intelligence, linguistics intelligence, bodily-kinesthetic intelligence, interpersonal intelligence, intrapersonal intelligence, and visual/spatial intelligence. According to Gardner, musical intelligence has similar structural characteristics which parallels linguistic intelligence (Gardner, 2011). Bodily-kinesthetic intelligence establishes a connection between the body and the mind, focusing thoughts about one's body, of objects, a sense of timing, and of trained responses that resemble reflexes. Interpersonal intelligence is utilized and developed through group collaboration as cooperative work carried out through effective communication that is both clear and specific verbally and non-verbally while demonstrating sensitivity to other's moods, temperaments and feelings. Intrapersonal intelligence functions through the language of introspection and awareness of the internal self, including an awareness of one's own feelings, intuitions, and thinking processes. Finally, visual/spatial intelligence deals with the language of shapes, images, patterns, designs, color, textures, pictures and visual symbols (Gardner, 2011; Lisk, 2010). Lisk embraced Gardner's theory of multiple intelligences throughout his approach by relating many of the Lisk teaching strategies to musical, linguistic, bodily-kinesthetic, interpersonal, intrapersonal, and visual/spatial intelligences as they related specifically to musicianship and music-making, and challenged teachers to recognize the importance of the cultivation of musical intelligence in their students (Lisk, 1987, 1991).

The nine chapters of the Lisk “Alternative Rehearsal Technique-ART” book include the theories and ideas of Dalcroze, Kodaly, Orff, Suzuki, and Gardner, as well as the teaching of comprehensive musicianship skills. Table 2.1 lists the main subjects covered in each chapter. It is significant because it provides a basis for understanding how the learning theories and ideas of these individuals are interwoven with Lisk’s approach for the teaching of musicianship.

Table 2.1

Chapter Topics in Lisk’s “Alternative Rehearsal Techniques”

| Chapter | Subjects Covered |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Introduction to rehearsal structure, role of the warm-up in rehearsals, rehearsal processes including hemisphericity and musical performance, conflict between the analytical and holistic processes, the shift from mechanical to artistic process, Director Awareness Scale |
| 2 | Activating concentration in students, thinking about basic musicianship concepts using the Circle of 4ths including duration exercises, instrument groupings, chord qualities, rhythm patterns, scale variations, scales both ascending and descending, compressing key tonality, digital patterns, and the dominant to major relationship |
| 3 | The creation of an aural and visual image of sound through visualization, imagery, horizontal sound structure, vertical sound structure, chord color; the visualization of concepts by closing the eyes that focus on sound, silence, attacks, release, the fundamental, and texture |
| 4 | The cultivation of ensemble tone quality, along with balance and blend, intonation, logical conclusions to developing effective intonation, octave tuning, tuning the interval of the fifth, three steps to effective balance and blend, and tuning the ensemble |
| 5 | Rhythmic perception and the measurement of sound and silence, entrance and release, odd numbers and odd number duration exercises, rhythm patterns, the synchronization of sub-divisions, the Ruler of Time, and the compression of measures |
| 6 | Dynamics, including the development of consistent dynamic control, dynamic exercises, sforzando and forte-piano entrances with alternating choirs, and dynamic variations with silence |
| 7 | The conductor as the listener, “reactionary” conducting, controlling the “action”, casual rehearsal ears versus critical performance ears, the pyramid of auditory skills, the Superior Performance Tetrahedron and conducting with and without a score |
| 8 | Success techniques including the creation of a mental shift, free improvisation, correcting technical irregularities, imaging rhythm patterns, approaching entrances thinking about sound to infinity, imaging perfection, developing independent concentration, scale smoothness, breath support, phrase development, and the development of musical motion |

| | |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9 | Alternative rehearsal techniques, an outline for implementing these techniques in a rehearsal, circle of 4ths grouping, grouping for other ensembles such as jazz ensemble, orchestra, and chorus, duration, sound and silence, major chord quality, minor chord quality, dominant 7 th chord quality, major 7 th chord quality, minor 7 th chord quality, diminished 7 th chord quality, chord voicing variations, the Ruler of Time, basic rhythm patterns, dynamics, Percy Grainger color shifts, teaching scale order, scale variations with choir and group assignments, alternate ascending and descending scales, chromatic scale variations, digital patterns, dominant 7 th to major digital patterns, pyramids of auditory skills, including listening, balance, blend, and intonation, beatless tuning, suggestions and reminders, charts to share with students |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The Lisk “Creative Director” series and the development of musical minds. The conductor’s and the students’ musical minds are subjects that have intrigued Lisk throughout his musical career (Lisk, 2010). Through his teaching strategies, Lisk chose to challenge directors with his thoughts and opinions of how a musician’s mind functions with a glimpse into the complexities of what it is that the human brain does when making music. His teaching techniques are based upon the concept of metacognition (Lisk, 1987, 1991, 2010).

Lisk reviewed the research of medical professionals to gain insights into how the two hemispheres of the brain work together to facilitate learning (Lisk, 1987, 1991). He learned that the visualization of mental pictures in the mind that he labels as imaging is a right brain capability, the hemisphere of the brain that handles intuitive thought, whereas the left brain acts as the logical hemisphere. How the brain moves between the two hemispheres is dependent upon the ultimate goal being set, particularly if the thought goal relates areas such as compositional structure, synthesis of ideas, holistic analysis and assessment, perceptual awareness, painting conceptual images, and expressive qualities. Going a step further, Lisk also found that humans experience an altered state of consciousness through musical performance (1991, p. 13).

Finding that imaging is such an important element in effecting learning and memory within students, Lisk designed his pedagogical techniques to create mental pictures of concepts

that would normally be associated with sounds (Lisk, 1987, 1991). He discovered that humans learn things 2.5 times faster when they have developed a mental image of what they are trying to accomplish. Communication through the vehicle of verbal imagery is a technique that is commonly used by music teachers when conducting rehearsals (Molnar, 2005). Musicians use selective sets of these words to paint pictures of specific expressive musical qualities, likely based on the music's compositional elements (Woody, 2002). Sound imaging happens when closing the eyes, as noted by musician and conductor David Whitwell, "Music is for the ear, not the eye! Once the eye is eliminated, the ear comes into play" (Lisk, 2010, p. 22; Whitwell, 2015).

Another important aspect of imaging in the warm-up process of the "Creative Director" series was the teaching of the concepts of tuning and intonation (Lisk, 1987, 1991). "Pitch is one of the primary means by which musical emotion is conveyed. Mood, excitement, calm, romance, and danger are signaled by a number of factors, but pitch is among the most decisive" (Levitin, 2006, p. 25). Lisk pointed out that the teaching of imaging may be brought to a higher level through the creative thought process known as entrainment (Lisk, 2010). It is a type of non-verbal, internal communication synchronizing two or more rhythmic cycles between all players in an ensemble.

In dealing with painting visual images to describe some aspect(s) of musicianship, Lisk challenged musicians with the following question: "Do we see notes or do we hear music?" (Lisk, 2015, p. 17) He encouraged directors to remember that the literal application of musical signs and symbols often gets in the way of the uniqueness and beauty of the music. Lisk reminded teachers to always consider expression to be something that is genuine and authentic (Lisk, 2013, 2015). When having students experience free-form expression, musical improvements will be evident to students and teacher alike (Lisk, 2015).

The table below (Table 2.2) illustrates some key concepts introduced in the Lisk “Creative Director” series, with a basic description of those concepts and related exercises.

Table 2.2

Table of Lisk Warm-Up Elements

| Concept | Description | Exercises |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Circle of fourths | C, F, Bb, Eb, Ab, Db/C#, Gb/F#, Cb/B, E, A, D, G, C – all notes resolve in dominant to tonic relationships moving left to right. | 1. Basis of most Lisk warm-ups. 2. Play through moving from left to right using different note values, intervals, and scale patterns. |
| Imaging | Mental pictures of concepts associated with sounds. | 1. With circle of fourths, students remove music notation, focus on mental image of sound. 2. Students close eyes and focus on mental image. |
| Internalizing pulses in sounds and silences | Imaging of sounds and silences. | 1. Conductor places palms up for sound, palms down for silence. 2. Students close eyes and focus on mental image. |
| Tuning and intonation | Cerebral imaging of pitch and intonation. | 1. Develop concept of beatless tuning between two pitches within students. Faster beats indicate getting far away from being in tune, slower beats showing tuning getting closer. 2. Stress overtone tuning with students. |
| Habituation | Brain tunes out unimportant signals if habitual attention to a particular process is uninteresting or not motivating. | 1. Do not subject students to constant repetition of same warm-up patterns. 2. Make certain that warm-up concepts for students are varied and mixed to achieve a higher level of learning. |
| Entrainment | Non-verbal, internal communication synchronizing players in an ensemble. | 1. Point out that things vibrating in proximity synchronize in frequency as they get closer. 2. Have students notice how their bodies move to rhythm. |
| Expression | Imaging of varied inflections in sounds and speech. Laws of musical expression - high searches for low, low searches for high and short looks for long. | 1. Have students read sentences placing different emphasis on different words. 2. Show students different levels of intent through varied inflections-high to low, low to high, short to long. |

With the synthesis of approaches and the thorough examination of all of the musicianship skills outlined in this chapter, Lisk became a pioneer in his creation of an entire set of techniques for instrumental music teaching (Molnar, 2005, p. 43). “Through music study, students experience the beauty of musical expression. . . . Beauty, compassion, feeling, appreciation, sensitivity, love, peace, tolerance, sympathy, warmth, empathy, self-esteem, cooperation, and respect. . . . These are but a few ‘living or life priorities’ hidden in music study! No other discipline addresses these ‘living or life priorities’ found within music.” (Lisk, 2015, p. xi)

Student understanding in musical ensemble settings. Student motivation and attitudes about education have been shown to improve when their school learning is designed to be student-centered, one of the main tenets of 21st century learning skills and emphasized in music instruction by Lisk. In classrooms of varied disciplines, students are motivated to improve their digital technology skills and even assist teachers in the same way (Huber, Dinham, & Chalk, 2015). Students have learned foreign languages and how to program digital technologies by using their student-centered learning skills (Huber et al., 2015). This motivation extends into the music ensemble, where student-centered learning helps them to help others in the class (Huber et al., 2015; Lisk, 1987, 1991).

Both students and teachers believe that expression in music is important to cultivate (Karlsson & Juslin, 2008). There is not a great deal of research about how musical expression is taught to students and how they respond. Research has shown that teachers use verbal instruction and modeling with students when teaching about musical expression, but that students do a more natural job responding to the modeling with their own performance rather than being able to talk about expression. Students often understand expression better through performance rather than

trying to verbalize concepts about expression (Lisk, 1987, 1991). The pedagogical strategies of the Lisk “Creative Director” series provide a basis for judging how expression is taught through its emphasis on the teaching of musical expression and overall musicianship (Lisk, 1987, 1991, 1996a, 2007, 2013, 2015).

In a study that examined relationships between individual strategies for improving musicianship skills with musical expertise, Hallam (2001) compared fifty-five string players whose ages ranged from beginner to college level in the way in which they prepared and performed standard short works appropriate for their age. She found that while students' attitudes about practice distributed across a wide range, from enthusiastic enjoyment to no enjoyment whatsoever, many of the students agreed that the repetitive processes of playing scale exercises and woodshedding technical details were not satisfying and that it was often a challenge to find enough enthusiasm to try to address these issues (Hallam, 2001).

A similar study by Pitts and Davidson (2000) looked at the practice habits of school-aged students to determine the cognitive strategies that they used when they practice, including factors such as environment, personal motivation, and ability. Three students were selected to be in this study, and closely monitored observations were recorded, including the interactions between them and their parents regarding their practice regimen. Pitts and Davidson (2000) found that students who experienced teacher-centered instruction were frequently taught to focus on technical, repetitive practice strategies that ultimately resulted in boredom with little or no progress in the development of their musicianship skills.

In a study completed by Molnar (2005) that examined growth in overall musicality between two groups, five categories of musicality were measured, including intonation, balance/blend, dynamics, phrasing, and expression/interpretation. The experimental group that

received musical instruction in student-centered techniques using the Lisk “Creative Director” series showed significant improvement in two musical categories (intonation and expression/interpretation) over the control group that received instruction on similar music but with teacher-centered musicianship instruction instead that did not show significant improvement in any musical categories whatsoever (p. 85). When measuring growth in overall musicality, determined by averaging together ratings for the five categories of musicality used in this study, a significant difference ($p < .05$) between the two groups was found, in favor of the Lisk-trained experimental group (Molnar, 2005, p. 90).

Students who experience student-centered learning see themselves as independent learners, communicators, critical thinkers, scientists and agents for change in education (Preus, 2012). They are generally aware of the metacognition learning strategies that they are being taught in student-centered approaches and actively make connections and stay engaged in lessons. Teachers are encouraged to ensure that students are always sharing the responsibility of their learning (Sierra, 2010). The Lisk method facilitates student-centered learning in music education and ultimately contributes to student acquisition of 21st century learning skills.

Summary for teaching musicianship with the Lisk “Creative Director” series. The review of the literature on the Lisk “Creative Director” series examines the evolution of his approach for teaching musicianship skills in ensembles. Lisk’s influences, theories and beliefs, are first presented in his pursuit of developing effective strategies for the teaching of musicianship skills (Lisk, 1987, 1991, 1996a; Molnar, 2005). The ensemble is central to teaching musicianship skills in the Lisk “Creative Director” series, and Lisk provides an array of strategies for approaching the teaching of musicianship in ensemble rehearsals, emphasizing tone quality, balance and blend, intonation, dynamics, rhythm, articulation, improvisation, phrasing,

and expression and interpretation (Kinney, 2004; Lisk, 1987, 1991; Molnar, 2005).

The thought processes that musicians use to demonstrate various musicianship skills parallel the processes identified as 21st century learning skills (Lisk, 2010; Younker, 2002). Lisk reviewed an extensive amount of research on how humans learn, with some emphasis upon brain research, finding that the process of imaging in the brain was fundamental to learning (Levitin, 2006; Lisk, 1987, 1991, 2010, 2015; Molnar, 2005; Whitwell, 2015; Woody, 2002). The literature also demonstrates how student motivation and attitudes about education have been shown to improve when their school learning is designed to be student-centered, a basic tenet of both Lisk's series and the 21st century learning skills (Huber et al., 2015; Lisk, 1987, 1991; Molnar, 2005; Preus, 2012; Sierra, 2010). Growth in student musicality through the variations of teaching technique from teacher-centered to student-centered approaches was reported in the literature as well (Hallam, 2001; Molnar, 2005; Pitts & Davidson, 2000).

Introductions to the main approaches and methods that influenced the development of the Lisk approach were made. The only diversity in findings between researchers was brought out in the uniqueness of the individual approaches from one another. It would be interesting to define a particular challenge in the teaching of musicianship, and compare how each approach would address that challenge. However, since many diverse viewpoints exist defining what constitutes music education as well as equally diverse thoughts defining appropriate outcomes for music education, the comparisons of how various approaches would solve a particular musicianship challenge need to be taken in the broader contexts of the music education goals of the particular approaches being considered.

Researchers cited in the description of the design of the Lisk approach appeared to be in consensus regarding the importance of the teaching of musicianship in the ensemble experience.

There was no research found that stated anything otherwise. Since the Lisk approach has only been in existence for a few decades in music education, it may be the subject of future research in instrumental music education for many years to come.

Summary of the Literature

This literature review addresses the way that overall musicianship is taught and presented in classroom rehearsals and the extent to which students gain musical understanding as participants in those ensembles. There is a limited amount of research that addresses the experiences of learning about musicianship through the Lisk series from the students' perspective (Molnar, 2005).

The teacher-centered techniques commonly utilized in music education are less effective in teaching overall musicianship rather than utilizing student-centered techniques that provide ownership to students as they learn the concepts of musicianship through individual learning skills (Blocher et al., 1997; Froseth, 1971; Gordon, 2007; Mark, 1996; Molnar, 2005).

There does not appear to be a great deal of literature that relates to the relationship between teaching 21st century learning skills and overall musicianship (Blocher et al., 1997; Froseth, 1971; Molnar, 2005; Topoğlu, 2014). However, Lisk addresses the challenges of teaching overall musicianship in his creation of an entire set of techniques that can make a real difference in student comprehension of musicianship through using the same learning skills that students are encouraged to utilize in all of their academic classrooms (Byo, 1990; Lisk, 1987, 1991; Molnar, 2005). Mental imagery, self-assessment, aesthetic awareness, student-centered learning, critical and creative thinking, collaboration, and communication are key components of Lisk's approach, as well as encouraging teachers to go beyond teacher-centered approaches in their daily teaching strategies (Byo, 1990; Lisk, 1987, 1991, 1996b, 2007; Molnar, 2005).

CHAPTER 3

METHODOLOGY

Research Overview

The purpose of this study is to examine the pedagogical strategies used to cultivate overall musicianship in the Lisk “Creative Director” band series and how these strategies facilitate the development of 21st century learning skills of instrumental music students. It also considers the following research questions:

1. Why do teachers use the Lisk approach and what do they find most effective about it?
2. How are 21st century learning skills cultivated in a Lisk-centered classroom?
3. What impact do students believe that the Lisk “Creative Director” series has had on the development of their musicianship skills and their 21st century learning skills?

This chapter is divided into three major sections. It begins with a discussion of case study research. The next section frames the research questions within a case study context. It is followed by a description of the components of case study research as they apply to this study, including the methodological basis, sampling, access to the sites, role of the researcher, data collection, data management, and data analysis. The conclusion of the chapter outlines the steps that were taken to establish trustworthiness.

Case Study Research

A case study is an up-close, in-depth, detailed examination of a subject or case – a setting, a single individual or subject, a small group, a group as a whole (such as an ensemble), an event, or a specific collection of documents (Bresler & Stake, 2006; Stake, 2000; Yin, 2014). While the case or subject can be in the form of a person, place, or thing, not everything functions as a case (Stake, 2000). It serves as an inquiry of a subject or case within the context of real life.

The case study takes place over time with extensive data collection, and it must be specific and bounded. The case study is used to foster the understanding of a specific case, without further generalizing (Yin, 2014).

Stake (2000) describes three types of case studies: intrinsic, instrumental, and collective. The intrinsic case study centers on an intrinsic interest upon a particular individual, subject or setting (Flinders & Richardson, 2002). A teacher's practice would be considered for the subject of an intrinsic case study. The instrumental case study places less importance on the particular case or subject but is used for the insight that it provides (Stake, 2000, p. 237). This type of study provides a fuller understanding of interest, issue or construct beyond the individual subject. The collective case study is "an instrumental case study extended to several cases" (p. 237). A collection of several cases makes it possible for the reader to generalize discoveries through comparison and analysis. This type of study can lead to better understanding, perhaps even better theorizing, about a larger collection of cases (p. 237).

Case Study Research in the Current Study

Stake (1995) points out that the three categories of case studies (intrinsic, instrumental and collective) can have some flexibility of approach within them, as a study may contain multiple cases or participants within the context of a particular setting. This study examines the Lisk "Creative Director" series within the context of the musicianship experiences of its participants. Three cases will be examined, so this can best be defined as a collective case study.

The cases are varied in that they deal with three teacher participants and twelve student participants from three different schools. They were observed and interviewed not only as individuals with their own viewpoints on the musicianship concepts they experienced, but as members of concert bands that were bounded by their own cultures that utilized the Lisk

“Creative Director” series in their curricula.

Selection of Sites and Sampling

Purposeful sampling was used in the current study. The intent of purposeful sampling is to find individuals who can provide the most in-depth understanding about a phenomenon rather than having to generalize about that phenomenon from a larger group (Creswell, 2005). They are information-rich cases that allow for thorough study of a phenomenon. In this study, sampling was first undertaken by selecting sites, teachers, and ensembles with experience in the Lisk “Creative Director” series.

Selection of sites. Sites for this study were chosen based upon homogeneous sampling. In this level of sampling, the sites and participants shared a common phenomenon. It was necessary to find school instrumental music programs in which the phenomenon of the Lisk “Creative Director” series could be observed in the lived experience of students. In this way, this phenomenon could be observed in classrooms illustrating the students’ musical experiences with minimal interruptions to the normal classroom routines. It was also important to select teachers who immersed themselves in the teaching strategies of the Lisk “Creative Director” series in order to witness an expert level of instruction using this approach. This made it possible to conduct meaningful dialogue about the approach with teachers regarding their perspectives around the effectiveness of the approach. Three teachers and twelve students were selected in order to present overviews of the individual experiences of each case, in keeping with the principles of qualitative research (Creswell, 2005).

By selecting these particular teachers, I was able to observe the main components of the Lisk “Creative Director” series in action. I selected three teachers at the high school level, Mr.

Brown, Mr. Carter, and Mr. DiNapoli.¹ These teachers have extensive teaching experience using the Lisk “Creative Director” series and are known to have achieved considerable success among colleagues and peers. Witnessing these techniques used by veteran teachers in action allowed me to remain focused upon my observations of the Lisk approach.

The three selected teachers work in three different high schools composed of grades 9-12. Where the purpose of this study is to examine the pedagogical strategies used to cultivate overall musicianship in the Lisk “Creative Director” band series and how it facilitates the development of 21st century learning skills of instrumental music students, these sites provided ample opportunities to see the Lisk techniques in action.

The three sites were Deer Creek Community High School, Deering, IN; Grand Falls Central High School, Grand Falls, New York; and Lake Onondaga Central High School, Lincolnshire, New York. In terms of scheduling and staffing, Deer Creek Community High School has one instrumental music teacher (Mr. Brown) who is responsible for the entire instrumental music program K-12. In addition to his high school band program, which meets everyday for one hour, Mr. Brown is responsible for a sixth-grade band, a seventh and eighth grade band, a jazz ensemble, and elementary instrumental music with small group instruction. As a result, the high school band students only receive instrumental music instruction for one hour per day in their full band experience. Any individual or small group lessons take place outside of the regular school day or if some time opens up in Mr. Brown’s full class schedule. The only other music teachers in the school district include a choral instructor at the secondary level and a general music instructor at the elementary school, for a total of 3 music teachers in the district, K-12.

¹ All names and locations have been assigned pseudonyms.

Grand Falls Senior High School has an instrumental music instructor (Mr. Carter) responsible for teaching two large ensembles including wind ensemble and concert band that meet in separate class periods of 43 minutes every day, along with theory, small group instruction, and a jazz ensemble. All students in the wind band program receive small group instruction in addition to their large group ensemble experience, provided by Mr. Carter and other individuals. There is a string program taught by a separate orchestra director and a choral program directed by another teacher. Along with the shared orchestra director, there are three music instructors at the middle school level and five music instructors at the elementary level, for a total of 11 full-time music teachers in the district, K-12.

Lake Onondaga High School has three full-time instrumental music instructors dedicated just to the band program, including an honors wind ensemble, a symphonic band, a concert band, and a freshmen band. The teacher participating in this study, Mr. DiNapoli, teaches the symphony band/honors wind ensemble that meets for 77 minutes daily, along with small group lessons. All students in the instrumental music program receive small group instruction. The other two instrumental music teachers teach the other three bands along with two jazz ensembles. This does not count the string educator or the vocal staff. There are seven music teachers at the high school level, eight music teachers at the middle school level plus one music teacher shared with the high school and there are 14 music teachers at the elementary level with three music teachers shared at the secondary levels, for a total of 29 full-time music teachers in the district, K-12.

It should be noted that all of the instrumental music teachers in the Lake Onondaga Central School District have received instruction in using the Lisk approach with their students. As a result, students are exposed to various elements of the Lisk approach from the time that they

start learning to play an instrument until they graduate from the program as high school seniors. Unlike the other two case studies, students who have passed through the instrumental music program in the Lake Onondaga Central School District have been taught by different staff members who have been trained in using the Lisk approach and who subsequently bring their own interpretations of the Lisk approach to their students.

Philosophically, all three schools share the same objective in placing the highest priority on teaching comprehensive musicianship in all of their instrumental music ensembles. In all three districts, it appears that there is adequate funding for each program considering the equipment and facilities made available in each building.

Gaining access to the sites. In order to gain access to the sites, I obtained permission to collect data in the selected schools through a letter sent to each teacher and building principal involved. The letter included a detailed description about the study along with the emphasis upon the Lisk “Creative Director” series, observing the phenomenon of the Lisk series in the lived experience of students as described by the teachers and students alike. Once the parents signed consent forms to allow their child’s participation, the students then signed assent forms. These consent and assent forms were in compliance with the requirements on the Institutional Review Board (IRB) of the University of Massachusetts at Amherst. Mr. Brown, Mr. Carter, and Mr. DiNapoli also signed consent forms in which they were informed of the additional time and energy that would be required of them to participate in this study. Mr. Brown, Mr. Carter, and Mr. DiNapoli invited student participants to apply, and I selected the students based upon diversity in grade and gender when possible. The directors assisted with the collection of the assent and permission forms, negotiated with other staff members in their respective buildings regarding the scheduling of multiple student interviews, and provided additional information on

their schools and music programs.

Selection of student participants. In a performance ensemble, individual students bring their own experiences and talents for making music to the group while, at the same time, becoming a part of that ensemble's culture. Four students were selected from each participating group to explore the ways in which those students experience rehearsals in that ensemble.

Student sampling for this study centered on the selection of the typical student-participants. In this form of sampling, persons are chosen by the researcher who are considered to be typical, average, or normal participants engaging in a particular phenomenon. The researcher nominated the student-participants from those who returned the assent and parent permission forms. I felt that the typical sampling strategy would best represent the membership of the overall instrumental ensemble. Participants needed to be enrolled in ensemble settings to adequately assess the techniques of the Lisk "Creative Director" series, since the approach centers upon improving the students' abilities to think critically and creatively while communicating and collaborating with others in an ensemble.

Four students from each school were selected for the study in the belief that they would be verbal, independent thinkers and average musicians. This selection criteria was consistent with the description that Creswell (2005) provided for typical sampling in qualitative research. It was necessary for students to be able to express their thoughts verbally in order to become participants in this study. It was more important to have student participants who thought for themselves in this process, instead of simply regurgitating ideas about what they thought the researcher would want to hear. After looking at the interest letter and receiving the appropriate consent and assent forms, the student-participants were selected that appeared to meet the criteria that were set for this study.

Researcher Lens

Creswell (2005) describes the role of the qualitative researcher as one who assimilates data through the processes of interviews and observations. The qualitative researcher looks to understand and explore a single phenomenon, taking into consideration all of the outside influences that have an impact upon the composition of the phenomenon. The background of the qualitative researcher may take on varied forms, including that of a practitioner who has first-hand knowledge of the central phenomenon, an outside observer, an observer who also has experience with the central phenomenon as a participant, or a combination of some or all of these forms. The qualitative researcher continuously strives to clearly understand his or her role throughout the research process and is sensitive to understanding how that role might affect the study's validity and outcome. Full public disclosure regarding the researcher's experience with the phenomenon is recommended to add credibility to the study.

Throughout this study, I conducted observations in classes, took detailed field notes, and conducted interviews in order to assemble qualitative data. In my own teaching practice outside of the context of this study, I taught classes using the Lisk "Creative Director" series with my own band program. Lincoln and Guba (1985) refer to this role crossing as "reflexivity". The researcher using the process of reflexivity not only closely examines the phenomenon being studied, but whatever experience that the researcher may have with the phenomenon first hand. It is possible that some of my own experiences have had an impact upon my analysis and interpretation. However, the teachers and programs that I observed were totally immersed in the use of the Lisk approach, while my use of the approach is on a more limited basis.

I made sure that I notated the reflexivity issues in the research journal that I maintained for the duration of my study. I also gave some thought as to how my observations in the other

schools may or may not have had an impact upon how I use the Lisk “Creative Director” series in my own classroom. My objective was always to learn as much as possible about this pedagogical approach and to learn from the teachers who had mastered this approach with their students.

Data Collection

The design of the study dictated the methods and procedures utilized for data collection. A grid was developed to plan how the data would be collected (Anfara, Brown, & Mangione, 2002). This grid outlines the relationship between the research questions and the data sources, along with illustrating the data sets used in this study (Table 3.1).

Table 3.1

Data Planning Grid: The Lisk “Creative Director” Series

| What Do I Need to Know? | Why do I Need to Know This? | What Kind of Data Will Answer the Question? |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| What insights do students and teachers reveal about musicianship skills that are presented through the “Creative Director” series? | To clarify students’ and teachers’ perception about overall musicianship skills | Formal and informal interviews with students and teachers, including some writing prompts |
| Are there any signs that students are demonstrating growth in 21 st century learning skills through musicianship skills learned through the “Creative Director” series? | To understand the extent that students and teachers make connections between 21 st century learning skills and overall musicianship skills | Interviews with students and teachers, along with rehearsal observations |
| What relationship exists between the teacher outcomes of the lessons and the actual understandings that students demonstrate in their musicianship and learning skills? | To understand whether or not the students and teachers perceive outcomes that are similar or dissimilar from what the teacher has planned | Interviews with students and teachers, along with rehearsal observations and teacher lesson plans |
| How does the Lisk “Creative Director” series inform the overall musicianship and learning skills experience? | To discover the ways that this approach empowers students to take responsibility for musicianship skills that also impacts learning skills | Interviews with students and teachers, along with rehearsal observations, teacher lesson plans and interviews with teachers |

The first data source for this study was the observation of rehearsals. Observation is the systematic recording of events within the selected case setting. The observations completed in this study include formal ensemble rehearsals along with informal records of interactions between students and teacher. These observations took the form of descriptive and reflective field notes. These field notes also provided the basis for the interviews that were conducted with the student participants. My role in the field was that of a non-participant observer in the classroom (Bogdan & Biklen, 2003). I divided my observations into two periods – winter and spring. The first phase of the data collection took place from late February to late March 2017. In this time span, I visited each site once over a three-week time period. The purpose of these visits was to meet the teacher and student participants at each site and to become familiar with each site setting (Bogdan & Biklen, 2003). This gave me the opportunity to observe the Lisk “Creative Director” series in action within school music programs that had totally embraced this approach, as well as observe master teachers who were well-schooled in the series. I also visited the various sites during a second phase of data collection between May and June 2017. The intent of these observations was to expand upon my previous observations of the Lisk “Creative Director” series in order to see the students’ involvement with the “Creative Director” series and to further explore the research questions. In the first and second phases of this study, I observed each ensemble once, for a total of 6 observations, with two observations completed in each school.

Interviews of both student and teacher participants made up the second data source for this study. I conducted interviews with the teacher-participants during the scheduled visits, as I began the initial phase of data collection. Each teacher was interviewed for approximately 30 minutes during the visit. I also conducted one interview with each of the students for

approximately 30 minutes during the visit. A student focus group including all four students at each campus was interviewed once for an approximate 30 minute time period during the visit. Students and teachers alike were interviewed during the second phase of data collection in a manner consistent with the first phase. This worked out to one interview for each student and teacher and one focus group interview in the first phase and one interview for each and one focus group in the second phase.

The interviews were semi-structured (Creswell, 2007). A semi-structured format for teacher and student interviews was chosen so that a focus could be maintained on issues relative to the Lisk “Creative Director” series as well as enabling the use of spontaneous issues that would emerge naturally from the participants. I was not interested in directing what the participants said and I wanted to remain open to the thoughts and experiences that they have had with this series. All interviews and observations were digitally recorded using a Phillips Voice Tracer DVT 1300 digital recording device and transcribed afterward.

Field notes provide a written account of the researcher’s observations and experiences while visiting case study sites (Bogdan & Biklen, 2003). Extensive field notes that were both descriptive and reflective were taken to archive what I observed and heard while visiting the various sites included in this study.

I also utilized documents as another data source (Creswell, 2007). Both teachers and students generated documents in the current study. The lesson plan form documented what each teacher prepared for the teaching of overall musicianship skills through the Lisk “Creative Director” series. The lesson plan form may be found in the Appendices. I also had students and teachers answer writing prompts that made it possible for students and teachers to complete questions when I was not present at the individual sites. Examples of the writing prompts may be

found in the Appendices. Between the writing prompts and the interviews, students had varied opportunities to express their thoughts about rehearsal experiences.

Data Analysis

Data analysis is a process of organizing and examining the data collected in a study. In this process, the data is organized in such a way so that what was heard, read, and observed can be woven together to make sense of the data collected (DeWalt & DeWalt, 2011). As the data is considered collectively through description, analysis, and interpretation, the process leads to meaning. Through data analysis, I looked for connections that would be meaningful for me as well as the reader. I considered suggestions made to researchers by Bogdan and Biklin (2003) including observer comments, review of field notes, conversations with the participants, and personal journal notes regarding what I was discovering, which facilitated my efforts to focus my study and remain mindful of the research questions. In qualitative research, purpose statements and research questions may change during the data collection process (Creswell, 2005). Keeping this in mind, I constantly reviewed the purpose statement and the research questions during the data analysis. I also reviewed literature while I was in the field, as recommended by Bogdan and Biklin (2003) to look for any further information that would enhance my data analysis.

In this study, data collection included field notes, journal entries, lesson plans, interview transcripts, transcripts of digital recordings, and related documents. In the subsequent data analysis, I took these various forms of data and reviewed, organized, and coded them into useful units that allowed for synthesis and searching for patterns (Bogdan & Biklen, 2003). I followed coding recommendations as described by Saldaña (2013), combining elements of attribute, evaluation, and causation coding. Through analysis, the resulting interpretations of these findings were further related to pertinent literature and broader concepts.

I followed several steps to carry out the data analysis. First, the data was read to provide a general overview of the students' experiences with overall musicianship in these particular classrooms. While reading the data the first time, I made notes of things that I thought were particularly important, insightful, or unclear. This process is referred to as memo writing, when a researcher begins to analyze data (Glesne, 1999).

Next, I focused my efforts on the way in which data related to the research questions. The data were organized chronologically and read and reviewed by one site and one participant at a time. While reviewing the data, I kept referring back to my list of research questions and noted comments and observations that seemed to be related with one or more of the research questions. While writing, reading, and reflecting on all of this data, I took note of my reflexivities, where I could move from researcher to practitioner over things that might motivate me to think about how I would solve a particular issue that arose if I were the teacher in charge to avoid researcher bias.

I then began to organize the data into coding categories. The purpose of coding is to organize collected data into related units that provide meaning to the information (Bogdan & Biklen, 2003). I developed a list of major codes and then further adjusted the list as the data was read as recommended by Glesne (1999). Open coding was used (Creswell, 2007).

All of the transcriptions of interviews, observations, writing prompts and other notes were entered into a qualitative research software program called HyperResearch, version 3.7.5. All of this information was coded following the constant comparative method of data analysis in grounded theory research (Creswell, 2007), beginning with open coding, axial coding, identifying causal conditions, strategies, and intervening conditions (Strauss & Corbin, 1990, 1998), and concluding the entire process with selective coding (Creswell, 2007). A sample of the

codebook may be found in Appendix P.

After the data had been coded, I re-read the data and organized it into files labeled with the name of the person who generated an idea as well as the nature of a particular idea. This data process was managed using a consistent indexing format with marked codes, a numbering system that was related to the date that each piece of data was generated, and the participant's name, as recommended by Galman (2013). I began to search for emerging themes while re-reading the data a number of times. Another researcher was asked to code a portion of the data to support the reliability of my coding as well.

Determining Validity

Qualitative researchers use a process of validity to make a determination about the credibility of their studies (Creswell & Miller, 2000). The validity of a study measures the extent to which it reports findings that accurately represent the participants and their experience. Common procedures used to determine validity include triangulation, member checking, reflexivity, external audit, peer review, and thick or deep description. Researchers use one or more of these procedures to determine validity (Bogdan & Biklen, 2003; Lincoln & Guba, 1985). I used several of these strategies in my study, including triangulation, member checking, reflexivity, and external audit.

Triangulation is a procedure to establish trustworthiness as researchers look to substantiate findings through comparing evidence generated using multiple methods (Creswell & Miller, 2000). In establishing trustworthiness, I examined the findings to seek those which were generally replicable, with similar outcomes in settings resembling one another in the different cases, although I recognized that generalizability was not always necessary to establish the findings as reliable as long as they supported or informed other research (Galman, 2013). The

methods used for the purposes of data collection were described earlier in this chapter. As I engaged in data analysis, I looked both across and within the multiple data sources employed.

A second strategy used for determining validity was member checking, which allowed for the study participants to review and add to the data and its interpretation in confirming the credibility of the information assimilated by the researcher (Creswell & Miller, 2000). Ongoing member checks were done with the teacher participants, especially through email correspondence. Focus groups were created at each of the sites to allow the student participants opportunities to review the study data and interpretation as well in another attempt to support validity.

The third strategy that was used was researcher reflexivity, a procedure where the researcher discloses his or her assumptions, beliefs, and biases. The purpose of researcher reflexivity is to state these beliefs and biases at the beginning of the research process so that readers can understand the researcher's perspective up front (Creswell & Miller, 2000). I noted my reflexive moments while collecting and reading the data, and these helped me to identify my biases through the data analysis process.

Limitations of the Study

There were a number of limitations to this study. One limitation was my outsider status with these music programs. Students and teachers may have felt uncomfortable speaking with someone who was not involved with the music program or may have tried to make their processes and learning sound more positive than they were. A second limitation could be the prior experience that I have had with the Lisk "Creative Director" series, in that my familiarity with the model could be perceived as a personal bias when evaluating the program. A third limitation was that the observations of the students' overall musicianship experiences were

limited by what the student participants said and how I interpreted those statements as the researcher. Finally, the locations of these programs limited data collection opportunities. In terms of the ethical nature of data collection, guidelines established by the University of Massachusetts Institutional Review Board (IRB) were utilized, and subjects were able to withdraw at any time and were not subjected to deception, discomfort or danger. My qualifications as a researcher were described to the participants. Data was stored electronically on media in a locked office desk with only the author and advisor able to access to it.

Chapter Summary

There is no singular approach for the construction of case study research or qualitative research in general. The use of a variety of strategies selected for their appropriateness is more typical to this type of research. The selection of the case study methodology was an outcome of the purpose of this study, which was to examine the pedagogical strategies used to cultivate overall musicianship in the Lisk “Creative Director” band series and how it facilitates the development of 21st century learning skills of instrumental music students. As a means for investigating that phenomenon, it was important to utilize research strategies that addressed the purpose and the central question. The Lisk “Creative Director” series is the subject of this case study, and the various student and teacher participants are cases.

The data collection process utilized transcripts of interviews and rehearsals that were coded to illustrate the students’ perceptions, teachers’ perceptions, definitions of particular situations, and narrative codes (Bogdan & Biklen, 2003). Included were two classroom observations for each location, two interviews of each of the individual participants in each school, and two student group interviews in each school. In addition to these observation and interview transcripts, field notes were taken in each of the three locations. Lesson plan forms and

two writing prompt forms for each participating teacher and student completed the data collection process.

CHAPTER 4

INDIVIDUAL CASE ANALYSIS

Deer Creek Community High School

Students started to file into class beginning at 7:30am. Some went dutifully to their lockers to get their instruments to begin the warm-up process by themselves, and others stood around the room for a short period of time visiting with one another before getting their instruments out and taking a seat. The energy felt around the room was infectious. It appeared that for many of these students, one of their favorite classes was about to begin. As a bell rang to signal the start of the school day, students scurried to their seats to prepare for their ensemble warm-up. Once Mr. Brown stood up on the podium at 7:50 am, an immediate hush came over the room. Mr. Brown greeted the students and reminded them about the importance of treating music as a language and the need to keep that idea in the back of their minds as they played throughout the rehearsal.

The group started the rehearsal with warm-ups based upon the Lisk “Creative Director” series. The first exercise was a warm-up using the circle of fourths, where students held notes for 3 counts and then rested for 7 counts. I could feel the concentration level in the room rise as Mr. Brown counted out loud while students played through the circle of fourths. Then, he stopped counting as they counted silently to themselves. During this time, and for the rest of the rehearsal, the students remained focused and purposeful. While watching the students’ response to Mr. Brown, I noticed that they had their eyes open at the beginning of this exercise, but started to shut their eyes once the silent counting began. Right after this exercise, Mr. Brown talked a bit about the role of focus in the performing arts and asked the class if anyone could define what is meant by the concept of focal point in dance. A student with experience in dance

instruction raised her hand to describe how a dancer extends a gaze to a focal point in the audience or another dancer while still maintaining dancing movements. After this response, Mr. Brown addressed focus through a different lens by closing their eyes in their warm-up, where, when the sense of sight was eliminated, other senses such as hearing and touch become elevated, which was a concept he defined as the mind's eye. Mr. Brown reminded the students to shut their eyes during the warm up and make a mental picture of the concept, in this case, counting, that was being presented. He also asked them to identify which playing aspect was more of a challenge, sound or silence. Several students spontaneously responded that "playing" a silence was more challenging than playing a sound. Mr. Brown moved the group into another exercise, where they played specifically on counts 1, 5 and 9 through the circle of fourths. Students completed this, many with their eyes completely closed. (Field Notes, 2/23/2017)

Introduction. Deer Creek Community High School² is located in Deering, Indiana, a rural farm community in the "Hoosier Heartland" section of Indiana. The population is focused in a small geographic region surrounded by fertile fields for agricultural purposes, with corn a common crop. This farmland is located on open flat plains with some trees planted, acting as a kind of natural windbreaker. Even though the population of Deering is only 3,200, most of the citizens live in a small geographical area that has the ambience of a small, Midwestern city. The school has only 500 students in grades 9-12.

When you enter the high school, the first thing that you see is the library/instructional media center located at the center of the building, not surrounded by any walls, but featuring a man-made stream that runs around it with real plantings. It is a unique and beautiful design. The cafeteria is also located at the center, and the auditorium is nearby as well. The other segments of

² All names and locations are assigned pseudonyms.

the building fan out in pods for the various disciplines that are taught in the school, and the music room fans out from the auditorium.

The music room has a number of trophies, plaques, and photographs representing many successful years of music festival participation. The room is tiered so that the back of the band sits higher than the front of the band. It contains modern instrument and sheet music storage facilities, music posture chairs, music stands, and a variety of percussion instruments.

The participants. All of the student participants at Deer Creek Community High School were seniors who would be graduating at the end of the school year, and all of them worked with the same band director from elementary school to the present.

Ellen. Ellen was soft-spoken and polite, and expressed interest in pursuing a career in music education. Ellen was a percussionist with experience on snare drum, mallets, timpani, and accessories. As an elementary student, she started on flute, and tried a number of other band instruments before settling on percussion. Ellen's first thoughts about the Lisk "Creative Director" series included the following:

I first thought that it was a little confusing, when I thought that when I was in sixth or seventh grade and then, once we used it, more like in eighth grade year and then starting in freshman year, it got a little bit easier to understand. It helped a lot with learning flats and sharps and helping us understand scales and all the tetrachords. (Interview, 2/23/2017)

Jane. Jane was a quiet but well-spoken student who played trombone. Jane loved being a part of the band and emphasized that her band experience is an important part of her life. Jane's first observations about the Lisk "Creative Director" series included the following:

I think that it is a very cool and new way to learn music, especially your scales and your flats, because most of the time, you know in our beginning band class it's just, here is a note on the staff - this is what it's called - this is how it sounds - memorize it. I think it's an interesting and useful tool. (Interview, 2/23/2017)

Katie. Katie played bass clarinet. She loved being able to enhance the sound of the clarinet section with her contributions to the bass line on bass clarinet. When asked about her impressions of the Lisk “Creative Director” series on her high school band program, Katie responded as follows:

I think that it is very helpful for warming up the class and that it really gets us into the mindset of like, playing, because it helped us with flats and sharps, it helps us learn our tetrachords, and I know that its helped me a lot to learn new notes. (Interview, 2/23/2017)

Marilyn. Marilyn loved to play the trombone and mentioned that she took the instrument primarily because she thought that she had to take band or choir as an elementary school student, and she did not want to sing. Marilyn was feisty and always seemed happy to share her opinion. Marilyn’s initial thoughts about the Lisk “Creative Director” approach were as follows:

I think that it's really cool that you can kind of get off the page of like going through and just reading the music. You can kind of get off of it and then create music just like from the theories that are all in the circle. (Interview, 2/23/2017)

Mr. Brown. The teacher, Mr. Brown, had been using the Lisk “Creative Director” series during his entire career. Mr. Brown appeared to be a well-organized and efficient teacher who was looking to make a real difference in the lives of his students. Mr. Brown was responsible for the entire band program in the Deer Creek public schools, teaching beginning band students in grade six, a seventh and eighth middle school band, and a ninth through twelfth grade high

school band. For one year of his high school career he was a student of Mr. Lisk's, so he brings a unique perspective to his students in Deer Creek as he was immersed with this approach himself as a high school student. He maintains close connections with Mr. Lisk, even to this day.

Cultivating musicianship. At Deer Creek Community High School, development of musicianship skills was fundamental to the curriculum of the instrumental music program. Mr. Brown emphasized that everything he teaches in music points back to the teaching of musicianship skills.

Comprehensive musicianship allows the students to understand all aspects of music as a whole versus little chunks of skills that need to be mastered. The Lisk approach never splits things up. It always is evolving into the needs of the ensemble and always addresses mastery of sound and silence and moving amongst all key signatures. (Brown's Journal, 5/17/2017)

The foundation of the music program at Deer Creek Community High School was built from this beginning premise. There was a body of musicianship skills that Mr. Brown focused upon in his teaching that defined what it meant to be well-trained. This body of skills was described by his students. According to Ellen:

A person with comprehensive musicianship brings depth to the music, and they know their fundamentals, they know their basics, and they're able to easily talk to someone about it that they are trying to help, or mentor somebody there . . . they want to easily explain something because they have an understanding. (Interview, 5/17/2017)

Jane concurred and explained further, saying:

This approach helps a student to be a good, comprehensive musician, I believe that they need to have a good knowledge of music in general. Like, just knowing how to read

notes, knowing what certain dynamics mean, and articulations. I think that they also need to be able to read beyond the music . . . they can take it further than what's written on the page and bring a new light to the song. (Interview, 5/17/2017)

The students pointed out that knowledge of the fundamental elements of music is necessary to be well-trained in music. For them, these skills are built upon one another, and it was important for the well-trained musician to demonstrate comprehension skills that go beyond the notes and fundamentals to consider the essence of music by bringing depth to its expression.

Lisk techniques used at Deer Creek. The Lisk approach addresses a number of musicianship techniques, presenting many perspectives of musical performance to facilitate a vision of comprehensive musicianship within all participating students. The techniques include student-centered learning, warm-ups, use of imagery, listening strategies, rhythmic perception, dynamics and color shifts, and creative expression. Those specific techniques, and how Mr. Brown utilized them at Deer Creek Community High School, are described below.

Student-centered learning. The Lisk approach is, by design, an intellectual approach that fosters the development of comprehensive musicianship skills. It places the highest emphasis on engaging students in their own learning so that instruction is not a top down, teacher-centered, lecture type of phenomenon. For Mr. Brown, the Lisk approach cultivates a process of learning by students that develops a student-centered approach, to give students more ownership in their learning. This engages them in their learning and makes it more meaningful for them.

This approach is student-centered learning instead of teacher-centered - it gets away from teacher tell student. I think one of the things that this approach does is create a culture in a room where children are not afraid to make mistakes. Or if they are, they are not

intimidated by the others. As far as the creative side of that, it gives you permission to fail and grow. (Interview, 5/17/2017)

As Mr. Brown pointed out, this approach provides a solid beginning for teaching musicianship skills by emphasizing individual student musical growth through student-centered learning.

Warm-ups. While the idea of warm-ups in a band rehearsal is a standard component to any generic band rehearsal using a number of approaches, the warm-ups utilized in the Lisk approach assume a more prominent role in the rehearsal philosophically than others. Even though many of the Lisk warm-ups are unique unto themselves for developing certain musical routines and skills, the Lisk warm-ups are based around the concept that the warm-up is the most vital part of rehearsal, and that philosophically they are tied directly into the musical conceptual demands of all of the musical literature being taught. Nothing is presented in the warm-up that does not have at least some relevance to what is being specifically taught through the musical literature later on in the rehearsal. Mr. Brown pointed out that this is a concentrated way of getting students focused in the first ten minutes of a class, introducing skills used in music literature played later in the classroom rehearsal.

Mr. Lisk would say that the first ten minutes of rehearsal is the most vital so, using the circle and using his techniques really gets you in there and really focuses the band within those first ten minutes. (Interview, 2/23/2017) The warm up becomes directly related to the music literature being rehearsed. (Writing prompt, 5/17/2017)

One of the most prominent aspects of the Lisk approach is the Circle of Fourths, a visual chart developed by Lisk that has all of the chromatic notes of a scale laid out in intervals of fourths. In cultivating musicianship skills, it is important that the musician is fluent in all major and minor scales and modes, and the chart is used as a technique for organizing students' minds

to develop that performance fluency. The entire circle is organized so that the next letter to the right of each letter in the sequence completes the dominant to tonic sound for each key represented: There are numbers located above the letters indicating how many flats or sharps are in a particular key, and numbers located below the notes indicate the specific order of flats or sharps in a key signature. Instrument groupings are also spelled out on the sheet, based on tone color and tessitura. The circle of fourths chart may be found in Appendix L. Mr. Brown insisted that all students have a copy of the circle of fourths in their rehearsal folios, and he uses it to begin rehearsals every day. Mr. Brown described one usage of the circle of fourths:

Getting them to slow down, any age kid just wants to hurry up and get it done. So, when I do use the circle, even with scale work, just you've got to start slow and recite the pitches and do the fingerings along with it. That was huge for Mr. Lisk when we used to do our lessons in school, is to recite, forward and backward and make sure that we had that and we were looking at the letters in our head, and looking at the numbers for duration.

(Interview, 2/23/2017)

As Mr. Brown pointed out, it is necessary to bring students around the circle of fourths slowly until it feels natural for them, both with playing, and reciting the pitch letters and fingerings. The oral recitation of these is a major part of the Lisk approach, seeing them in one's mind.

Another aspect of the warm-up, the Grand Master Scale, is simply a Circle of Fourths chart upon which entire major or minor scales are built upon each note in the order of the circle, to assist with key awareness. While students trained in the Lisk approach will refer to this chart occasionally, Lisk's intent in the usage of the grand master scale is for students to visualize the notes in their heads and play from memory. Moving back and forth from reading and chanting the note names aloud to playing the scales from memory while mentally visualizing images of

the notes themselves is a strategy that facilitates the learning of scales. When playing the grand master scale in the Lisk approach, the emphasis is not only on just playing accurate notes. It's also very much about cultivating interval tuning between notes to strengthen students' intonation awareness, as well as helping students to feel the notes in their hands physically. Mr. Brown said, "The biggest challenge is to go slow and teach the mastery of the scales. I'm not going to give up on the grand master scale. I'm done with truncating scales." (Interview, 5/17/2017) It is Mr. Brown's impression that most music educators truncate the full grand master scale around the circle of fourths to have students only play the safe-sounding scales that they perceive are easier to play. Mr. Brown emphasized that scales with multiple sharps and flats are not necessarily any more difficult to play than ones with less flats and sharps, the idea of easier versus more difficult should not be applied to scale learning as all scales are important. Appendix M provides a visual chart to assist students with learning the grand master scale.

Use of imagery. The Lisk approach emphasizes the internalization of thinking about musical concepts within each student. This includes having a teacher paint a mental picture describing a sound concept as a way to aid in comprehension. Lisk develops this by challenging teachers to image a concept of perfection to students. Mr. Brown utilized this technique constantly, coming up with different strategies for motivating students to create mental images of musical concepts.

And this just divorces you from the notes enough that the kids are going to internalize that. I am huge on Mr. Lisk's concept of The Mind's Eye. If you see it in your mind and in your head, that's where your release is. Seeing the numbers in your head, as well as seeing the letters on circle of fourths are all important. (Interview, 2/23/2017)

Mr. Brown regularly addresses “The Mind’s Eye” imagery usage with his Deer Creek students in the Lisk approach. Teachers utilizing the Lisk approach are continually encouraged to use imagery to get students to make valuable mental visualizations of sound concepts to help them with overall comprehension of those concepts.

Listening strategies. The Lisk approach places the highest priority on cultivating listening skills including beatless tuning and intonation and striving towards beautiful tone, balance, and blend in an ensemble. In terms of tuning, when two or more notes are played simultaneously, it becomes evident that the two notes are in tune with one another if there are not any extraneous beats or pulses in the sound that are created when out of tune frequencies clash with one another. Thus, striving for beatless tuning is essential in helping a performance ensemble sound its best. Mr. Brown addressed these strategies constantly in his classes at Deer Creek.

The approach depends on the development of the ears and not using a strobe to achieve beatless tuning. Many school bands will break out an electronic tuner, but students don’t develop their hearing as well. Achieving beatless tuning, versus using a machine. With this approach, kids are stopping to tune to take on their own intonation issues. (Brown’s Journal, 2/23/2017)

Mr. Brown emphasized the need for students to develop their hearing skills specifically with their ears instead of an electronic strobe, another fundamental of the Lisk approach.

Another facet of listening skills is approaching sound and silence in equal ways. Relating sound and silence with rhythmic perception in the development of musicianship, is central to the Lisk approach. Focused listening is critical to this approach. Mr. Brown stressed to his students that the way in which notes begin and end, as well as moving from sound into silence or vice-versa, are important conceptual challenges for musicians.

The first exercise was a warm-up using the circle of fourths, where students needed to hold notes for 3 counts and then rest for 7. The teacher counted out loud while students played through the circle of fourths. Then, he stopped counting as they counted silently to themselves. The starts and releases of the notes were played together very well. I noticed that students had their eyes open at the beginning of this exercise, but started to shut their eyes once the silent counting began. (Field notes, 2/23/2017)

The Lisk approach emphasizes that both concepts of sound and silence are equally important in music and need to be treated with equal respect, and Mr. Brown was careful to communicate this message to his students.

Part of understanding sounds and silences is helping students visualize how beats and subdivisions of beats should be interpreted. The Ruler of Time is a chart that Lisk developed to help students graphically visualize how beats and subdivisions should be counted. This Rule of Time chart is included as Appendix N. Mr. Brown presented the concept of the Ruler of Time as follows during the warm-up phase of a rehearsal:

Mr. Brown then worked on the Ruler of Time Lisk exercise. When the conductor's palms were in the "up" position, students counted aloud. When the conductor's palms were in the "down" position, students counted silently. This was repeated a number of times to make certain that the students were counting consistently throughout. When the palms went to silence, there were never mistakes when the students counted aloud as the palms were turned up. Internal pulse was always maintained perfectly. (Field notes, 5/17/2017)

This chart is used mainly to introduce students to the concepts of beats, subdivisions, durations, and rhythms, primarily to the young players. At Deer Creek, it was used mainly for young players and gradually is used less and less as students' musicianship skills grow and develop.

Dynamics and color shifts. The Lisk approach takes the concept of teaching dynamics - the loudness or softness of notes - and doing some creative things with those dynamics where different sections of the ensemble are assigned different degrees of loudness and softness, and then shifting dynamically opposite from one another, emphasizing a striking tone color shift, as well as dynamic contrast. Mr. Brown encouraged Deer Creek students to think about this concept especially when they were considering ways of adjusting the intensity and textures of the music that they perform.

The last warm-up that was done from the Lisk “Creative Director” series was the alternate “Grainger” dynamic warm-up exercise. This exercise utilizes contrasting dynamic and color shifts between different instrument families as found in the music of Percy Aldridge Grainger. The students adjusted their exercises so that the woodwind groups would crescendo up from piano to forte and alternate notes with the brass and percussion that would answer the following note on the circle playing a decrescendo down from forte to piano. Notes in the circle would continue to alternate: woodwinds then brass and percussion. Each group played every other note in the circle. It was evident that the students were aware of the change in musical colors through this exercise. (Field Notes, 2/23/2017)

This exercise affords students the opportunity to use the concept of dynamics shifting to also create contrast in colors of sounds created by different instruments or families of instruments. The students at Deer Creek applied dynamic and color shifts to the ensemble music that they performed. Appendix M provides a visual representation for students to help them understand the concepts of dynamics and color shifting.

Creative expression. The Lisk approach fosters the development of student decision-

making in bringing creative music expression, imagination, interpretation, improvisation, and style into a performance. Mr. Brown worked hard to implement rehearsal strategies that enable students to express themselves creatively.

While some teachers demand musical perfection, sometimes there's no expression behind it. We need to place more expressiveness in music, where critical and creative thinking and improvisation come in. It goes back to creating that culture inside the room where the children feel safe so that they can be creative and expressive. (Interview, 5/17/2017)

Mr. Brown described the need to bring expression, imagination, interpretation, improvisation, and style into the musicianship vocabulary of students. The "Natural Laws of Musicianship" is a concept emphasized by the Lisk approach that facilitates the development of these concepts of phrasing, expression, imagination, improvisation, and movement in musical lines. This includes ideas about short notes seeking long, long notes seeking short, high notes seeking low, and low notes seeking high. They are observations about the musical tendencies of notes within phrases and how they are interwoven to create stylistic musical expression and movement. This particular Lisk approach concept was addressed indirectly at this school.

Twenty-first century learning skills through the Lisk approach. The 21st century learning skills of critical thinking, creative thinking, collaboration, and communication were evident in Mr. Brown's use of the Lisk approach. While these four learning skills may not be directly recognized with the label of 21st century learning skills at Deer Creek, they were reinforced regularly. Mr. Brown described the importance of these four learning skills in the teaching of music and recognizes that the Lisk approach incorporates all of these skills.

All 21st century skills are important in music performance. Teachers of other subjects have to generate how they deal with the learning skills...in music, we address 21st

century learning skills automatically, and have been doing so for years. I touch on them every day through an anecdote, all four, especially teamwork. (Interview, 2/23/2017)

Mr. Brown acknowledged that he addresses all four of the learning skills in music education on a daily basis, and has been doing so for his entire career. These skills have broad applications to all areas of life, as Marilyn described. “I would say that these skills could be applied in all areas of your life. You need them for everything that you do everywhere.” (Interview, 5/16/2017)

Twenty-first century learning skills are fundamental to all areas of people’s lives and they are necessary for students to become independent, self-reliant learners.

Critical thinking. Critical thinking in music was an important component of the Lisk approach at Deer Creek, as it provides a way to work around a musicianship problem and work towards finding solutions. In musical ensembles, it is important for musicians to apply critical thinking when analyzing performance challenges. Katie described the role of critical thinking in musical performance and pointed out that the 21st century skills are used more in band because the experience requires that they use them continuously:

I think that we use these skills more because we have more practice with them in band.

When we encounter a musical problem, we always work to find a way around it. In a hard part of music, we use critical thinking when we encounter rhythm we don't know or how to play a certain part of the song. In critical thinking, we figure out a way to get around it. We learn how to play it so we can get through it. (Interview, 5/16/2017)

This process is an important problem-solving tool in music, and critical thinking is a constructive, internalized process to solve problems. Ellen referred to problem solving when she described critical thinking.

In a non-music way, it's just trying to find a good way to solve an issue...but sometimes,

you need a better way to think of something different. I think that I use critical thinking as much as I do in any other class as I do in band. (Ellen's Journal, 5/16/2017)

Musicians need to listen constantly to their sound quality, balance, blend, and intonation while performing, in order to achieve high quality results played at the highest level of musicianship possible. They are constantly analyzing and assessing the kind of sound that they are creating for tone quality, dynamics, and intensity. In an ensemble, musicians work to determine how their individual musical lines contribute to the overall whole. Mr. Brown constantly reminded his students to analyze the sound that they create through critical thinking, making critical thinking a fundamental learning skill in the band program at Deer Creek Community High School.

Creative thinking. Creative thinking allows for bringing human expressive and interpretative elements into musical performance. It is a skill that is also utilized extensively in the Lisk approach when it focuses the creative process into describing feelings and emotions. It is an important concept that has many practical applications in school. Marilyn shared some thoughts about creative thinking and what it brings to musical performance.

Yeah, it might not be in the music, but like a swell in the music, it's bringing feeling and human emotion into the music. This brings some individual creative interpretation to the music and some human elements so that it can come alive. Creative thinking lets you look deeper for what the music says beyond the page. (Interview, 5/16/2017)

Creative thinking is a skill that requires students to “think outside of the box” to bring innovative solutions to challenges that require novel approaches to solve effectively. Jane pointed out with creative thinking: “Creative thinking is the ability to add imagination and uniqueness to simple things. Musicians constantly must think deeper than the notes on the page;

this all ties into creative thinking.” (Jane’s Journal, 2/23/2017) Creative thinking skills are identified in terms of adding depth to the music. Mr. Brown used a dynamics and color-shifting exercise from the Lisk approach identified as “Grainger Dynamics” which was a creative way to get students to think about how sound colors can bring depth to performances.

Students were clearly aware of the change in musical colors through the “Grainger” dynamic warm-up exercise when one observed their facial expressions and body language. This exercise in creatively manipulating sound colors and dynamics was exciting for students to experience. (Field notes, 2/23/2017)

Mr. Brown told his students that even with a composed section of a piece of music, such as a march, creative musical adjustments can be made to improve the effectiveness of the overall sound. “He challenged students to play melodies that are lyrical and expressive, using musical imagination, interpretation, and style.” (Field notes, 5/17/2017)

Of all four 21st century learning skills, Deer Creek students referred to creative thinking the least in terms of their own usage of learning skills. Despite this, students agreed that creative thinking for the musician is a way to look at the interpretative and expressive elements of music in more depth and bring life to the music.

Collaboration. Working together in a musical ensemble to solve musical challenges and problems is another critical component of the Lisk approach, and the development of teamwork skills is important in the band setting. Deer Creek students and teacher alike kept referring back to collaboration skills as fundamentally important to the success of any musical performance ensemble. According to Ellen “Collaboration is working with others, but not just working, understanding each other while you work together.” (Ellen’s Journal, 2/23/2017)

Conversations with all Deer Creek participants regarding 21st century learning skills always referred to the importance of collaboration in musical performance. Marilyn placed a high value on group collaboration skills through individual responsibility for improving their own musical performance skills:

Every class that I have is project-based. Every final is a project . . . I don't have a single written final exam. I would say that learning to work together as a group effectively was the most important thing that we get from using this approach. And, making sure that everyone knows what he or she is doing, and doing it together. (Interview, 5/16/2017)

The acquisition of people skills, being able to work together as a team, and helping students make their own musical decisions were acknowledged by Mr. Brown as important skills that lead to success in musical performance:

Well, I think that they trust each other a lot more, using those techniques, because they have to rely on each other. Because you're not there as a director to lead them through every little bit, you are allowing them to make their own musical decisions, find that internal pulse, and find that ensemble feel. We've all had those magic moments in an ensemble where something clicks, well, I think we've clicked faster and in a better way using these techniques, and again the teamwork aspect, relying on each other, trusting each other. Anything to get the students to, again, work together, play together, create that unity so that we can succeed, so that we can be better. (Interview, 5/17/2017)

Students collaborate with one another in a musical ensemble when they are balancing and blending chords. Mr. Brown split the ensemble into various instrument groupings so that entire sections could collaborate balancing and blending chords.

From this point, students played major chords on each note of the circle of fourths, with the emphasis on balance blend, and intonation. The body language and facial expressions of the students in the ensemble demonstrated that they were actively collaborating to achieve balance and blend. (Field notes, 2/23/2017)

Students also collaborated with one another in counting, both aloud and silently, and Mr. Brown took the ensemble through an exercise.

Students played through an exercise where students needed to hold notes for 3 counts and then rest for 7. The teacher counted out loud while students played through the circle of fourths. Then, he stopped counting as they counted silently to themselves. The starts and releases of the notes were played together very well. (Field notes, 2/23/2017)

Collaboration was identified by all Deer Creek participants as one of the most important 21st century learning skills to facilitating successful musical ensemble performance, and the concept of teamwork is constantly emphasized in this program.

Communication. Developing good communication skills between people are important to the implementation of the Lisk approach, and at Deer Creek Community High School, the development of good communication skills among students was a priority in the instrumental music program. Deer Creek participants all emphasized that members of a musical ensemble need to communicate with one another to solve whatever musical challenges might arise. Ellen shared the following regarding communication in music:

In percussion, when we communicate, I might say that this would sound good here or we need to do this better and the communication is in the percussion. We have it easy because we can talk to one another while we play. If you are playing softer then maybe your neighbor will go oh hey I need to play softer too. (Interview, 2/23/2017)

As an example of how communication between players and the conductor may be both verbal and non-verbal in a Lisk Ruler of Time warm-up exercise, Mr. Brown emphasized non-verbal communication that focused upon watching the conductor and demonstrating internal pulse.

The conductor decided to take students through a Ruler of Time exercise where they would demonstrate internal pulse through spoken and silent counting. When the conductor's palms were in the "up" position, students counted aloud. When the conductor's palms were in the "down" position, students counted silently. This was repeated a number of times to make certain that the students were counting consistently throughout sound and silence. (Field notes, 5/17/2017)

Keeping lines of communication open among people is necessary to carry out any task, and the Lisk approach places an emphasis on this skill. This emphasis surfaces when conversations arise among Deer Creek participants address communication and 21st century learning skills.

Summary. Deer Creek Community High School is a small school instrumental music program implementing the Lisk approach. The director of the program brought a unique perspective of the Lisk approach to the Deer Creek students since he was a former high school student of Lisk himself. While the participants did not use the term "21st century learning skills" the skills of critical thinking, creative thinking, collaboration, and communication were taught to and utilized by all of the participating students, who could define and describe them at a basic level. Students were at least familiar with all of the basic techniques of the Lisk approach as well. The teacher shared that he had seen great progress in the musical development of his students since using the Lisk approach, and that it was obvious that his students had a musical edge over students from other schools in the regional music festivals that they attended. For

those students planning a career in music education, they indicated a desire to teach with the Lisk approach themselves.

Grand Falls Senior High School

Students started to file into class beginning at 7:30am for a 7:45am rehearsal. The students, dressed mostly in pink and green for a school spirit day, wasted no time moving around the room to get their instruments out of their lockers and went straight to their seats. There was only occasional socializing between students, as they seemed anxious to get to their seats to do some individual warm-ups. A cacophony of sound soon erupted in the room as students quickly started to play all kinds of warm-ups ranging from long tones to noodling on fast technical lines. A high level of energy and enthusiasm was felt around the room in anticipation of the beginning of today's wind ensemble rehearsal. When a bell rang to signal the start of the school day, the teacher entered the room, and the students were immediately silent.

The warm-up centered initially upon major chords, using the circle of fourths. Mr. Carter divided the ensemble into four instrument groups each playing a different note to form an F Major chord when put together. Mr. Carter asked students to evaluate their own blend with the overall ensemble. He then had the students move to next pitch on their circle sheets, and also add a rhythm to the chord. This rhythm was imitated around the circle of fourths on major triads. During this portion of the warm-up, he asked, "Is that your best, best tone quality? Are we still in tune...did you articulate together? Reevaluate your balance". The group continued to play these rhythms for each note. The rhythms used in the warm-up were from some of the literature being played later in the rehearsal.

Mr. Carter then asked the students what he called the big question, "Is what we are playing still a warm and pleasing sound? What is the rule should we follow if the sound is too

much?” After some critical assessment by the students, he then asked the students “Is it still a warm and pleasing sound?” Students responded verbally and by example through performance and movement. He also encouraged students to keep the tempo going and challenged them with the following question: “What happens if one person slows down...doesn’t it pull down the tempo of entire group?” The students nodded “yes” in the affirmative. (Field notes, 3/31/2017)

Introduction. Grand Falls Senior High School is located in Grand Falls, New York, a comfortable, middle class community in New York State. It is located near a popular tourist destination and a number of people maintain vacation homes here. It is surrounded by rivers, making it an island community. The population of Grand Falls is 20,400, and the town is growing with new construction on a landscape that is flat and only lightly forested. The high school population is mid-sized, with 1,045 students in grades 9-12.

When you enter the high school, the building is centered on a large campus, with other schools nearby. It is a modern, functional facility with two stories. The building is approximately 20 years old, clean and well-maintained. There are three large music rooms in it to accommodate band, orchestra, and chorus ensembles along with a large auditorium.

The music room has a number of trophies, plaques, and photographs representing many successful years of music festival participation. The room has acoustical treatments and a high ceiling to accommodate the acoustical demands of large instrumental music ensembles, along with instrument lockers and shelves for sheet music storage, music posture chairs and music stands. The school owns a number of color instruments such as English horn and soprano saxophone, and a wide variety of percussion instruments to facilitate the performance of advanced wind ensemble literature.

The participants. All of the student participants at Grand Falls Senior High School represented different classes in the school – there was one student representative from each class (freshman, sophomore, junior, senior). Three of them worked with the same band director during their high school years and one moved to Grand Falls from another high school.

Eileen. Eileen, a freshman trombone player, opened up with an engaging personality when she had the opportunity to speak about a subject that interested her. Her first thoughts about the Lisk “Creative Director” series included the following: “I think that the approach has definitely helped with controlling the sound that you make and blending it with other players, expanding your knowledge of how to play an instrument to its full potential.” (Interview, 3/31/2017)

Harold. Harold was a personable, articulate 10th grade tuba player who was interested in being a foreign language translator for an organization like the United Nations someday. Harold enjoyed being a part of the band and emphasized that his band experience was important to him, even though he is not going to be a music major. Harold’s first observations about the Lisk “Creative Director” series included the following:

The approach really helps with note recognition and just having it come so much faster, because obviously the music that we are playing in wind ensemble is the best of the best music. So the tuba parts aren't just going to be downbeats and quarter notes anymore. With the circle sheet, it starts coming to you fast and then it really helps with just the level of musicianship and being able to play those faster melodies. (Interview, 3/31/2017)

Rachael. Rachael was a junior French horn player. She was an easygoing, industrious student who enjoyed participating in the band on French horn but also in the chorus as a soprano. Rachael planned to be a music education major with an emphasis on vocal performance. Both of

her parents were music educators, so she has grown up with music all her life. When asked about her impressions of the Lisk “Creative Director” series on her high school band program, Rachael responded as follows:

It helps us as a band to have a better sound and, if we didn't have the warm-ups at the beginning, everyone would be all over the place with balance and listening to each other. I think that the teacher does a good job of getting us ready for the day and it helps us with our critical thinking and creative approaches towards pieces. (Interview, 3/31/2017)

Frank. Frank was an accomplished euphonium player who had a significant amount of musical experience outside of the school. Frank, a senior, conducted a local Salvation Army Band and was regarded as one of the top high school euphonium players in New York State. He was also an accomplished vocalist. Frank wanted to pursue a career in music education as a band director, as he loves the sound of wind band music. Frank’s initial thoughts about the Lisk “Creative Director” approach were as follows:

Because I went to other school districts and I play in a lot of community groups, it was obviously different here what we did at this school from what we did in the other school districts I was at. And I heard of Ed Lisk because I'm a big band geek; I research stuff like that. I think it teaches everything that you need to know to perform good literature, emphasizing balance, blend, and not sticking out of the band. (Interview, 3/31/2017)

Mr. Carter. Mr. Carter has been using the Lisk “Creative Director” series for his entire career. He got to know Mr. Lisk after attending a workshop of his at VanderCook College of Music, and Mr. Lisk drove out to Grand Falls frequently to help Mr. Carter learn about the “Creative Director” series. Mr. Carter was responsible for the junior high and high school band programs in the Grand Falls public schools, and he taught a middle school band, and two high

school bands - a wind ensemble and a symphonic band. Having been trained directly by Mr. Lisk himself in the “Creative Director” approach as a teacher, Mr. Carter was knowledgeable about the approach.

Mr. Carter described his initial work using the Lisk “Creative Director” approach as follows:

I actually first heard about the Ed Lisk system from Ed Lisk at VanderCook College of Music. He came in and did a one-day presentation as part of one of our classes. And I was intrigued by it because of the educational approach to music instead of just beating band music into kids, proposing we create creative thinkers, accomplished musicians, and let them make the decisions in the chair. (Interview, 3/31/2017)

Cultivating musicianship. At Grand Falls Senior High School, the teaching of musicianship skills is central to the design of the instrumental music program. Mr. Carter commented on the teaching of comprehensive musicianship skills:

I guess for me the comprehensive musicianship approach comes in to how much does the student know without me having to tell him? Can they read the rhythms without me rote teaching it? Can they read key signatures; can they change keys in a piece without me having to prompt it? Do they know every fingering on their instrument? And if I have to identify an articulation as marcato . . . I don't have to tell them what marcato means?

When Lisk branched off into interpretation, artistic interpretation, I was so still in the nuts and bolts because it was working for me. It took me a while to buy in, and I realized this is why we are doing that over here. When I finally had the courage to take that leap of faith in the classroom, comprehensive musicianship came in. (Interview, 5/25/2017)

Since the development of comprehensive musicianship skills was a primary goal of the instrumental music program at Grand Island Senior High School, all musical skill development strategies that were employed connected to this goal. Mr. Carter focused upon a collection of musicianship skills in his teaching to identify certain benchmarks that lead to proficiency in these skills. Some of these important benchmarks were described by his students. Eileen provided her view of musicianship skills:

Working together, watching the conductor, understanding the music, understanding how to portray the correct emotion, playing the correct rhythms and notes, accuracy of notes, dynamics, tuning, any like style, in particular, are all important. (Interview, 5/25/2017)

Frank indicated that musicianship requires thinking outside of the box, and that musicianship skills learned in warm-ups need to be carried over into the literature:

Musicianship is always like thinking outside of the box, being observant and with the Lisk series it does that more than anything else because you think, whenever the teacher says to "remember this in the warm-up" while we are playing the piece, we think of that.

Musicianship learned in the warm-up applies to the literature. (Interview, 5/25/2017)

The students viewed these skills in a hierarchy in which the learning of certain skills leads directly to others, and that collectively, they all contribute to the development of comprehensive musicianship. Ultimately, they realized that these skills enable them to perform the music literature that they are playing in their ensemble with a level of musical accuracy and integrity.

Lisk techniques used at Grand Falls. The Lisk approach presents a myriad of techniques leading to the development of comprehensive musicianship within all students, examining the components of musical performance and developing strategies to enable students to achieve success in applying those components to their performances. The techniques addressed include

student-centered learning, warm-ups, use of imagery, listening strategies, rhythmic perception, dynamics and color shifts, and creative expression. Those specific techniques, and the context of how Mr. Carter uses them at Grand Falls Senior High School, are described below.

Student-centered learning. Early in his career, Mr. Carter knew that he wanted to steer clear of more traditional methods that emphasize mindless drilling and repetition. Mr. Carter recognized that the quality of student learning is enhanced when it is designed to enable students to make their own decisions, thus fully engaging them in the process. In searching for an approach to instrumental music instruction that is designed for such student-centered learning, Mr. Carter found that the Lisk approach met the criteria for what he had been seeking. He found the Lisk approach to be an organized, intellectual strategy for cultivating comprehensive musicianship skills in students that was rooted in student-centered learning. Mr. Carter shared the following thought: “It's such an educational approach, it's such an intellectual approach to teaching band, instead of the ‘let's beat the notes into them’ you know, higher, faster, louder, shorter kind of thing.” (Interview, 3/31/2017)

Mr. Carter recognized that the cultivation of solid musicianship skills requires that students constantly analyze and assess the quality of their musical performance.

Mr. Carter elaborated on the process:

Where they started to think about things, they were thinking about why they should do it, what it should sound like, and then the physicality of how to actually make it happen. They're smart kids and they'll figure that part out themselves. There were times today when I went, "oh, there are no tubas", but I was fine with the sound. The students listened and balanced accordingly, thinking about the pyramid of sound. (Interview, 5/25/2017)

For Mr. Carter, the Lisk approach is a vehicle for providing student-centered learning experiences in order to teach comprehensive musicianship skills.

Warm-ups. Mr. Carter liked the warm-up strategies that are unique to the Lisk approach for cultivating certain musical skills. He demonstrated some of these strategies with his students, as they focused their attention in the first ten minutes of a rehearsal:

The warm-up centered initially upon major chords, using the circle of fourths. Mr. Carter asked students to evaluate their own blend with the overall ensemble. He then had the students move to next pitch on their circle sheets, and also add a rhythm to the chord.

This reflected a rhythm that would be found in the music literature that was rehearsed later in the class. (Field notes, 3/31/2017)

Mr. Carter used the warm-up developed around instrument groupings and applied a rhythm from a piece being played in the rehearsal later in the same class. He tried to get students to develop a feeling for the rhythm as well. In another rehearsal Mr. Carter focused his group by starting with a tuning routine. “The teacher started with the tuning note "F" from a designated euphonium player. The note was passed among low instruments tuning first, followed by next highest instruments until it went around the entire band.” (Field notes, 5/25/2017) Mr. Carter started the tuning process by having the lowest instrument of the band sustain a pitch, then added instruments in the tuning process reflecting a pyramid of sound, where the lowest instruments provided a solid base for the instruments with higher timbres in the woodwind and brass families could match. The higher instruments also played proportionally softer than the lower ones, providing well-balanced sounds that created a warm band sound.

Mr. Carter makes certain that all students have the Circle of Fourths chart in their music folders, as he uses it at the start of each rehearsal. The Circle of Fourths chart may be found in Appendix L. Mr. Carter addressed one approach to the circle of fourths:

We use the circle sheet to teach kids transposition, so they can do it in warm-ups. We can talk about entering into silence, or out of silence with a student, and they understand it, they know the difference between that and an attack or a cut-off. It isn't about passing out a circle sheet and teaching them how to read it, that is just a tool. (Interview, 3/31/2017)

As Mr. Carter stated, there is more to the Lisk approach than the Circle of Fourths sheet, even though the Circle of Fourths sheet is one of the most recognizable features of the approach. The Circle acts as a gateway to introduce students to a broad variety of musicianship skills, as well as giving student musicians ownership of their performances.

Mr. Carter remarked about the use of the grand master scale, another Lisk warm-up element:

Teachers should be using the grand master scale approach as well as the beatless tuning approach. And so it is a lot more of the just pure Ed Lisk kind of approach to listening and the technique things like scales and everything like that. (Interview, 5/25/2017)

Mr. Carter believes that it is through the use of the grand master scale that students get an improved feeling for the scales and sense of tuning the intervals between notes of the scale and the beatless tuning approach helps students play more perfectly in tune with one another. This results in a beautiful, blended sound free of unintentional dissonance. Harold referred to the importance of the scale sheet used in conjunction with the circle of fourths:

I think that a lot of it is the circle of fourths and the scale sheet. It is perfect in the way that it is because it has taught us so much on how to read notes and rhythms, and how to do anything with music. (Interview, June 13, 2017)

Rachael also addressed how Mr. Carter used the grand master scale in rehearsals. “He'll switch it up. Like we'll do Grand Master, all slurring, change up, time meters, will do circle of fifths and circle of fourths, the chromatic.” (Interview, 3/31/2017) Mr. Carter credited the use of the grand master scale for helping his students play accurate scales in all keys. It demonstrated to them that scales with multiple sharps and flats are not more difficult to play than scales with simpler key signatures, but that they just have a different feel to them. The grand master scale chart may be found as Appendix M.

Use of imagery. Mr. Carter enjoyed using imagery with his students and expressed that sometimes students respond better to visual imagery of certain musical concepts rather than to try to explain things solely in musical terms: “Mr. Carter asked the people playing the lower notes to keep them long, and take the last note and ‘throw it against the back wall’ for a special emphasis.” (Field Notes, 3/31/2017) Mr. Carter was trying to focus the players on the amount of energy and intensity that the last note needed in the piece that the group was playing. The students responded effectively by giving that note the kind of impact that the director wanted.

Mr. Carter referred to another example of the use of imagery in the following:

Can you play your scales in the circle of fourths in ascending and descending chromatic order, and, my joke for my kids is, you know, "Let's try them two octaves. They ask why? And I'll say, do you want to learn half or a whole clarinet?" (Interview, 3/31/2017)

In this case, Mr. Carter pointed out that there are benefits, especially in technical feel and intonation development, for playing the chromatic scale in the full range of an instrument. He

asked students here if they only want to focus on the high notes of a clarinet, or if they should be focusing on the entire instrument, including the low register. Using imagery to describe musical concepts is encouraged through the Lisk approach. It adds a level of creativity and uniqueness to the presentation of ideas and is thought provoking for students. Mr. Carter finds that the use of this technique has helped him to be more effective in explaining some music concepts to his students.

Listening strategies. Mr. Carter placed the highest emphasis on the cultivation of listening strategies in his students at Grand Falls. In rehearsal, it was noted that the importance of beatless tuning was always encouraged. This is a continuous theme that is referenced in every aspect of the rehearsals in Grand Falls. Mr. Carter stressed that the utilization of beatless tuning was essential to all musical performances. Students responded positively to Mr. Carter's encouragement in this area, considering the precise tuning that they demonstrated throughout all rehearsals.

Other listening strategies help students understand how notes and silences begin, sustain, and end. Mr. Carter described how he talks with his students about the way in which notes begin and end. "And so, when you start talking to a student about beginning or articulating notes, it is important to remember that you don't attack notes - you enter out of silence, or you enter into silence." (Interview, 5/25/2017) Mr. Carter continued by relating the concepts of creating beautiful sounds with sound into silence techniques. "We can talk about entering into silence, or coming out of silence with a student, and they understand it, they get it, they know the difference between that and an attack or a cut-off." (Interview, 5/25/2017) By stressing the importance of both of the concepts of sound and silence as equal forces in music, the Lisk approach cultivates

the students' sensitivities towards the beginning, sustaining, and ending of notes. Mr. Carter continuously emphasized the importance of these strategies with his students.

Related to the treatment of sounds and silences and how they are applied to rhythmic figures, the Lisk approach uses a chart known as the Ruler of Time. The Ruler of Time helps students to visualize the concepts of beats, subdivisions, and durations, and how these relate to rhythmic construction, especially to younger, less experienced players. Mr. Carter used this with his younger players in younger grades where he found it to be the most effective. By the time students make it into the wind ensemble, the knowledge gained from working with the Ruler of Time becomes a given. The Ruler of Time Chart is included as Appendix N. Mr. Carter does not utilize the Ruler of Time much with the students in his top group, but he recognized its value: "I don't use this much, but it is helpful to younger players to help them understand duration and subdivisions." (Interview, 5/17/2017)

Dynamics and color shifts. Mr. Carter demonstrated an exercise to help his students conceptualize the intensity and textures of the music that they perform:

Mr. Carter moved to a dynamics shift exercise, where the group added and then lessened dynamic intensity. One could see that students noticed the differences in intensity and color through their facial expressions and body language. (Field Notes, 3/31/2017)

Students playing these exercises recognized the compositional device of dynamics and color shifting that can be created with different groupings of instruments, assisting with their overall accurate musical interpretation. Students at Grand Falls were adept in applying dynamic and color shifts to the ensemble music that they perform. These dynamics and color shift exercises may be found in Appendix M.

Creative expression. The concept of musical expression brings a level of musicality and

individuality to any performance ensemble, as it brings a level of expression unique to an ensemble to a performance of music literature. Creative expression includes such areas as interpretation, phrasing, musical expression, imagination, improvisation, and style. Mr. Carter remarked about student ownership in musical performance through student decision-making:

I was very intrigued by the Lisk approach because of the creative, educational approach to teaching music. Instead of just beating band music into kids, let's develop creative thinkers who become accomplished musicians, and let them make the decisions in the chair. If I'm rote teaching to a wind ensemble kid, I as a teacher missed something somewhere along the line...they are smart, creative thinkers. (Interview, 3/31/2017)

Mr. Carter identified that developing creative thinkers who make creative decisions as players is very important. He continued by addressing creative expression through the concept of how students should perceive notes. In his words, “Musical gains for them are that they think about music not as right and wrong, but as beautiful or needs to be more beautiful.” (Interview, 5/25/2017) Mr. Carter encouraged students to be more cognizant of the creative expression of musical notes and phrases rather than simply looking at playing musical lines with right or wrong notes.

Mr. Carter rehearsed a piece written for trombone solo with band accompaniment, and student creative expression was clearly demonstrated:

The trombone soloist in the Guilmant “Morceau Symphonique” played with beautiful tone, phrasing, and tasteful interpretation. The student performed a very musically expressive performance, along with demonstrating great range and playing technique. In addition to the soloist, the students did some great interpretative things with the piece, maintaining good balance with the trombone soloist. (Field notes, 5/25/2017)

The creative expression demonstrated in the soloist's performance was also balanced sensitively by the rest of the students in the ensemble, who took care to contribute musically to the composition without distracting from the soloist. A variety of creative expression elements covered in the Lisk approach that challenge students to think about interpretation, phrasing, expression, and style contributed to the musicianship that the soloist and the rest of the students in the ensemble demonstrated in their performance.

Mr. Carter continuously emphasized creative expression as a musical obligation that his students need to bring to every performance. The students recognized that the individual expression elements that they bring to the group give their ensemble its unique sound, empowering them to do their best.

Twenty-first century learning skills through the Lisk approach. The 21st century learning skills of critical thinking, creative thinking, collaboration, and communication were used extensively in Mr. Carter's classes at Grand Falls Senior High School, at the same time that he implemented the Lisk approach. Even though Mr. Carter was not familiar with the term "21st century learning skills," he acknowledged that they have been fundamental to his teaching of music for as long as he can remember.

I do not refer to the 21st Century Learning Skills during rehearsal although there is considerable overlap between the Lisk approach and the goals of these skills. And so in rehearsal, I have addressed collaboration and communication by asking students "are you communicating with me and with each other? Instead of listening, how are you communicating with each other, creative thinking and creative listening?" If they're not doing that in rehearsal, I'm not teaching the Lisk approach. I have been using the 21st

century learning skills of critical thinking, creative thinking, collaboration, and communication in my classes during my entire career. (Interview, 5/25/2017)

Mr. Carter pointed out that all four of the learning skills directly apply to music education, and he has been using them on a daily basis throughout his career.

These skills have broad applications to all areas of life as well. Frank addressed the value of collaboration skills as important general life skills in the development of teamwork in musical ensembles:

Well, I know that it's definitely taught me a lot of things in life, and I'm not even talking about music, because in my experience with sports, there's only a few people out on the field at a time, but with band, nobody sits on the bench, it's everybody's in or nothing. (Interview, 5/25/2017)

Frank remarked that, unlike in sports, “no one sits on the bench”. All students in band perform together as a group effort, and together they think critically, creatively, collaboratively, and communicate with one another. Harold also commented on the value of all four 21st century learning skills throughout life.

Those... words kind of encompass everything that you have to do in your life. And these are what those 21st century learning skills translate into; everything that you have to do in school and later in life. (Interview, 6/13/2017)

Harold emphasized that the four 21st century learning skills have multiple applications to all life situations, and not just in music education. All participants remarked that 21st century learning skills apply to all aspects of people's lives, even beyond the music education application, and they are essential for the cultivation of independent, self-reliant, life-long learners. They also emphasized that 21st century learning skills are integral to the process of performing music.

Critical thinking. The Lisk approach places a high priority on the use of critical thinking in music education, and it was used extensively in the Grand Falls instrumental music program. The analytical and assessment aspects of critical thinking provide students with the tools that they need to solve musicianship problems. Rachael pointed out the value of critical thinking as well as the interconnectivity of the learning skills:

Critical thinking really helps the students get engaged, especially since we have to analyze in rehearsals so early in the morning. It's just part of the warm-up that gets everyone engaged into the piece that we are about to play. (Interview, 5/25/2017)

The application of critical thinking in music education is not only an important device to solve performance issues, but it has an impact upon students' musical interpretations through musical analysis. Mr. Carter constantly reminded students to think critically about every sound that they produce with their instruments:

Mr. Carter asked the students "is what we are doing still a warm and pleasing sound? What is rule should we follow if the sound is too much?" After some critical assessment, he asked the students to again think critically "Is it still a warm and pleasing sound?" Students responded verbally and through performance. (Field notes, 3/31/2017)

As Mr. Carter stated, self-assessment and analyzation are important in critical thinking when addressing musical issues, as well as staying aware of what the entire ensemble is doing.

To achieve high quality, musical performances, it is essential that musicians listen constantly to the sound quality, balance, blend, and intonation that they create every time that they play their instruments. The constant analyzation and assessment that is required for producing superior tone quality, dynamic contrast, and accurate interpretations is necessary for musicians both as soloists and as ensemble members. In the ensemble experience, musicians

must constantly use critical thinking to judge how their individual musical lines fit with the overall group holistically. Mr. Carter fostered this principle in daily rehearsals through questioning his students to use critical thinking as they analyze the sound that they create.

Creative thinking. Creative thinking infuses human creativity, expression and interpretation into musical lines and phrases. Harold shared some thoughts about creative thinking and what it brings to musical performance in other ensembles:

Not necessarily for just like wind ensemble, but like we also have jazz ensemble at school, so people will be expected to possibly improvise at certain times on solos. He is definitely stressing creative thinking in our other ensembles. (Interview, 3/31/2017)

Harold remarked that other ensembles, such as jazz ensembles, utilize creative thinking in other ways, and especially through jazz improvisation, where performers creatively express themselves spontaneously with a harmonic background behind it and no written part using standard musical notation.

When students use creative thinking, they apply a “thinking outside of the box” mentality to find fresh solutions to problems that may arise, whether or not they be musical challenges or otherwise. In remarks related to creative thinking, Frank observed:

Creative thinking would be thinking outside of the box rather than just seeing something as it is. With creative thinking, we can think of it like shaping a melody because the composer, they may not have dynamics in but we still have to make it musical, because part of the arts is being creative. (Interview, 3/31/2017)

Creative thinking skills help students with decisions they make with musical interpretation and style. Mr. Carter reminded his students that creative thinking could even apply to composed

musical selections, where innovative musical adjustments can result in fresh, creative interpretations:

Mr. Carter asked students to add some unique phrasing to improve the musicality of the melody at the trio of "The Melody Shop" march they were rehearsal. Later in the class, in another piece, Mr. Carter asked the ensemble to deliver the musical phrases passionately, as well as give shape to the lines. (Field notes, 3/31/2017)

Even though creative thinking is an important 21st century learning skill, Grand Falls students cited creative thinking the least when they talked about their own applications of learning skills. However, when they were asked about the concept directly, the students were all in agreement that performers depend heavily on creative thinking in order to make interpretative and expressive decisions about the music they are playing.

Collaboration. Another critical component of the Lisk approach is the emphasis placed upon working together collaboratively in a musical ensemble in order to address musical performance issues. The concept of collaboration was cited by all Grand Falls students as one of the most important aspects of successful musical performance in any ensemble. Eileen shared the following thought about collaboration. "Collaboration is making sure that you are blending your sound and not overpowering or playing too quiet." (Interview, 3/31/2017) Successful musical collaboration is enhanced when all players in a group understand one another from a team perspective. Frank referred to the teamwork aspect of collaboration:

I've done sports, and there are only a few people out on the field at a time, but with band, nobody sits on the bench, it's everybody's in or nothing. It's not just there's one good trumpet player; it's a whole group effort. With collaboration, you are working together to deliver a product with the musicians and the conductor. (Interview, 5/25/2017)

The theme of teamwork skills development as an important aspect of collaboration consistently emerged in conversations with all Grand Falls participants as one of the most useful elements of 21st century learning skills that relate to musical performance.

While collaboration skills are somewhat related to communication skills, since communication skills are needed to collaborate with others, Mr. Carter pointed out a subtle difference with collaboration. “Communication and collaboration are subtly different, because they are trying to solve problems together through collaboration and they start thinking about things in groups.” (Interview, 3/31/2017) Balancing and blending chords in an ensemble require that musicians collaborate with one another. Students also collaborated with one another as they were listening while playing their ensemble pieces, as Mr. Carter rehearsed the ensemble in a section of a piece:

Mr. Carter challenged the group to think collaboratively and whom they should listen to...as in the melodic section with the bells. The teacher asked the ensemble to play the musical phrases passionately and give shape to the lines. (Field notes, 3/31/2017)

The Grand Falls participants identified collaboration as one of the most important and useful 21st century learning skills that apply to high caliber musical ensemble performances and referred to the value of teamwork to their overall success. Working together and constantly being aware of one another’s contribution was an attribute that continued to surface in discussions.

Communication. Any effort that involves more than one person requires that good communication exists between all individuals, and the Lisk approach places a high priority on the development of articulate communication skills, not only between musicians and the conductor but also among the musicians themselves. The cultivation of quality communication skills seemed to be a priority at Grand Falls Senior High School, and all participants in the

instrumental music program acknowledged this importance. Good communication skills are key to addressing musical challenges. Rachael shared the following regarding communication in music:

I feel like I have learned a lot, since it helps us listen to each other. Since it is such a big part of being a good musician, you always have to be listening to each other; you have to be communicating a lot. (Interview, 5/25/2017)

Rachael emphasized that communication and listening skills are essential for members of a musical ensemble to function effectively with one another. Harold concurred, and pointed out that communications skills might be one of the most important 21st century learning skills in an ensemble:

In band, you have to be listening to everything and seeing how your sound fits in. You always have to be aware of your surroundings, and if you're not communicating well, it's not going to sound great. Communication between band members and the director... being aware of what's going on all of the time. (Interview, 3/31/2017)

For Harold, effective communications skills are central to the successful performance of any musical ensemble. Mr. Carter also addressed the need for communication between the conductor and the players. "In a rehearsal, I ask them "are you communicating with me and with each other? Instead of listening, how are you communicating with each other?" (Interview, 5/25/2017) Mr. Carter stated that good communications skills between band members and the conductor are vital to performing with musicality in an ensemble, and that they are the key to using the Lisk approach.

Any group effort requires good communication among all participants, and this is especially true in musical ensembles. The Lisk approach treats the development of good

communication among musicians as essential. All participants in Grand Falls agreed that quality communication skills among ensemble members and conductor alike were key to successful ensemble performances.

Summary. Grand Falls Senior High School is a mid-sized school instrumental music program that has been utilizing the Lisk approach for a number of years. The director's presentation of the Lisk approach to his students was unique in that he received direct training from Lisk himself and that he brought Lisk into his school a number of times for feedback and suggestions. Even though the teacher did not use the "21st century learning skills" label with his students, nevertheless he and his students recognized the skills of critical thinking, creative thinking, collaboration, and communication as being essential to their studies as developing musicians. Students also recognized that the techniques of the Lisk approach contributed exponentially to their understanding of how to function in a musical ensemble. The teacher acknowledged that he had witnessed significant musical growth in his students over the years through utilizing the Lisk approach. The students recognized that, when they participated in regional music festivals, their Lisk training provided them with broader musical knowledge that they did not see in students who attend other schools. Students from Grand Falls planning a career in music education expressed an interest to learn more about the Lisk approach themselves that they could apply in their future teaching.

Lake Onondaga High School

Students entered the band room and hurried immediately to their lockers in the band room or in the rear instrument locker storage room to get their instruments. There was some socializing between students, but they seemed anxious to get to their seats to do some individual prep work before warm-ups. However, the smiles on their faces indicated that they were happy

to be getting ready for band. Before too long, musical sounds of all kinds soon enveloped the entire room as students quickly started to warm-up in all kinds of ways ranging from practicing excerpts of band pieces being performed, long tones and mouthpiece buzzing, advanced scalar warm-ups, to noodling on fast technical lines. A high level of energy and enthusiasm was felt around the room in anticipation of the beginning of the symphony band rehearsal. When the teacher stepped on the podium, the students became instantly silent and focused. Mr. DiNapoli greeted the students and then had the group play some scales and long tones. The overall tone quality was so remarkable that it was like observing a professional band. All of the exercises were completed without notation, with only the Circle of Fourths sheet used as a guide.

Five minutes into the period, Mr. DiNapoli initiated a tuning exercise beginning with the tuba players. The group tuned on “F” concert, and played a number of sustained tones, spending a good four minutes with this. The teacher then moved the ensemble into an exercise using the Grand Master Scale. The tuning was phenomenal and beatless. Within the next three to four minutes, chromatic scales were played across the whole circle of fourths, which is not typical for a high school band. This was followed by some student improvisations in various keys. (Field notes, 3/24/2017)

Introduction. Lake Onondaga High School is located in Lincolnshire, New York, a suburban community located next to a prosperous city in Central New York State with a balance of blue- and white-collar residents. The village is located on the shores of Lake Onondaga and it is a bustling community built on some flat plains and gently rolling hills. While the population of the village of Lincolnshire is small, the Lake Onondaga Central School District population is regional in nature, encompassing portions of two towns placing over 60,000 people within the boundaries of the school district. The high school population makes it one of the larger high

schools in New York State. When entering the high school, one immediately senses the size of the facility. It is comprised of several connected buildings that are, in some cases, three stories high. With a school population of over 2,500 students, this school is larger than some small colleges in population. The school is approximately 30 years old and is well-maintained. There is a music suite consisting of a main band room, another combination orchestra and band room, and a chorus room with instrument storage rooms, several practice rooms, a theory classroom and an auditorium to serve the needs of the four high school bands, full symphony orchestra, two jazz ensembles and multiple choruses in the building.

A number of trophies, plaques, and photographs that represent many successful years of performance activity and music festival participation are on display in the band room where the wind ensemble rehearses. At least two of the four bands at Lake Onondaga High School rehearse in this room. The room has a flat floor to provide enough flexibility for the set-up requirements of the different ensembles and has acoustically-treated walls and ceiling. It contains modern instrument and sheet music storage facilities, music posture chairs, music stands, and a wide variety of percussion instruments.

The participants. All of the student participants at Lake Onondaga High School were seniors in grade 12. Three of them worked with the same band director during their high school years and one moved to Lake Onondaga at the end of the ninth grade from another high school.

Claire. Claire was an outgoing, friendly person who is interested in becoming a music educator. Claire played Bb clarinet and was the clarinet section leader in the wind ensemble. She also plays some saxophone, violin, and piano, as well as being a vocalist. Both of Claire's parents have doctoral degrees in music, and both are music instructors at a local university. Claire's first thoughts about the Lisk "Creative Director" series included the following:

The approach has given me a lot of ways of becoming a better musician. But, it's given me insight that not only I can use for myself, but also for when I am teaching others someday. I can try to inflict it on other people and give them the right ideas pertaining to music...I definitely feel like I have blossomed as a musician because of this approach, and it has made it easier for me to learn. (Interview, 3/24/2017)

Jason. Jason was an accomplished euphonium player. He also intended to make a career out of music education. Jason emphasized that his band experience is an important part of his life. He moved to the Lake Onondaga School District after attending a different school until the end of the ninth grade. Jason's first observations about the Lisk "Creative Director" series included the following:

I think the Lisk 'Creative Director' series is really special. When I was in ninth grade, I went to a neighboring school district from here and they didn't use it so I have a better comparison about what it looks like when you don't use the Lisk 'Creative Director' series vs. when you do. The band program at Lake Onondaga plays clearer, they shape the dynamics more, and sound better. I think that this approach enhances the human aspect of teaching. I think that I am closer with my band director than I am with any other teacher as the director looks at us differently than a regular teacher would. (Interview, 3/24/2017)

Emily. Emily was a trumpet player and was a person of few words in one minute and then very effervescent and talkative the next. Emily acted as the trumpet section leader for the wind ensemble. She loved band and loved her instrument . . . in fact, she called her trumpet "my best friend." When asked about her impressions of the Lisk "Creative Director" series used in her high school band program, Emily responded as follows:

Through this approach, I think that I just learned to be more comfortable as a musician, once you get down the elements that I am taught, the repetitive things help me, because I'm not really good at retention. With music, it becomes second nature and so therefore kind of makes me feel more comfortable playing a piece and being able to kind of feel it instead of making it up like some kind of robot. (Interview, 3/24/2017)

Sebastian. Sebastian was an alto saxophone player who intended to continue playing his saxophone after high school while pursuing a career in the social sciences. Sebastian often did not speak in complete sentences, yet packed a lot of information into his participant interview. Sebastian's initial thoughts about the Lisk "Creative Director" approach were as follows:

It's more communicative, it's more, my teacher likes to do a lot of analogies . . . that's what he likes to do, to get the point across of what Mr. Lisk, in the series that he has outlined. That's my major experience with it. I've learned, so to give you some specific examples, my teacher does a lot of times dynamics that are marked in. So, like even if it's marked mezzo forte, it really needs to be mezzo piano. Something like that, you know dynamics are conditional and a mezzo piano is not always the same thing in different pieces. It has taught me to communicate on a higher level of musicianship. (Interview, 3/24/2017)

Mr. DiNapoli. The teacher, Mr. DiNapoli, has used the Lisk "Creative Director" series for his entire career. He first came in contact with Mr. Lisk's work as a senior undergraduate student at Syracuse University, where he heard the Oswego High School Wind Ensemble performing under Mr. Lisk. Mr. DiNapoli was a well-organized and efficient teacher who was looking to make a real difference in the lives of his students. Mr. DiNapoli taught the top wind ensemble at Lake Onondaga Central High School, and his colleagues taught the three other high

school bands that exist in the same school. One of his other two band director colleagues was a former high school student of Mr. Lisk's who grew up in the "Creative Director" series and the other band director colleague is a former student of Mr. DiNapoli's at Lake Onondaga Central High School, who also grew up using the series. Not counting the string and vocal faculty members, the size of the music staff at Lake Onondaga Central High School is quite large. With the whole staff fully trained to utilize the Lisk "Creative Director" approach, Mr. DiNapoli is in a unique position to bring the concepts of the Lisk approach to a high level.

Mr. DiNapoli described his initial work using the Lisk "Creative Director" approach as follows:

Let's see, the first time that I ever saw Ed's work, I was at Syracuse University. He was heavily involved in the NYSBDA (New York State Band Directors' Association) . . . he was one of the creators of it, and the Oswego High School Wind Ensemble was performing. I was a senior at SU, and I [had] heard about him . . . [I decided that] I've got to hear this band. And it was awesome. So that was my first seeing him. Eventually, we had him visit our school and assist with training our staff in his approach. (Interview, 3/24/2017)

Cultivating musicianship. The music program at Lake Onondaga High School was highly advanced and dedicated to cultivating comprehensive musicianship skills in all of its students. It has developed a reputation for rivaling the level of some college and university band programs, thus placing demands on the student musicians to play with sophisticated performance skills. Mr. DiNapoli emphasized that a big part of this musicianship training was focused upon equipping students with the tools that they need to make musical decisions:

I think the biggest thing is having students making musical decisions. I think that's what we've allowed them to do. So, in rehearsal, we might be playing an F Major chord, we are going to crescendo for 9 beats, decrescendo for 9 beats, silence, let's say, of four counts of silence, and let's go on to the next tonality. And let's do this dynamic shaping again. But you have to make musical decisions as the individual, within the ensemble, without sticking out, or playing with poor tone quality, balance and intonation, or we can do color shifts of any grouping you want. (Interview, 5/30/2017)

Significant to this statement is the emphasis that Mr. DiNapoli placed upon equipping student musicians with the necessary skills to make informed student decisions. He stressed that the ownership that students gain from making their own musical decisions results in performances that reflect the unique personal musicianship skills of the individuals.

With comprehensive musicianship skills at Lake Onondaga High School serving as the focus for this program, the music staff here has gone to great lengths to identify and share those essential skills with all of its student participants. Mr. DiNapoli constantly reminds his students to think about their responsibility to the group by bringing the necessary individual musicianship skills with them to rehearsals every day. Students shared their thoughts about what good musicianship skills mean to them, beginning with Claire:

It means being well versed in all aspects of musicianship...the technical stuff, the musical things, the basic things, and complex things. You need to have innate musicianship, but you have to be able to work well with others, and understand your role in the ensemble.

And also, what skills to use in certain spots where appropriate. (Interview, 5/30/2017)

Claire referred to a variety of component parts that define musicianship, as well as ensemble awareness. Emily agreed and added:

Depending upon your age and the skill level, technique and musicality are two very different things. You know, with musicality, depending upon the instrument that you are playing, you don't need to move your hands very fast or your fingers, and you don't need to be focused on notes, but more so, musicality is just feeling it, because there is a huge difference if you can feel it or not, or if you know where you are supposed to be beyond that on the pyramid of sound as opposed to if you just don't know. (Interview, 5/30/2017)

Emily separated technical skills from musical expression skills as being distinctive from one another in her view of the definition of good musicianship. Sebastian added that acquiring good practice skills lead to developing good musicianship:

Knowing how to practice on your own, knowing how to practice, and when you're practicing wrong, walls can arise. And being aware of yourself as a musician, articulations, listening, and paying attention to what we are doing. (Interview, 2/23/2017)

Sebastian made a distinction between the use of good and poor practice habits in developing effective musicianship skills. He also referred to the importance of self-awareness and listening to others when making music.

The students indicated that there are many elements that go into the development of good musicianship skills including instrumental playing technique, fundamental reading skills, musical expression, working together in collaboration, good listening skills, developing a work ethic, playing with precision, and establishing good practicing habits. They also emphasized that it is important for student performers to look beyond the notes and fundamentals to get to the essence of the music literature they are learning in their journey to achieve fluency in musicianship.

Lisk techniques used at Lake Onondaga. The Lisk approach provides directors with a number of strategies to teach students performance and perceptual techniques that contribute to the development of their comprehensive musicianship, which was a priority for Mr. DiNapoli.

Student-centered learning. In utilizing the Lisk approach, Mr. DiNapoli led his students into their own learning through the variety of exercises and techniques. Mr. DiNapoli emphasized that the Lisk approach is based on a natural way of learning that leads to the cultivation of comprehensive musicianship skills. Using a model of student-centered instruction, the approach allows students more ownership and engagement in their learning. He continued by noting the importance of student decision-making in the approach:

You have to make musical decisions as the individual, within the ensemble, without sticking out, poor tone quality, balance and intonation, or we can do color shifts of any instrument grouping you want. Crescendo, decrescendo, accent, all of those things.

(Interview, 5/30/2017)

Mr. DiNapoli stated that the Lisk approach encourages directors to implement student decision-making in their rehearsals as a means to facilitate the teaching of musicianship skills. He stressed that student ownership of their own their learning leads to higher levels of comprehension in the discovery process about what it takes to become musically proficient as performers.

Warm-ups. At Lake Onondaga High School, students did not perceive the warm-up to be comprised of mindless exercises, but rather, as success strategies to help them perform their music at the highest level possible. Mr. DiNapoli pointed out that he relates warm-up strategies to the selected literature selected being rehearsed:

So that's one thing too about Ed [Lisk's] world, when I look at literature that we are going to play, I can be creative in teaching the students concepts about rhythm and tonality, so we can use all of that stuff in the warm-up process. (Interview, 3/24/2017)

Mr. DiNapoli referred to the creative ways of looking at teaching students the concepts of rhythm and tonality that the Lisk approach provides. He also reinforced that the music literature being played that day is the basis for which exercises are used in the warm-ups.

Another element of the warm-up is the development of focus early in a rehearsal. Mr. DiNapoli demonstrated an approach for focusing his ensemble students in the first ten minutes of a particular class:

The teacher had the ensemble complete a warm up 5 - 7 exercise descending around the circle of fourths. Well-balanced chords were formed when the students descended in this exercise. The tuning was impeccable in all keys. After four minutes of this exercise, the teacher continued the warm up using extended scales with concert F. The fast execution of this exercise demonstrated by the students was outstanding in all keys. (Field notes, 5/30/2017)

Because the tuning process requires so much individual concentration in order for students to perform with beautiful sound, it provides a good starting point from which to begin a rehearsal and get students' attention focused.

The logical construction of the circle of fourths is a starting point from which a large variety of musicianship skills can be taught. A circle of fourths chart for the students' use may be found in Appendix L. All Lake Onondaga students had copies of the circle of fourths in their band folders so they were easily available on a daily basis. Mr. DiNapoli remarked on his usage of the circle of fourths:

With the circle of fourths, I can develop technique, through scales, the digital patterns, the extended scales getting their fingers going, so I can develop technique, tone quality, musicality, sonority, mixing up different scales, chords, and have a kid improve being creative. (Interview, 3/24/2017)

Mr. DiNapoli pointed out that there are so many different elements of musical technique and sound concepts that may be taught through the circle of fourths. He continued with a reference to his usage of the circle of fourths when he guest conducted an all-county band:

I did an all-county band in a county close to here five or six years ago. And, I told the teachers there "I'm going to bring the circle of fourths with me". And, we are going to play all our scales. A lot of those students didn't know the scales. But, in two days, we played all 15 major scales. So, I hope that I opened some eyes up. (Interview, 5/30/2017)

The use of the Circle of Fourths sheet in this case showed that students with little knowledge of scales were able to perform and access all of the major scales in just two days. The sheet does not distract them by adding note and rhythm reading while they learn their scales and depicts the pitches in a line of sequentially logical letters.

The mental visualization of the grand master scale assists students with their learning of scales in both major and minor, as well as the chromatic scale. Jason credited the use of the grand master scale and the circle of fourths as important tools for students to use when learning scales. He also added the following insights about the grand master scale:

I think I learned a lot of music theory when looking at this approach, especially with the grand master scale and how that applies to music, it helps me out a lot, especially where I have to go and be able to play in keys such as B Major or C# Major. So I really like that

it teaches you an easy way to memorize the scales and gives you a strong base. It gets you more involved with the ears and listening for intonation. (Interview, 5/30/2017)

Jason referred to the use of the grand master scale in terms of thinking about playing in specific keys and also engaging the students' listening skills.

Students were taught to play all major and minor scales and used a separate Scale Mastery chart from the Lisk approach to assist with their execution of the grand master scale. This Scale Mastery chart, used in conjunction with the grand master scale is found in Appendix O. The intent of the Scale Mastery chart is to help students make connections with the mind, body, ears, and eyes when performing scales. This sheet helps to organize the student's approach to scales in a four-step process: students recite pitch names, they finger the scales on their instruments, they dictate the scales internally while playing, and finally, they dictate the scales internally while playing and reading them. It is a device that students use to help them mentally visualize scales as they work to execute them perfectly.

These charts used concurrently, including the Circle of Fourths, The Grand Master Scale, and Scale Mastery provide a starting point from which to teach comprehensive musicianship and are fundamental to the Lisk approach. Mr. DiNapoli pointed out that scales with multiple sharps and flats are not any more of a challenge to play than ones with less flats and sharps. All scales are important, and these Lisk approach key and scale devices help students to access all scales more efficiently. The grand master scale may be found in Appendix M.

Use of imagery. Mr. DiNapoli drew upon the use of imagery frequently with his students, and made the following observation:

By using imagery, I tell the kids "Make up words in your mind because there is something to be said. You can make up words." I do, as you play. So, creativity is

important. Also saying things like "Day to-day" instead of "1-e-and-a", or "One-la-li" then second chord instead of thinking about a triplet into the second chord. I like to replace counting syllables with word rhythms to improve feeling. (Interview, 3/24/2017)

In this instance, Mr. DiNapoli found that the use of imagery through mnemonic syllables and descriptive words helped students to develop a better feeling for certain rhythms. Drawing on the same mnemonic syllables in the classroom, Mr. DiNapoli demonstrated another example of this use in the following:

The teacher asked students to think about the concept of "Day to-day" instead of "1-da-2" when addressing a rhythmic problem that was played in an inaccurate way. Once students started thinking about this concept, the rhythmic problem seemed to go away in the subsequent playing of the example. (Field notes, 5/30/2017)

It was significant that the rhythmic problem was solved when the students thought about this rhythm through words, similar to concepts found in Orff Schulwerk.

Imagery usage is a Lisk technique that is utilized often by Mr. DiNapoli in his day to day encounters with his Lake Onondaga students to help them understand abstract musical ideas. It is another tactic rooted in the Lisk approach for teachers to use to teach comprehensive musicianship skills to students through the creation of mental pictures of sound concepts.

Listening strategies. The development of sound listening strategies was a major goal that Mr. DiNapoli established for his students. He made the following comments about the process of tuning:

It's about focusing on tuning, tone, balance, and blend. In rehearsal, we tune to a concert F, beginning with the tuba, the fundamental, and everybody knows their role as far as when to enter for tuning and get rid of waves for beatless tuning. (Interview, 3/24/2017)

He emphasized the word *focus*, because it is the focus of listening skills that has a major impact on tuning. The concept of beatless tuning is central to the teaching about the development of sound intonation skills at Lake Onondaga, and it was evident that students are connecting with this concept based upon the solid intonation skills that they displayed in their playing.

Listening strategies might be used in different ways depending on the musical selection being performed. Jason concurred and pointed out that these strategies bring musicianship to another level:

You can think about balance, you can think about the pyramid of sound, you can think of about how in tune that you are, and once you use those kinds of mechanisms, it really helps you bring your musicianship playing to a whole other level. (Interview, 3/24/2017)

Jason referred to tuning as it relates to the concept of balance in terms of how parts fit in with the total ensemble.

Developing a concept about how notes begin and end is another aspect of developing good listening skills. This concept, combined with how it is assimilated with rhythmic figures, leads to the players' heightened sensitivity towards articulations and releases of notes. Mr. DiNapoli made the following observations about how he moves his ensemble from sound into silence or vice-versa:

We might be playing an F Major chord, we crescendo for 9 beats, decrescendo for 9 beats, add four counts of silence, and then go to the next tonality. They are developing their aural skills for listening purposes across the ensemble. (Interview, 5/30/2017)

In this exercise, Mr. DiNapoli had students shape an F major chord with contrasting dynamics with defined durations of sound and silence. Moving sounds into silences, or the reverse, silences into sounds in sensitive, thoughtful ways is important to the development of musicianship with

the Lisk approach. This priority was also reflected in the student performances of the Lake Onondaga instrumental music program.

In developing concepts of how sounds and silences begin and end in rhythmic figures, Lisk devised a chart known as the Ruler of Time to create an image for students that visually demonstrates how beats and subdivisions of beats should be played. The Ruler of Time especially helps younger, less experienced players with rhythmic counting skills. A visual chart of the Ruler of Time may be found in Appendix N. Mr. DiNapoli referred to the Ruler of Time in the following remarks:

In terms of our usage of his ruler of time concept that looks at durations and their subdivisions, we've done a little bit of it, and, if the beat is closer, it's faster. We've done some of it, but not extensively. (Interview, 3/24/2017)

The Ruler of Time is a device that assists students with counting rhythms, focusing on the concepts of beats, subdivisions, durations, and rhythms, primarily to less advanced players. Mr. DiNapoli pointed out that it is not used much with his advanced students at Lake Onondaga, but it is utilized with younger, less experienced students in the district.

Dynamics and color shifts. Mr. DiNapoli indicated that Lake Onondaga students think about the concepts of dynamics and color shifts when they are considering ways of adjusting the intensity and textures of the music that they perform. The emphasis that the Lisk approach places on dynamics and color shifts enables students to think creatively about how they perform dynamic intensity and timbral color shifts more effectively. Having students understand this compositional technique contributes a unique perspective to their studies about comprehensive musicianship. Students at Lake Onondaga High School were well versed in applying dynamic and color shifts to the ensemble music that they encountered. These exercises appear in

Appendix M under “Dynamics and Variations”. “We can do color shifts of any instrument grouping you want. Crescendo, decrescendo, accent, all of those things.” (Interview, 5/30/2017) Mr. DiNapoli related dynamics, color shifts, and articulations to one another. Jason concurred, and added:

And, not only does the band program at Lake Onondaga...play clearer, you know they can shape the dynamics more, and it sounds better. This is all related the use of the Lisk approach here. (Interview, 5/30/2017)

Students at Lake Onondaga recognized that the use of the Lisk approach contributed significantly to the overall sound that their ensembles achieved when performing, along with helping them to shape dynamics effectively.

Creative expression. Creative expression brings the musician’s own concepts of musical expression, imagination, interpretation, improvisation, and style to life in musical performances, and the Lisk approach places a special emphasis on it. Mr. DiNapoli remarked about one instance that enabled students to express themselves creatively:

You can be as creative as you want with this approach. I could have the whole band play any chord that you want - major, minor, diminished, augmented, 7th, 9th chords - and I could have another student improvise over that tonality in an instant, fostering creativity in expression. (Interview, 5/30/2017)

It was pointed out that this approach allows for flexibility in creating exercises in improvisation.

He made an additional remark about another use of creative expression with improvisation:

In terms of creativity, we had a student play in F on xylophone in the style of a march with band sustained on a note, with an interesting improvisation resulting. Another example was when the band sustained a minor chord (in harmonic) with the euphonium

improvising a melody in the style of a ballad. (Interview, 3/24/2017)

Improvisation exercises give students spontaneous opportunities to be creative and help them to play more expressively.

Mr. DiNapoli utilized another concept from the Lisk approach known as the “Natural Laws of Musicianship” which examines the musical properties of notes. Lisk addresses the tendencies of notes to move towards opposite directions in duration (short versus long) and range (high versus low) when they progress through musical lines. He describes the concepts as short notes seeking long, long notes seeking short, high notes seeking low, and low notes seeking high. These ideas, along with the elements of creative expression, are all presented to students to broaden their musicianship skills. Claire pointed out what this concept means to her:

If the entire group is on the same page with an idea - I keep coming back to short seeks long because that's just my favorite. But, if the entire group knows to do that, short seeks long, or low seeks high, then everyone is on the same page and everyone connects, and that's something that everyone can relate to. (Interview, 5/30/2017)

Examining these musical properties does give students insights into the principles of movement in musical phrases. Emily concurred and added:

Well, I know I've worked with all three band teachers here, from freshman to senior year, and they all really emphasize the importance of natural laws of musicality, like long seeks short, low seeks high, high seeks low, and all that good stuff. (Interview 3/24/2017)

Students recognized how notes move musically in phrases, and how this is emphasized in their school ensembles. Overall, students at Lake Onondaga High School acknowledged that creative expression is essential when performing and shaping musical phrases. They were also aware of

how the contributions that their training in the Lisk approach helped them perform more expressively.

Twenty-first century learning skills through the Lisk approach. The 21st century learning skills of critical thinking, creative thinking, collaboration, and communication were evident in Mr. DiNapoli's use of the Lisk approach. Mr. DiNapoli acknowledged that he addresses all four of the learning skills in music education on a daily basis and has been doing so for his entire career. Mr. DiNapoli referred to the importance of the learning skills in the teaching of music:

I'm not sure that the term "21st century learning skills" has reached us here in New York State, but we use these four learning skills extensively. We don't lock them in on etude books or rehearsal balance books, symphonic techniques, and all of those method books, like "Treasury of Scales". So, in terms of critical thinking, every student needs to play the correct scale. The approach provides many strategies for being creative, such as trading 8s back and forth in 4 bar phrases. (Interview, 5/30/2017)

Mr. DiNapoli related the teaching of 21st century learning skills to the teaching of music, referring specifically to critical thinking and creative thinking. Claire also looked at this relationship by addressing her acquisition of the learning skills through her study of music using the Lisk approach:

I think working in music has taught me so many life skills . . . how to work in a group and that I need to know what my part is in the group setting so that I can contribute. So, it has taught me people skills, creative skills, and analytical skills. (Interview, 5/30/2017)

Claire recognized that the cultivation of such learning skills as collaboration and creative skills were all related to her study of music using the Lisk approach. She continued this line of thought by referring her use of 21st century learning skills in her journal:

I feel that I don't learn the techniques as much as I am just constantly applying them.

Through constant use of the skills, I develop them, thus learning more things about them in the process. Unlike learning about an event in history, learning about these techniques can be applied every day and expanded upon. (Claire's Journal, 5/30/2017)

Emily agreed, and added that her communication skills especially were enhanced:

I think that music has given me valuable experiences, in different kinds of ensembles.

And all of them require different types of communication and life skills and being able to carry those out effectively, it's extremely important to me, because I'm going into music education, but it just teaches me the basics of communication and the basics of being able to talk to each other. (Interview, 5/30/2017)

The emphasis that Emily placed upon the importance of communication skills between people in the study of music was noteworthy here, as well as referring to those skills as a part of the foundation of this process.

The Lake Onondaga participants all emphasized that the 21st century learning skills of critical thinking, creative thinking, collaboration, and communication contribute substantially to the study of music. It was also significant that the participants made continuous references to the relevance of 21st century learning skills to all areas of peoples' lives.

Critical thinking. Musicians constantly use critical thinking skills when they process, evaluate, analyze, and assess aspects of their playing in order to perform at the highest level of success possible. The Lisk approach presents strategies to address all of the performance

processes that require critical thinking as a way towards developing comprehensive musicianship skills in students. These skills are often utilized spontaneously by musicians in live performances. The teachers at Lake Onondaga High School placed a high emphasis on the development of critical thinking skills. Jason addressed critical thinking skills in musical performance:

When you are tuning, you are listening for the pitch of your instrument relative to everybody else, making observations. You are using your ears and senses and making critical observations and applying that to what you are doing. You play in tune in terms of critical thinking in the classroom, thinking in the situation. (Interview, 3/24/2017)

Jason described the various steps in musical performance that include making observations, listening carefully, and utilizing one's other senses. Sebastian pointed out the value of critical thinking to get to the essence of a piece of music:

In a musical piece, you have to critically think about what it was meant for. We have a piece called "Tenebrae", by Adam Brennan. It's actually about a kid who commits suicide in his school. But, there are a lot of pretty parts in there, so it more has to do about just darkness in general, because that's what it translates to in Latin. So, one of my teachers gave us this whole story on it. So that gives you a different meaning. You have to critically think about what you are trying to portray, because, in music, you don't have words. (Interview, 5/30/2017)

Sebastian referenced the importance of context in understanding the essence of a piece of music and applying critical thinking to that context as a means to appropriately interpret that music. He also pointed out that in instrumental music, the essence of a piece of music needs to be

communicated non-verbally. Mr. DiNapoli asked students to think critically while evaluating the kinds of musical sounds the group was making:

Well, I put a lot of responsibility back on the student in a rehearsal. Everybody knows their role as far as when to enter for tuning and to find the target pitch, and get rid of waves, so we have beatless tuning. So, that's part of critical thinking, making those decisions, to play in tune, so that's just one aspect. Interview, 5/30/2017)

He referred to the importance of critically thinking about musical performance by constantly listening and analyzing their sound quality, balance, blend, and intonation. This process is critical to high level music making.

Critical thinking is a fundamental part of the constant self-assessment processes that musicians use while performing spontaneously. As he reinforced the need for his students to always analyze the sounds that they produce, Mr. DiNapoli stressed critical thinking as an essential learning skill in the band program at Lake Onondaga High School.

Creative thinking. Musicians constantly make creative choices with musical interpretation and expression as they perform using creative thinking skills. Creative thinking is a way to look at a challenge and think “outside of the box” to find innovative solutions, and it is highly emphasized in the Lisk approach. Claire referred to creative thinking in its application to musical performance:

With creative thinking, while everyone normally reads what's on the printed page, sometimes you've got to go beyond that. It is improvisation, exploration of new ideas, being vulnerable – creativity opens up a person to be vulnerable. (Interview, 3/24/2017)

Claire's emphasis on looking beyond the printed page was significant in developing ideas about creative thinking. Emily further developed some thoughts about creative thinking and its relationship to performance:

In creative thinking, when you are in a piece, it could mean something very different in one piece than in another, and you can be creative with these ideas and it brings awareness to the piece and what you are doing in the moment. (Interview, 5/30/2017)

Emily observed that individual musical selections might require different kinds of creative treatment in terms of musical expression and interpretation depending upon balance and part significance factors.

Jason addressed creative thinking skills used in jazz improvisation as well as their application to another discipline:

In creative thinking, when you are thinking of something such as jazz improvising, you're thinking "these are the chords and the scales that I can use to play this jazz improvised solo, and this helps with your creative thinking and the creativity side of your brain a little better. Developing skills like creative thinking in music helps me with something such as like an English project, where I have to be more creative and express myself better. The skills that I am developing here do show up there. (Interview, 5/30/2017)

The creative skills that Jason uses in jazz improvisation surface for him when he is studying other disciplines outside of music.

Sebastian also referred the use of creative thinking skills to improvisation and in other art forms:

Creative thinking, of tuning, puts you on the next step of hearing things. Having a good ear then translates to a lot of good improvisation, on the creative side. You definitely

need to have a good ear, a basics to be kind of creative in that way, just as an artist needs to have basics in painting and sculpting, to make a good piece. (Interview, 5/30/2017)

The use of creative thinking is fundamental to the way in which the concepts of creativity, musical expression, and interpretation are applied to musical performance. It contributes to the essence of the music and gives the music a feeling of soul. The emphasis on the development of creative thinking skills in the Lake Onondaga High School instrumental music program enabled students to perform with sophisticated levels of musical interpretation and expression.

Collaboration. The development of collaboration skills among all musicians is fundamental for any musical ensemble to solve performance challenges. Strategies for ensemble collaboration are presented in the Lisk approach to emphasize the need to apply collaborative teamwork skills to all ensemble performances. Sebastian observed the following about collaboration:

Especially in orchestra or band, you're always working and playing with people. You don't necessarily work with other students in class, like in a normal classroom setting, just because you are all learning, and you all have to take a test and you're all taking individual tests, it's not a partner test, typically. (Interview, 5/30/2017)

Sebastian pointed out that the basic premise of performing in a musical ensemble is the need to have all group members working together. Unlike individual tests given in other classes, a musical ensemble works as a team to create a final product that could be considered a test done in collaboration with one another. Claire stated that good friendships often result from collaborative teamwork. She continued to develop this idea by noting the importance of getting everyone on the same page in collaboration:

This approach has taught me that it's important to get everyone on the same page and foundation, and that everyone knows these kinds of basic things that are easy for high school aged kids to understand. It helps us to connect as musicians and as people.

(Interview, 5/30/2017)

Claire credited the Lisk approach with helping her to understand about the value of collaboration and connecting with other musicians as people. Emily took this idea about collaboration one step further. “Part of collaboration is being willing to make changes to how you play for the sake of the group.” (Emily’s Journal, 3/24/2017) Here, Emily referred to the idea of individual decision-making and personal compromise for the betterment of the ensemble.

Mr. DiNapoli demonstrated effective collaboration in the development of listening skills through rehearsing part of a musical selection:

The teacher had students help identify sections that needed to be together and he began working on sustained chords in the clarinets. The teacher talked about the need for students to be leaders, posing questions to the student leaders to assist with keeping certain sections together. The students watched a peer leader bring the mallets in together in one section. (Field notes, 3/24/2017)

Mr. DiNapoli stressed the importance of students acting as leaders to successful section performance and addressed the need for working in collaboration with one another.

Overall, the value on collaboration and teamwork in musical performance ensembles was continuously stressed and reinforced in the instrumental music program at Lake Onondaga High School. All participants identified collaboration as essential to the success of musical ensembles and recognized that effective teamwork plays a significant role in ensembles performing at the highest level possible.

Communication. The cultivation of meaningful communication skills between people was a priority of the instrumental music program at Lake Onondaga High School in the implementation of the Lisk approach. Mr. DiNapoli constantly reminds his students to keep lines of communication open with one another. All Lake Onondaga participants acknowledged that it is essential for members of a musical ensemble to communicate with one another while engaged in the process of musical performance.

Claire described the importance of developing communication with the audiences and the other players in an ensemble:

Communication, if you play the music well, communicates well with the audience. Also, section leaders have to make sure that they are communicating the right ideas to their section for certain parts of the pieces. (Interview, 5/30/2017)

In this instance, Claire pointed out that making music communicates the intent of the music with audiences, while section leaders maintain communication with their other section members to keep musical interpretation and communication on the same page. Sebastian built on this idea, discussing what he learned about communication on a higher level through music:

It really has taught me to communicate on a higher level of musicianship all around, and listening is a huge issue. I feel like the communication parts and the collaboration parts are definitely the bigger things, I learned that you know there are certain things that you need to do and say and how to phrase things. (Interview, 3/24/2017)

Sebastian indicated that communication at a high level is very important to successful music-making and made an argument for musicians to become effective communicators.

Mr. DiNapoli addressed the need for communication between the conductor and the players:

Mr. DiNapoli asked several questions of the students about what kinds of musical decisions they make as they perform. One such question from the teacher addressed a player about a how she would invite the group to play along with her...she responded, “with a crescendo.” (Field notes, 3/24/2017)

This was just one example of many where Mr. DiNapoli engaged his students in dialogue regarding various elements of musical performance.

Ensemble musicians who are informed and aware of their surroundings through communication with one another enhance the quality of their music-making. The Lisk approach stresses the importance of quality communication among ensemble members. Participants in the instrumental music program at Lake Onondaga High School continuously recognized the importance of communication to the development of comprehensive musicianship.

Summary. Lake Onondaga High School was a large school instrumental music program where the Lisk approach was implemented. The director of the program directly exposed the Lake Onondaga students to the Lisk approach in a number of ways, including his direct training with Lisk himself, the training of the entire music staff in the Lake Onondaga Central School District, and by bringing Lisk into his school a number of times for feedback and suggestions. As a result of this, it is also noteworthy that students at Lake Onondaga have had a number of different music teachers, all trained in the Lisk approach, during the entire time that they have played their instruments since elementary school. While the school faculty members of the band program did not specifically use the term “21st century learning skills” the skills of critical thinking, creative thinking, collaboration, and communication were emphasized to all of the participating students. The students were very articulate in their ability to define and describe all of the elements of the 21st century learning skills as well as identifying the various techniques of

the Lisk approach. The teacher indicated that he had witnessed significant musical growth over the years in his students since using the Lisk approach. It was also noteworthy that his students recognized that they had a distinct musical advantage over other students from other schools not trained in the Lisk approach when they participated in regional music festivals. Students from Lake Onondaga who are planning a career in music education also indicated an interest in learning more about the Lisk approach themselves that they could apply to their own teaching.

CHAPTER 5

CROSS CASE ANALYSIS

Introduction

This study examined the teaching of musicianship skills using the Lisk “Creative Director” series and the development of 21st century learning skills through this approach, including critical thinking, creative thinking, collaboration, and communication, at three different sites. Since students from the three schools learned about music through directors who utilized the Lisk approach, the comparative analysis of student and teacher input from these three settings provided valuable insights about the effectiveness of this approach and its relationship to the students’ development of 21st century learning skills.

The research questions used to guide this study were: 1) Why do teachers use the Lisk approach and what do they find most effective about it? 2) How are the 21st century learning skills of critical thinking, creative thinking, collaboration, and communication cultivated in a Lisk-centered classroom? and 3) What impact do students believe that the Lisk “Creative Director” series has had on the development of their musicianship skills and their 21st century learning skills?

Utilization of the Lisk Approach

The teachers in all three schools presented musicianship skills as fundamental to the curriculum of their respective music programs. These teachers taught the students to learn how to individually utilize the concepts presented in the Lisk approach in order for them to cultivate musicianship skills as independent learners. In evaluating how the Lisk approach was used in the three schools, the depth of engagement in the program, musical elements, and Lisk musical concepts were examined.

Depth of engagement. All programs emphasized the need for students to take personal ownership of their musicianship training, in varying degrees, and at different levels of intensity depending upon the program. All three teachers addressed areas such as: musical technique, expressive and interpretative elements, developing the student's personal responsibility for learning, warm-ups directly related to the musicianship skills curriculum, listening strategies, visual imagery strategies, dynamics and color shifts, and creative expression. All of these skills were addressed in varying degrees depending upon school time and staffing differences.

Deer Creek. The Deer Creek instrumental music program was a developing band program that used the "Creative Director" approach at a fundamental level and the students appeared to be successfully acclimating to this approach. Mr. Brown worked with his band near the graduation time for his school.

Mr. Brown is trying to have kids read into cut-time section. It is still a developing band, but reading, balance, and tone quality have improved since the last visit, and this is without seniors. The music is of a grade 3, moderately easy, level, and the students are executing the playing of this material with accuracy. (Field Notes, 5/17/2017)

Mr. Brown focused upon performance fundamentals and basics during both field visits, consistent with what one would expect from a developing band program. Through the teaching of basic performance techniques, Mr. Brown is building the foundation for introducing his students to more sophisticated, intellectual musical concepts found in more advanced music.

However, the Deer Creek program's utilization of the Lisk approach was somewhat limited in scope because one teacher essentially was responsible for the entire instrumental music program and that person was responsible for teaching many students who are at different proficiency levels. The field notes taken in Deer Creek described those limitations:

In Deer Creek, time did not allow for getting much beyond technique. In terms of scheduling and staffing, Deer Creek Community High School has one instrumental music teacher (Mr. Brown) who is responsible for the entire instrumental music program K-12. In addition to his high school band program, which meets everyday for one hour, Mr. Brown is responsible for a 7 – 8th grade band, a grade 6 band, a jazz ensemble, and elementary instrumental music with small group instruction. As a result, the high school band students only receive instrumental music instruction for one hour per day in their full band experience. Any individual or small group lessons take place outside of the regular school day or if some time opens up in Mr. Brown's full class schedule. The only other music teachers in the school district include a choral instructor at the secondary level and a general music instructor at the elementary school, for a total of 3 music teachers in the district, K-12. (Field notes, 5/17/2017)

Mr. Brown, the teacher at Deer Creek did his best to provide comprehensive musicianship training to his students in spite of some of the time constraints. However, the advantage of him being the only band teacher was that he could introduce his younger students to Lisk approach concepts that they could take with them during their entire experience in the Deer Creek School District music program.

Grand Falls. The Grand Falls instrumental music program provided students with a deeper Lisk experience that allowed students the opportunity to move beyond basics and deal with more advanced expression and technique, utilizing the “Creative Director” approach at an advanced level. The students responded in a way that demonstrated their successful comprehension of this approach.

Mr. Carter reminded the players about the importance of always listening, especially in

the areas of balance, blend, and intonation. The students demonstrated their listening skills through their execution at a high level. Having addressed these performance basics, Mr. Carter asked them to then agree on style, once again relating back to their listening. As a result, their execution of the open rhythmic section was precise, demonstrating an aggressive playing style. The teacher stopped conducting so that the students could focus their listening output without being distracted. The group demonstrated range and technical accuracy. The students in the ensemble performed with great interpretation. The ensemble performed with a level of musicianship that was reminiscent of college bands that I have heard. (Field Notes, 3/31/2017)

Mr. Carter emphasized responsibility on the students, through cultivating higher listening skills, self-assessment and stylistic interpretative skills. This resulted in musicianship skills that arise beyond the simple execution of notes that most developing bands work towards. The Grand Falls music department has been cultivating this approach since the late 1980s, which was approximately fifteen years longer at the high school level than the teacher at the Deer Creek program, and consequently, Mr. Carter has had a longer time to develop and refine his programs. His students were able to play the music in expressive, musical ways that get beyond the execution of basic notes and rhythms.

The Grand Falls instrumental music program also provided more staff and scheduling flexibility to allow for more comprehensive music experiences. The following field notes describe the basic parameters of the program.

Grand Falls Senior High School did allow for adequate time to present Lisk-centered techniques. The school has an instrumental music instructor (Mr. Carter) responsible for teaching two large ensembles including wind ensemble and concert band that meet in

separate class periods of 43 minutes every day, along with theory, small group instruction, and a jazz ensemble. All students in the wind band program receive small group instruction in addition to their large group ensemble experience, provided by Mr. Carter and other individuals. There is a string program here taught by a separate orchestra director and a choral program directed by another teacher. Along with the shared orchestra director, there are three music instructors at the middle school level and five music instructors at the elementary level, for a total of 11 full-time music teachers in the district, K-12. (Field notes, 5/25/2017)

Grand Falls had considerably more opportunities for musical instruction at the high school level both with ensembles and general music classes than in Deer Creek. These expanded opportunities and additional staff made it possible for the students to perform at a higher level than in Deer Creek.

Lake Onondaga. Teachers in the Lake Onondaga program also began utilizing the Lisk approach in the early 1990s, immersing the “Creative Director” approach across all elementary, middle, and high school instrumental music groups district-wide, and it brought the student musicianship level to an even higher standard than the other two bands I observed. As a result, the top group at the high school operates on a sophisticated musical level.

Mr. DiNapoli moved the class into a selection by John Mackey entitled “Xerxes” – The group began at the top of the piece, and the intensity of visual communication between the teacher and students was evident throughout the entire rehearsal. The group executed the complex contemporary harmonies with well-balanced dissonances and the display of advanced alternative-playing techniques not often heard in high school bands. This band is as good or better than any professional band that I have heard in New England. The

piece was rehearsed in a style that demonstrated consistent aggressive, rhythmic, and metallic sounding qualities. The students were extremely focused and have an understanding of the style of this composition. (Field notes, 3/24/2017)

Mr. DiNapoli was able to develop a synergy among his players through non-verbal communication through his use of the Lisk approach. The ensemble responded spontaneously to balance and blend issues and interpretative stylistic issues.

The Lake Onondaga band program also had the most musical performance ensemble and classroom music experiences available to their students of the three cases studied. This program is described in the field notes taken during an observation.

Lake Onondaga built in a considerable amount of time to present Lisk-centered techniques. Lake Onondaga High School has three full-time instrumental music instructors dedicated just to the band program, with the symphony band (an honors wind ensemble), a grades 10-12 symphonic band, a grade 9 and 10 concert band, and a grade 9 freshman band. The teacher participating in this study, Mr. DiNapoli, teaches the symphony band/honors wind ensemble that meets for 77 minutes daily, along with small group lessons. All students in the instrumental music program received small group instruction. The other two instrumental music teachers teach the other three bands, and they also share with two jazz ensembles. This does not count the string instructor with the orchestra or the vocal staff. There are 7 music teachers at the high level, 8 music teachers at the middle school level with another music teacher shared with the high school, and there are 14 music teachers at the elementary level with 3 music teachers shared at the secondary levels, for a total of 29 full-time music teachers in the district, K-12. It should be noted that all of the instrumental music teachers in the Lake Onondaga Central School

District have been trained in using the Lisk approach with their students. (Field notes, 5/30/2017)

The Lake Onondaga program had a larger staff, a more diverse offering of different musical ensembles, longer rehearsal times, and more small group lessons than the other two programs. All instrumental music teachers in the Lake Onondaga school district were trained in the Lisk approach as well.

Musical elements. The concept of musical elements refers to the sound quality, technical skill requirements, and expressive properties that performing ensembles continuously address when making music. Based upon an elements inventory of my personal observations that I maintained during the classroom visits in all three schools, the number of addressed musical elements was proportional to the size and scope of each of the programs (See Table 5.1). This was a written record that I kept of the frequency that musical elements were presented or referenced in every classroom situation that I observed in this study. The table was assembled from the data that I recorded in classroom observations, broken down by individual schools, and combined to indicate the total number of addressed musical elements per school rehearsal. Two rehearsals were observed in each of the three schools of this study.

Table 5.1

Musical Elements Table

| Musical Elements | Deer Creek | Grand Falls | Lake Onondaga |
|-------------------------|-------------------|--------------------|----------------------|
| Tone | 13 | 19 | 8 |
| Intonation | 11 | 21 | 30 |
| Balance, Blend | 6 | 22 | 10 |
| Melody | 6 | 6 | 9 |
| Rhythm | 1 | 6 | 12 |
| Sight-Reading | 4 | 1 | 0 |
| Interpretation | 0 | 5 | 5 |
| Musicianship | 8 | 9 | 11 |
| TOTALS | 49 | 89 | 85 |

The Deer Creek program utilized the smallest number of musical elements of the three, while Grand Falls and Lake Onondaga referenced an almost equal number of elements, with both schools addressing almost twice as many musical elements as Deer Creek. The table indicates that the elements of intonation, tone, balance, and blend received the most emphasis in each of the schools. The overall sound quality of these bands seemed to be the priority. The cultivation of various musicianship skills was evident in all of these schools, but there was a subtle difference among the three schools among the degree of emphasis of the component parts depending upon the technical requirements of the musical literature being performed and the skill levels of the student musicians in the three groups.

The Deer Creek program spent the most time with note accuracy and tone. The Grand Falls program spent the most time with balance, intonation, and tone, but in more detail than Deer Creek. The Lake Onondaga program spent the most time with rhythmic technique, intonation, blend, and balance. The musical elements addressed were more simple and straightforward in Deer Creek, while the elements addressed in Grand Falls and Lake Onondaga were more sophisticated in nature.

Lisk musical concepts. My personal inventory of observed musical elements in rehearsals also included a record of Lisk approach musical concepts (charts, visual aids, and other materials developed by Lisk) that I maintained during the classroom visits in all three schools (See Table 5.2). As described above, the table was assembled from the data that I recorded in classroom observations, broken down by individual schools, and combined to indicate the total number of addressed Lisk approach musical concepts observed in all six of the rehearsals (two in each of the three schools).

Table 5.2

Lisk Approach Concepts Table

| Lisk Elements | Deer Creek | Grand Falls | Lake Onondaga |
|-------------------------------|-------------------|--------------------|----------------------|
| Chart-Chord Progressions | 2 | 1 | 3 |
| Chart-Circle of Fourths | 15 | 11 | 19 |
| Chart-Scale Mastery | 2 | 1 | 3 |
| Chart-Grand Master Scale | 1 | 2 | 6 |
| Chart-Ruler of Time | 2 | 0 | 1 |
| Chart-Grainger, etc. Dynamics | 4 | 3 | 1 |
| Concept-Beatless Tuning | 6 | 6 | 10 |
| Concept-Tone, Balance, Blend | 5 | 15 | 4 |
| Concept-Listening | 6 | 4 | 4 |
| Concept-Nuance Perception | 0 | 0 | 2 |
| Concept-Vocalization | 4 | 2 | 1 |
| Concept-Musical Focus | 5 | 5 | 11 |
| Concept-Articulation | 3 | 2 | 1 |
| Concept-Digital Patterns | 0 | 0 | 7 |
| Concept-Attack, Release | 2 | 3 | 1 |
| Concept-Imagery | 10 | 5 | 6 |
| Concept-Internalization | 1 | 6 | 8 |
| Concept-Improvisation | 4 | 1 | 8 |
| Concept-The Mind's Eye | 7 | 0 | 0 |
| Concept-Assessment | 0 | 10 | 15 |
| Concept-Expression | 2 | 4 | 4 |
| Concept-Musicianship | 8 | 9 | 11 |
| Concept-Student Leadership | 2 | 1 | 4 |
| Concept-Reflective Thinking | 0 | 2 | 1 |
| Concept-Department | 0 | 3 | 1 |
| TOTALS | 91 | 96 | 132 |

In Table 5.2 Deer Creek and Grand Falls teachers address a similar number of Lisk approach concepts, while the Lake Onondaga teacher addresses about one third more of Lisk concepts. The chart indicates that the most popular Lisk approach concepts included the following: circle of fourths; overall musicianship; assessment; focus on tone, balance, and blend; beatless tuning; use of imagery; focus; internalization; listening; and improvisation. The Lake Onondaga program also used the Scale Mastery sheet and touched upon the Ruler of Time sheet,

as did Deer Creek, although usage of these items was not observed in Grand Falls. However, the various educational techniques were similar between schools, such as the usage of the circle of fourths and the emphasis on listening. Based upon direct observation in all classrooms of the three schools in this study, the most popular concepts presented were as follows: circle of fourths; overall musicianship; assessment; focus on tone, balance, and blend; beatless tuning; use of imagery; focus; internalization; listening; and improvisation. Of those ideas, the Lisk approach concepts that received the most attention consistently from the directors included tone, balance, and blend, beatless tuning, assessment, and musicianship. The Circle of Fourths sheet devised by Lisk received special emphasis in the musical warm-up process of all schools.

Teaching strategies with the Lisk musical concepts. Teachers in all three schools were very well versed in the different teaching strategies offered through the Lisk approach in the area of performance technique. While performance techniques encompass both technical skills (performance skills requiring some type of manual or physical dexterity and/or specific aural skills) and interpretative skills (individual expression and musical decision-making), all three school music programs spent most of their time improving technical skills through the use of the Lisk approach.

While technique development was central to all programs, each school was able to achieve different levels of success using the Lisk approach addressing each of the following skills: musical technique, expressive and interpretative elements, developing the student's personal responsibility for learning, warm-ups directly related to the musicianship skills curriculum, listening strategies, visual imagery strategies, dynamics and color shifts, and creative expression. The Lake Onondaga program placed the most emphasis on student creativity through

improvisation, although all three programs encouraged some level of creative thinking through student ownership of group performance challenges.

Absent from all three “Creative Director” school rehearsals was mindless repetition in the classroom, with directors employing constant drilling in order to “teach” notes. Mr. Brown, at Deer Creek, remarked about this when he recalled his master’s work at VanderCook College.

When I was taking my master's work at VanderCook, we would have clinics on warm-ups, and different things like that. And I would actually ask the professors and I would ask the clinicians that were teaching, "So what do you notice"? And a lot of them just flat out said that there is a lot of meaningless warm-up. A lot of repetition for the sake of repetition. (Interview, 5/17/2017)

Mr. Brown indicated that his work with the Lisk approach has helped him to avoid these repetition issues that were addressed in his classes. When Mr. Carter of Grand Falls was also at VanderCook, he also noticed that there was interest in the Lisk approach because of its lack of repetition just for repetition’s sake. “I was very intrigued by it because of the educational approach to music instead of just beating band music into kids.” (Interview, 3/31/2017)

Even Mr. DiNapoli in Lake Onondaga, made a reference to getting away from straight repetition in teaching. “This approach opened me to possibilities with students and it allowed me to get out of the way. You know, I'm not doing repetition, you know, practicing, lesson practicing, so it really has helped our program.” (Interview, 5/30/2017)

All of these remarks reinforce that repetition for the sake of repetition in rehearsals was a concern among band directors. While purposeful repetition is unavoidable and is a fundamental technique to help musicians learn difficult passages while in the practice room, the schools using this approach focused on cultivating skills that enabled students to sort out what they could

achieve best together in a collaborative manner in a group rehearsal as opposed to recognizing the musical challenges that could be solved best through individual preparation in the practice room. This distinction helped students to understand why individual practice is necessary, and it was interesting to note that the students in all three of these schools were obviously practicing on their own, based upon what they said and how they played in rehearsals. The absence of mindless repetitive drilling of parts allows for a more efficient use of rehearsal time and all three of these schools packed a great deal of content into their rehearsal periods.

Summary. The teachers in all three schools utilized the Lisk approach as a vehicle for teaching musicianship skills in their instrumental music ensembles. These teachers identified musicianship skills as fundamental to the curriculum of their respective music programs. All taught the students to learn how to individually utilize the concepts presented in the Lisk approach in order for them to cultivate musicianship skills as independent learners. In evaluating how the Lisk approach was used in the three schools, the depth of engagement in the program, musical elements, and Lisk musical concepts were examined. These programs emphasized the need for students to take personal ownership of their musicianship training, in varying degrees, and at different levels of intensity depending upon the program. The three teachers addressed areas such as: musical technique, expressive and interpretative elements, developing the student's personal responsibility for learning, warm-ups directly related to the musicianship skills curriculum, listening strategies, visual imagery strategies, dynamics and color shifts, and creative expression, but all of these skills were addressed in varying degrees depending upon school time and staffing differences. The three instrumental music programs in this study shared similar outcomes while using the Lisk approach.

Benefits and Challenges of the Lisk Approach

The teachers and students in all three schools indicated that there were important benefits to using the Lisk approach in their respective programs as well as challenges to implementing the approach. These teachers credited the Lisk approach with the success in teaching their students about comprehensive musicianship that they have experienced. The students recognized the value that the approach has had on their learning about musical performance. The teachers also referred to challenges using the approach as well, including such things as the absence of the approach from college curricula, the subsequent reliance on Lisk himself in their training, and investing time in learning to teach with the approach.

Benefits. The benefits of the Lisk approach used in the three schools included the development of musicianship, improved student engagement in their learning, and implementing a program that reflects upon new trends in education.

Musicianship. Mr. Brown, at Deer Creek, referred to the importance of the “Creative Director” approach because of its emphasis on musicianship fundamentals and the clarity that it provides to students.

Teach fundamentally, teach musicianship, and then the song is just second nature. You know, if the kids have that in their tool belt, and they live that way, and they do that day-to-day, I think that the notes on the page are just secondary. The dots on the page are just secondary. So, if anything about this "Creative Director" approach, it's that, you know it creates a ton more meaning to the child as a player as an individual player. (Interview, 6/13/2017)

Mr. Brown emphasized the importance of teaching fundamental musicianship to his students and the Lisk approach provides them with the tools that they need to become independent learners.

Students' thoughts about musicianship and the Lisk approach. Student responses at Deer Creek demonstrated that they had a basic understanding of the elements of musicianship, as they were able to describe these characteristics in succinct, straightforward ways. For Ellen, musicianship was a concept that was wrapped up in various music technique concepts. Her comment represented a broad overview of the definition of musicianship.

A person with comprehensive musicianship brings depth to the music, and they know their fundamentals, they know their basics, and they're able to easily talk to someone about it that they are trying to help, or mentor somebody there . . . they want to easily explain something because they have an understanding. (Interview, 5/17/2017)

Ellen's response was linked to basic performing techniques, with a broad view of musicianship. Katie's concept of musicianship once again focused on group activity along with tuning and sight-reading.

I think that the approach improves musicianship in that it helps show that we all need to be in sync with each other. When we do this it helps us to be more like a team and it helps us help each other with tuning and sight-reading, and it helps us already know a lot of the notes, and we know how to approach it without being scared of it. (Interview, 2/23/2017)

Katie's response, like all from this school, gives an indication that she knows something about musicianship, but it is not inclusive enough to cover the broad scope of what the concept of musicianship should mean. The answers given from the Deer Creek students regarding what they felt the Lisk approach contributed to their ideas about musicianship were basic in nature, but they did make connections with these concepts and later, with 21st century learning skills once they started talking about them.

Mr. Carter, at Grand Falls, expanded upon Mr. Brown's perspective of the effectiveness that the Lisk approach has on student learning.

I would say that the Ed Lisk system is a common sense, intellectual approach to teaching music to students. Convincing teachers that this is the way to go is easier when we consider that, generally, we tend to teach music to students on a graded scale, for example, flute players and trumpet players should have to do everything, and the tuba player, well if he's just there in rehearsal, I'm happy. You know, instead of "why can't that tuba player play 15 major scales and all the variations, why can't he play a full range chromatic scale in the same way as the flute player, why can't he read rhythm, we can't he play with as beautiful a sound, why can't he understand articulation?" (Interview, 5/25/2017)

Mr. Carter's reference to the Lisk approach as a common sense way to teach music to students pointed out that the approach is accessible and is not difficult for students to understand. He also indicated that the approach cultivates proficient musical technique in all instruments, not just the typically melodic instruments such as flute.

At Grand Falls, students were thoughtful when addressing musical skills and expressive concepts. Harold gave an overview of details about what he thought the concept of musicianship encompassed.

The approach really helps with note recognition and just having it come so much faster, because obviously the music that we are playing in wind ensemble, as a premiere group in the area, makes it so we are going to be playing the best of the best music. So the tuba parts aren't just going to be downbeats and quarter notes anymore, you're really going to have to get those eighth note runs and just nail everything down so when you are just

going over, and over, and over with the repertoire on the circle sheet and stuff like that you really . . . it starts coming to you fast and then it really helps with just the level of musicianship and being able to play those faster melodies when they come up.

(Interview, 3/31/2017)

Harold found that the Lisk approach helped him to access musical technique and made him a contributor in his high school band program, a group that he acknowledges being outstanding from a musicianship perspective. Frank's response focused upon balance and blend and ensemble issues.

I think that the approach teaches basically everything that you need to you know in musicianship to perform proper literature, I think like, balance, blend, and, you know not sticking out of the band and I think the whole balance thing. When Mr. Carter describes what not to do with balance, he does this cool thing sometimes where he will change the intensity of the balance of the instrument groupings in the warm-up. Then, he says, "OK, give me the false, unbalanced sound and give me what most high schools do", he says "have group 1 play the loudest", I think that it's cool, it shows the kids like "Whoa", this really does sound way out of balance, and they learn from things like that. (Interview, 3/31/2017)

Overall, the students at Grand Falls did talk more about musicianship in a broader overview than their peers at Deer Creek. Listening to the ensemble at Grand Falls, it was evident that the students gave thought to what it means to be good musicians.

Mr. DiNapoli, at Lake Onondaga, referred to the effectiveness of the Lisk approach in to comprehensive musicianship in an historical context with how teaching has changed over the years.

Well, we have to change with the times. And, when I started here in the late 80's early 90's, we were in etude books and we'd give the student a weekly assignment and they would practice it. We had the Cavally book, the Hite book, the Rochut book, you know, all of those wonderful books. And that's where we were at. So you give them the assignment, they would do the etude in the book, and they didn't have all this distraction today of technology . . . they are so engrained in it. And they have more academic pressure with AP courses, honors courses, super courses, all the, you know there's more pressure on the kid today. So back then, we were in these books. Now, you can't do that today. I can't give a kid a Hite book and say John, I want to hear page 22 next week, that kid will come back and say, "I didn't do it." So it's a reality. So, now with the Lisk approach, I can develop technique, through scales, the digital patterns, the extended scales getting their fingers going, so I can develop technique, tone quality, musicality, sonority, mixing up different scales, chords, have a kid improve being creative. So I sort of can get to that without giving the kid the Rochut book, page 12. Because, they're not going to do it today. (Interview, 3/24/2017)

Mr. DiNapoli's reference to the effectiveness of the Lisk approach in teaching musicianship skills at the same level as one of the classic instrumental technique books is a testament to the confidence that he felt using the Lisk approach as a core component of his overall teaching strategy. He pointed out that students don't respond as positively to practicing individually from method books as they did years ago.

The Lake Onondaga students were the most articulate of all the students in the three schools in terms of their individual descriptions of the artistic processes of musicianship, as they spoke in the most sophisticated terms about music and musical concepts. Claire gave a

description of what the development of musicianship would mean to her future career as a music educator:

Personally, the approach has given me a lot of ways of becoming a better musician, which is obviously the goal of the whole approach. But, it's given me insight that not only I can use for myself, but also for when I am teaching others someday, if I am teaching others someday, whatever happens. It's stuff that I can really take to heart. I can try to inflict it on other people and give them the right ideas pertaining to music. (Interview, 3/24/2017)

Emily echoed the idea of growing as a musician and she referenced that some of the processes learned through the Lisk approach did allow her to access the core of musical response:

Through this approach, I think that I just learned to be more comfortable as a musician, once you get down the elements that I am taught, the repetitive things help me, because I'm not really good at retention. So after all that repetitive learning, especially with music, since you can apply it to anything that you do, it becomes second nature and so therefore kind of makes me feel more comfortable playing a piece and being able to kind of feel it instead of making it up like some kind of robot. (Interview, 3/24/2017)

Jason followed up with some specific ideas of how the Lisk approach supported his musicianship:

I think that this approach helps because, for example, with the circle of fourths, all the kids in the Symphonic Band, or at least a very high percentage of them know all of their scales so that means that since you really don't have to think about what your fingers are doing, you can go on to listen to think about everyone else . . . you can think about balance, you can think about the pyramid of sound, you can think of about how in tune

that you are, and once you use those kind of mechanisms, it really helps you bring your musicianship and playing to a whole other level. (Interview, 3/24/2017)

Student Engagement. An important outcome of the Lisk approach is to foster independent learning skills in students, resulting in direct student engagement and ownership of their learning. All participating schools developed concepts of independent learning and decision making in their students that are fundamental to this approach. Mr. Brown referred to the concept of having students both thinking and learning at the same time as well as the importance of presenting musical skills by having students engage in thinking rather than have the teacher give all the directions, and the students just do what they are told.

So, even if you are in a one on one lesson, your focus is on the student. Whereas, it gets away from teacher tell, students do. The Lisk approach is just so totally different where kids are thinking and kids are doing at the same time, and there is so much less chance for errors, there ends up being more student success. Using the Lisk approach, the level of focus that the students have in rehearsal has improved. I think that tone quality over the course of the years, I could look back over the course of four or five years and, I think that my older students have a better grasp of what tone quality is. And when I use terms like "beatless tuning" and "straight-line sound" and "getting a full ensemble sound", balance, and blend . . . I think that I can use different vocabulary now that I didn't get to use, maybe even five years ago. So, in rehearsal, it's become much more in depth in a faster way. And, we can talk music ed speak and we can do that in a rehearsal. And, it has just brought it to a much higher level. (Interview, 5/17/2017)

Mr. Brown linked the students' engagement with the Lisk approach through thinking and doing at the same time to the progress that they had made with the various musicianship challenges that

they had addressed using the approach. Mr. Brown's reference to teaching things in a hurry by just issuing commands and having the students follow along reinforced the importance of involving the students in thinking about the lesson and being engaged as a way to improve their quality of learning.

Mr. Carter commented on the direct student engagement through dialogue and thinking about music that his Grand Falls students have experienced with the Lisk approach as a way to make musical gains in performances that go beyond right or wrong notes.

The use of the Lisk approach has provided musical gains where we can talk about entering into silence, or coming out of silence with a student, and they understand it, they get it, they know the difference between that and an attack or a cut-off, and they understand a beautiful sound versus a not so beautiful sound. And so it's a lot more musically based, than it is just technique and right and wrong. The Lisk approach for me as a teacher worked because it shifted me from, instead of thinking, "what is the minimum that they need to know?" to "what's the maximum to make them a literate musician?" If I'm rote teaching rhythm to a wind ensemble kid, I as a teacher missed something somewhere along the line . . . they are smart enough to do this. (Interview, 3/31/2017)

Mr. Carter indicated that the Lisk approach has helped students get beyond correct notes into the expressive domain of music and that it gets students engaged in their learning, without an emphasis on mere rote teaching.

Mr. DiNapoli developed this idea even further with his Lake Onondaga students about the encouragement of student independent learning through the Lisk approach. He indicated that the Lisk approach sets students free from simple descriptions about the notes. Mr. DiNapoli also

pointed out that he could do more creatively as a teacher through the approach when the students are involved in meaningful dialogue and thought.

Let's say that I'm taking away from the student, I am letting them be a bit more free, without reading notation, when using the Lisk approach. Without engaging their eyes on a piece of paper, to play this scale or this piece of music. So, we're developing their mind and their ears and their kinesthetic approach to valve combinations or clarinet fingerings or what have you. So, they are learning the vocabulary of all scales, major, minor, extended, arpeggios - without reading any etude book. So they are looking at that Circle of Fourths chart, and, they're more focused in kinesthetic response and developing their hearing with intonation, fourth, fifth, octave. So, I think, that's the greatest value, to free that student from printed notation. I tell them, "the better you get, the more I am able to do too". So with Lisk's whole concept, when we talk about tuning, kids are finding a target, and they know what's in tune and out of tune, what a perfect fifth is, major second, so their ears are more developed. Now we have the eyes engaged and everything else is divorced. (Interview, 5/30/2017)

Mr. DiNapoli showed his students that he is less of a lecturer and more of a facilitator in his lessons when using this approach. None of the teachers lectured students. Whatever was communicated was framed in questioning that required students to process and respond to whatever concept that was being addressed, which is a key characteristic of the "Creative Director" approach.

Addressing new trends. All of the teachers in all of the schools agreed that the Lisk approach has enabled them to teach musicianship skills more effectively to their students. One consistent idea in all three classrooms was that the dialogue happening during the class was

designed to always engage the students' thought processes. The dialogue was not lecture-based. There were always questions asked of the students that required some level of critical or creative thinking, collaboration, or communication between director and students or students and other students' ideas that stimulated further thinking.

All of the teachers participating in this study shared the same personal observation that other colleagues knew little about the Lisk approach, used it in different ways when they did, or incorporated the approach into their teaching the most that they discovered about it. Mr. Brown, at Deer Creek, pointed out that the Lisk approach helps teachers to address new trends that are surfacing in education.

I think that a lot of the trends that have come down, especially here recently in the last five years, an ensemble class or a performance-based class meets those requirements, and then some. So these are things that we've done for years and now, folks are suddenly . . . like, collaborative learning, that's something that we do every day and we just do it and take it for granted that that's what we do every day, but other teachers now, when they are faced with that challenge or posed with that question, sometimes they struggle because they don't know how to incorporate that into their curriculum or how to make that work. The Lisk approach is one of those things that you can manipulate and you can make it work for you and you don't have to be guessing on how to warm up a band or how to work on fundamentals, things like that. (Interview, 2/23/2017)

Mr. Brown reinforced that teachers are looking to incorporate ideas about improving curriculum in performance-based, collaborative classes and that, for him, the Lisk approach helps him address these issues.

In Grand Falls, Mr. Carter noted that the quality of small group lessons improved when the Lisk approach was implemented.

When using the Lisk approach, it means that you've got to stop doing band music in lessons. And maybe, your first couple of concerts may not be as strong, but, after a year's time, you know, a difference will have been made. There are the bands really that beat the technique into them in the lessons where they play very cleanly, but not very musically. Once you make that leap of faith and make them better musicians in the lessons, the rehearsals will take care of themselves. (Interview, 5/25/2017)

Mr. Carter emphasized his program improved significantly through the use of the curricular techniques introduced in the Lisk approach. With its emphasis on creative new approaches to the teaching of scales and musical fundamentals, Mr. DiNapoli concurred that the use of the Lisk approach at Lake Onondaga improved that program. He demonstrated how quickly the approach presents musical concepts in a local all county honors band that he guest conducted.

I did an all-county band in a county close to here, I don't know, five or six years ago, and I did the high school band there. And I told the teachers there "I'm going to bring the circle of fourths with me". And we are going to play all our scales - the band. And, a lot of those students didn't know the scales. But, here it is, and guess what, in two days, we're playing all 15 major scales. So, I hope that I opened eyes up. (Interview, 5/30/2017)

Mr. DiNapoli pointed out that his use of the Lisk approach circle of fourths in teaching scales at a festival that he guest conducted opened up some eyes of teachers who were unfamiliar with the approach and motivated them to look at it more clearly.

These teachers all remarked that in conversations they have had with colleagues, those music educators using this approach were extremely pleased to incorporate the Lisk-centered

techniques in their classrooms. The teachers in this study all indicate that by using the “Creative Director” approach, the quality of their instruction has improved significantly.

Challenges. The teachers also referred to challenges using the approach as well, including such things as the absence of the approach from college curricula, the subsequent reliance on Lisk himself in their training, and the investment of time in learning to teach with the approach.

Absence from college curricula. There was a common perception expressed by every teacher in all three participating school cases that only a minimal number of American schools of music at the college and university level were exposing pre-service music educators to the Lisk approach in any meaningful way. They all agreed that the only way for the Lisk approach to grow and prosper in instrumental music programs is to introduce the approach in more college and university music education programs around the country. Mr. Brown observed the following:

When I use this approach, or when I use some of my approaches at this school with my college kids, or others, it kind of makes them think a little bit more, because they have never been introduced to that quite in that way before. When I was taking my master's work at VanderCook, we would have clinics on band warm-ups. A lot of them just flat out said that there is a lot of meaningless warm-up. A lot of repetition for the sake of repetition. And, I think this "Creative Director" approach offers so many more opportunities to go in some many different avenues. (Interview, 5/17/2017)

Mr. Brown acknowledged that there was little talk about this approach, and that most people in the field are new to it. Mr. Carter stated how important it is to make the Lisk approach a basic staple in college instrumental music education programs.

I am in 100 per cent agreement that this approach should be presented in music education programs at the college level. I wish I would have not had to happenstance run into him. You know, most undergraduate programs will talk about Kodály, talk about Suzuki, Gordon, etc., they'll mention them and give at least overviews, but very little on Lisk and from the instrumental side of things, you know, it's I think very few people that I've known have tried it aren't happy with the results. And I think that it would be more prevalent if it was introduced, at least introduced and talked about in more university/undergraduate settings. (Interview, 3/31/2017)

Mr. Carter suggested that the Lisk approach would be more prevalent if it was introduced more at the college/university level. Mr. DiNapoli referred to the uniqueness of the Lisk approach and suggested that college courses in the approach would be useful.

I wish that they did have college courses for the Lisk approach. I think the key to the approach is that you are not restricted by visuals, you know, that is a huge thing. Where you are just using your muscles and fingerings, and embouchure and hearing, and range, and developing expansion and diminution of sound, and balance, and fading into nothingness. You know, that's one thing, the group; you know they can fade out sound into air, just like the string player can and the vocalist. (Interview, 3/24/2017)

Mr. DiNapoli continued with a few more observations about band people at the college level.

I think that you've got some of those folks out there, and then, you know, you as a teacher, you've just got to keep learning and bring that to your classroom. That's the other thing, let's look at the college level. How many of those college directors stay in tradition, and tune to the clarinet? They tune to the clarinet. Why don't you tune to the tuba? That's

your fundamental. And you're at the college level; I thought that you would know that. How do the harmonic series line up, so why don't you tune to the tuba? I think some colleges do that, that Ed has had an influence on. But, you still see a lot of those college folks tuning to the Bb clarinet because it's tradition. So they don't know what they don't know. Or worse yet, you see somebody tune to the oboe in band. You know, some of the college folks? Why, because the string folks do it? Is that why you do it? So you can be equal. How about, be better? (Interview, 5/30/2017)

Mr. DiNapoli's respect for the Lisk approach was evident with his description of how college band directors generally deal with the concept of tuning and implied that they would be well served to follow the Lisk approach for fresh ideas about tuning strategies.

Access to Lisk. The teachers from the three school programs had direct access to Ed Lisk. Lisk maintained a personal contact with all of the teachers of these programs as they became more proficient in using his approach. They were fortunate because most teachers do not have the same kind of personal access to the author that these teachers had, and thus would not have the same benefits of interpreting the ideas in the approach as these teachers.

Since all of the teachers involved in these three case studies had direct contact with Lisk, they were able to get specific help from the author himself when they needed guidance or clarification about the approach in their teaching. Mr. Brown referred to his experience with Mr. Lisk as a student in Mr. Lisk's high school band program.

I was first introduced to the Lisk approach this as one of Mr. Lisk's high school students, and I have stayed in touch with him over the years. I've probably dabbled in this approach ever since I started my career, so throughout my 17 years, we use it in different capacities at different schools that I have taught at, so, whether it be just unison, read through the

circle or whether it be like I'm doing now here at Deer Creek more in depth. When we used to do our lessons in school with Mr. Lisk, he would have us recite circle of fourths note patterns, forward and backward and make sure that we had that and we were looking at the letters in our head, and looking at the numbers for duration. And, you know I remember the day sitting as a freshman sitting in that wind ensemble knowing that I had to keep up, and, you know, that is just what you did. So, here are juniors and seniors whipping through every major scale at you know 100 beats a minute and doing all of these different articulation things and, it's just incredible. (Interview, 2/23/2017)

As a result, Mr. Brown had a unique perspective as a student of Mr. Lisk's, as well as working as a teacher later on in his life using Lisk's materials. He goes on in another interview to point out his more recent contact with Lisk.

Mr. Lisk gave me his Beginners' Book for the "Creative Director" series only this week, so started looking at it with my group on Monday. The reason that I asked him about it, is that I got into that "Intangibles" book of his, and he talks about a theory or an idea of teaching the students how to listen and play before you get into the mechanics of the notation, and before you get into the mechanics of fingerings. (Interview, 5/17/2017)

Mr. Brown pointed out that he continues to read and learn about the Lisk approach, through direct contact with Mr. Lisk right up to the present.

Mr. Carter commented that Mr. Lisk often visited Grand Falls throughout his career, taking a big interest in the work being done in Grand Falls.

After a couple of years of doing the basic Lisk "Alternative Rehearsal Techniques", I brought Ed out to Grand Falls. And, he was terrific about driving out here and then kind

of giving me an assessment of the program watching me apply what he was doing. He came out here a number of times. (Interview, 3/31/2017)

The professional relationship that Mr. Carter maintained with Mr. Lisk served to strengthen Mr. Carter's ability to use the Lisk approach effectively and help him to grow as a teacher. Mr. DiNapoli referred to Mr. Lisk's visits to Lake Onondaga in the following:

So, in 1996 we were doing that clinic in the Lake Onondaga Library, and that's when I started to see what was possible with his presentation. And that's how it got started. At the time, I was doing the second group and another teacher was doing the Symphonic Band, and Ed Lisk would come down to Lake Onondaga a lot, free, you know, free of charge, he thought that much of us. And we thought that much of him. And he started to work with our bands, opening up even more possibilities. (Interview, 3/24/2017)

Mr. DiNapoli stressed that Mr. Lisk always made an effort to get out into the field and see his approach in action in as many instrumental music programs that embraced it as possible.

On the surface, this could be perceived to be a benefit for these programs in the same way as when a music program brings in a guest artist such as a composer so students may experience music from the artist directly. The challenge of this, however, is that Lisk cannot be physically in all schools at the same time and, as time goes by, his direct contact with future programs will be significantly diminished from what it is now, even with the use of technology. This means that the future implementation of the Lisk approach will be more dependent on a teacher's interpretation of available materials rather than directly from Lisk himself.

Investment of time. All three teachers indicated that learning Lisk approach teaching strategies require a significant investment of time to learn. In Deer Creek, Mr. Brown talked

about learning new things about the approach constantly and how he was reading Lisk's latest book.

Just this week, I got into that "Intangibles" book of his, and he talks about a theory or an idea of teaching the students how to listen and play before you get into the mechanics of the notation, and before you get into the mechanics of fingerings. (Interview, 6/13/2017)

Mr. Brown reinforced that he spends time learning about other elements of the Lisk approach while he is actively using it. In Grand Falls, Mr. Carter noted that a number of teachers use the Lisk approach in different ways and with varying degrees of commitment.

A lot of them in this area do use the Ed Lisk system, but I don't know if a lot of them are at as full a buy in as I am. I think that a lot of bands pass out the circle sheet and they use it for warm-ups so they are using the Ed Lisk system, and we both know that that alone is not the Ed Lisk system. You know, I think that there are a lot of programs where they pass out the circle sheet, and then never read one of his books. And they do like the approach of having that flexibility in the warm-up, but they really don't know the whole system. I would agree that it takes a huge leap of faith. (Interview, 5/25/2017)

Mr. Carter emphasized that when he had the courage to jump in and commit to fully use the Lisk approach, it significantly benefitted his program. Mr. DiNapoli concurred that when he made the commitment to use the Lisk approach at Lake Onondaga, it improved that program.

But I think, when we bought in to the Lisk approach, I think that it saved our program here in the high school. With scale knowledge, chords, balance, blend. We learned to teach more efficiently and use our time more productively. (Interview, 5/30/2017)

Mr. DiNapoli noted that the investment of time in learning the approach resulted in better teaching that was more efficient and productive. Teachers interested in implementing techniques

from this approach need to be prepared to spend a significant amount of time to make it work...it does not provide a “quick fix” for performance challenges. However, it is also important to keep in mind that the Lisk approach is not a prescribed method for teaching either. It does not outline things to be taught in a sequence of steps...it is a collection of concepts, techniques, and ideas to be used in conjunction with a teacher’s individual teaching abilities and preparation. In this way, the Lisk approach is an enhancement to the skills that music teachers have already developed in their career preparation. Teachers need to spend an adequate amount of time to learn how to obtain the maximum educational benefits from this approach for their students.

Summary of benefits and challenges. The benefits of the Lisk approach that were identified by the teachers in the three school districts included the development of musicianship, improved student engagement in their classrooms, and implementing strategies that are considered to be new trends in education. The students from the three schools also agreed that the approach has had a positive influence on their understanding and use of musical performance skills. Additionally, the teachers also referenced some challenges that they saw with using the Lisk approach as well, including the absence of the approach from college curricula and the investment of time that is required to become proficient teachers in the approach. While access to Lisk himself was recognized as a benefit by these teachers, it was also recognized to be a challenge for those teachers unable to access Lisk in the same manner.

Twenty-first Century Learning Skills

This study examined the teaching strategies presented by the various instructors of the three schools that required that the students use some, if not all aspects of the 21st century learning skills of critical thinking, creative thinking, collaboration, and communication.

From the inventory of my observations, the following table (Table 5.3) outlines the

number of activities observed in classroom settings in the three schools that were connected to 21st century learning skills. These were combined to indicate the total number of addressed 21st century learning skills observed.

Table 5.3

Twenty-first Century Learning Skills Addressed in Rehearsals of Participating Schools

| 21st Century Learning Skills | Deer Creek | Grand Falls | Lake Onondaga |
|------------------------------------------------|-------------------|--------------------|----------------------|
| Critical Thinking | 39 | 46 | 69 |
| Creative Thinking | 14 | 4 | 14 |
| Collaboration | 32 | 40 | 40 |
| Communication | 14 | 22 | 31 |
| Totals | 99 | 112 | 154 |

The number of specific 21st century learning skills activities presented in each of the observations of the three schools using the Lisk approach indicates a notable pattern. Beginning with the young band program in a small school like Deer Creek, followed by a larger, more accomplished program in a medium-sized school such as Grand Falls, and finally, an accomplished program working at a high degree of sophistication such as at Lake Onondaga using similar approaches, the use of 21st century learning skills increased incrementally from the least sophisticated to the most sophisticated instrumental music programs. The only exception to this statement was that there were fewer creative thinking activities observed in Grand Falls than Deer Creek. Critical thinking skills were the highest utilized skill set in each of the schools, with collaboration being the second most used skill. Communication skills were observed less, and creative thinking skills received the least attention in these schools.

Deer Creek. At Deer Creek Community High School, the focus was on the acquisition of technical musicianship skills in order to approach the expressive elements of music that look beyond the notes, with a basic emphasis on developing the student’s personal responsibility for

acquiring these skills. Mr. Brown placed a priority on 21st century learning skills, without using the actual label.

I'm really vague about it, I really am, because I never want to get too heady about it or too in depth about it. It goes back to creating that culture inside the room where the children feel safe, and they feel comfortable so that they can be creative. So we take our strong skills that we have, we take the students that are in the class, based upon their prior knowledge that they have from middle school, and based upon my teaching them and we are able to grow from there. (Interview, 5/17/2017)

The Deer Creek students, beginning with Jane, provided their insights about aspects of 21st century learning skills. Jane described how she thought people in music use all of the learning skills in their experiences making music:

With this approach and 21st century learning skills, I think that we used all of them. Critical thinking, I think, is the technical stuff like the note needs to be this long, there's this many rests, this is the sharps, the flats, and all of that, I think creatively, like that's where the crescendos and the voice of the music comes out so that, to me, because in band, one day I can play a song and it sounds this way and another band can play the same song and it will sound different and they use the different crescendos and different interpretations, for collaboration, because you know music isn't about the individual, it's about all of us, so I think that's very, very important to musicianship, and then communication, I think it ties in with collaboration, because even though you know that you're not telling someone, I think you can communicate efficiently and you really have teamwork through music. (Interview, 2/23/2017)

Jane's observations about 21st century learning skills provided an overview of how all are used in music, as she sees it. Marilyn referred to all four learning skills specifically in her observations of the value of these learning skills:

When you consider 21st century learning skills, I would say the communication and the collaboration kind of go together and they are like really strong ones because in a group you can't do anything together if you don't communicate and collaborate. Critical thinking I would say would be like the next most used, important one because you have to think through the music, make sure that your parts are working together and that you're playing together. You kind of need that to do the communication/collaboration part. And creative thinking is completely 100% necessary maybe not for technicality but like for musicality. It definitely is, because you have to - you're creating this music from this paper. (Interview, 2/23/2017)

Marilyn's insights centered upon the treatment of communication and collaboration as the most important learning skills in a musical group. She addressed how creative thinking brings the human component of creativity into performance:

Creative thinking is bringing feeling and human emotion into the music that is up to the performer. This brings some individual creative interpretation to the music and some human elements so that it can come alive. Creative thinking lets you look deeper for what the music says beyond the page. (Interview, 5/16/2017)

Marilyn recognized that the use of creative thinking helps one to look at music in a deeper way. The students at Deer Creek generally had a good grasp on 21st century learning skills even if they were not addressed by name.

Grand Falls. At Grand Falls Senior High School, the expressive and interpretative elements of music were equally key components to the teaching of music fundamentals in the development of the well-trained musician, with an elevated expectation that the students were personally responsible for acquiring these skills. Mr. Carter reinforced the following:

I was intrigued by “The Creative Director” series because of the educational approach to music instead of just beating band music into kids, proposing that we create creative thinkers, accomplished musicians, and let them make the decisions in the chair.

(Interview, 3/31/2017)

The Grand Falls students had equally valuable perceptions about the importance of 21st century learning skills. Eileen made a very general statement about applying the learning skills used in band for other areas:

Being familiar with 21st century learning skills I think does help with the elements, and I think working outside of music and band does help to apply the skills towards other things. Obviously working together with people and making sure that you put in the right amount of effort to accomplish something. (Interview, 5/25/2017)

Eileen’s statement was vague, but she did credit 21st century learning skills as important in music making. Harold identified these skills as central to peoples’ lives, with an emphasis on critical thinking and communication:

With 21st century learning skills, those four or five words encompass everything that you have to do in your life. With critical thinking, obviously in school, getting into these higher-level classes, not just in music, you always have to be thinking on your feet and understanding materials or you are not going to do well in the class. And the same thing with communication, you have to be keeping an open communication line between you

and your teacher so you just understand everything. And these are what those 21st century learning skills translate into; it's just everything that you have to do in school and later in life. (Interview 6/13/2017)

Harold credited all four learning skills as very critical to everything that people do. Frank pointed out that critical thinking is an exercise in thinking outside of the box:

Critical thinking is like thinking outside of the box, not just thinking about one concept, but many. You know, you are playing the right notes, but are you playing them in tune, are you playing the correct rhythm, and are you playing with the ensemble? All of these things you have to be thinking about at the same time as while you are playing.

(Interview, 5/25/2017)

Frank emphasized that critical thinking is a skill that helps the musician visualize every aspect of playing so the music is being played with correct rhythms and well balanced among all players. It was noted that students in Grand Falls did not discuss creative thinking to any appreciable degree.

Lake Onondaga. At Lake Onondaga High School, an even larger focus was placed upon the process of cultivating the students' personal responsibility for learning as they equipped themselves with the basic technical and expressive and interpretative techniques they needed for becoming well-trained musicians. Mr. DiNapoli described how he sees the teaching of music fundamentals with critical and creative thinking.

I just go back to unlocking that student's possibilities without locking them in, on etude books or rehearsal balance books, symphonic techniques, you know, all of those method books, "Treasury of Scales". So, we've eliminated that. So, in terms of critical thinking, every student needs to play the correct scale, or I can, within a rehearsal, split that up so

we open up tonalities F, A, C, groups 4 & 3, play F, group 1, play concert C, group 2 play concert A. Now we've opened up sound and tonality for the development of the ear and balance. You can be as creative as you want with this approach. (Interview, 5/30/2017)

Mr. DiNapoli indicated that critical and creative thinking are applied directly to learning the musicianship skills that he addressed. The assessment and performance challenges that he presented to his students tapped in to the use of critical thinking for solving performance problems and creative thinking for using creative ways of approaching these problems.

The Lake Onondaga students were articulate about the importance of 21st century learning skills. Emily stressed the importance of the learning skills, and especially communication, in their use in musical ensembles:

I think that music has given me valuable experiences, in every aspect, not even just like sitting down playing in an ensemble, but being in jazz, being in marching band, and being in pit orchestra, those are four very different things. And all of them require different types of communication and life skills and being able to carry those out effectively, it's extremely important to me, because you know, I'm going into music education, but, at the same time, it just teaches me the basics of communication and the basics of being able to talk to each other. For example, when I am sitting in an ensemble, being able to ask someone a question, being able to communicate, and to not be afraid to raise my hand, that helps me in other classes. (Interview, 5/30/2017)

Emily pointed out that these skills would help her, especially in the development of her future career, which will be in music education. Sebastian referred to the value of creative endeavors, collaboration, and communication in his reflection.

I've definitely learned, just being a part of music in general, this department has taught me to be more creative. I feel like, when I interact and I had that sort of collaboration with other people, they taught me how to be creative in certain ways and think in those ways. And so, when I get into a traditional classroom setting, I see things that other people don't think about. And they're like "Oh yeah", but like, then my music friends will say the same thing. So, we sort of get on the same page on how to think. So it's sort of a social mentality, I guess that you could say. We all get on kind of the same collaborative mentality. I feel that I'm a very good collaborator with anybody. (Interview, 5/30/2017)

Based upon direct observation in all the three schools, communication skills were emphasized more in the Lake Onondaga program, with Grand Falls being somewhat less, and Deer Creek placing the least emphasis on this area. (See Fig. 5.3) Creative thinking skills generally received less emphasis than the other three, although Lake Onondaga addressed it more than the other two schools. There was not an even balance of all four 21st century learning skills utilized by these schools.

The least emphasized skill. Except for Lake Onondaga, little was done with the Lisk approach thoughts towards creativity. All teachers were primarily focused upon skill technique. Lake Onondaga did challenge students to think about what makes great art and developing a definition for music appreciation. Mr. DiNapoli described an activity completed with a particular composition.

I think that we've made an impact with whatever we do. You know I had them write, they had to fill out questions such as "What inspires you?" and "Who inspires you?" Because we are doing "Movement for Rosa" and then you learn about the kid. And then I sent all

of that to composer Mark Camphouse. And he wrote the students back. So there's a connection with the composer and all that good stuff. (Interview, 3/24/2017)

This creative thinking activity was one of many carried out at Lake Onondaga. In addition, Mr. DiNapoli referred to some creative activities in improvisation.

I could have the whole band play any chord that you want - major, minor, diminished, augmented, 7th, 9th chords - and I could have another student improvise over that tonality in an instant. So, there's your creativity. Or we could just pass; we could trade 8s back and forth in 4 bar phrases. (Interview, 5/30/2017)

Mr. DiNapoli described various improvisation activities that are an integral part of the daily rehearsal routine at Lake Onondaga High School. Students use creative thinking to improvise in musical performance, where they take chord structures and turn them into creative solo lines. With its connection to lifestyle development, the 21st century learning skills cultivation was the most evident in this school as a result. This school also varied instruction in a more obvious way than the other two schools in terms of accommodating diverse learning styles.

The other two schools focused upon the development of musical performance skills through the Lisk approach. While I did not observe much emphasis on creative performance in an improvisational framework, the approach did stimulate creative thinking in students through involving students in the novel creative processes that comprise this approach, hence the name "The Creative Director" series of the Lisk approach. This is not a negative reflection on the other two schools in this study. I did not observe instances of creative thinking, but that does not mean it is non-existent in their programs. It might simply not have been utilized on days I observed. However, the Lisk approach places a high value on spontaneous music making through improvisation, and teachers may enrich their programs by doing more to connect students'

creative thinking with on-the-spot, spontaneous creative music making in an improvisational setting.

Summary of use of 21st century learning skills. While teachers in the three schools did not identify the concepts of critical thinking, creative thinking, communication, and collaboration with the nomenclature of 21st century learning skills, they acknowledged that these learning skills were important for students to learn and that they have actually been using them as music teachers throughout their careers. Students in these schools, however, were more familiar with the label of 21st century learning skills and recognized that the use of critical thinking, creative thinking, communication, and collaboration in their learning provided them with avenues for strategic solutions to musicianship challenges, while strengthening their general learning skills competencies through the process. They indicated that they utilize the 21st century learning skills that they have learned through the Lisk approach and that these skills have had a positive impact on the development of their musicianship skills and other life skills. Critical thinking was the most utilized 21st century learning skill, followed by collaboration, then communication, and finally, creative thinking. Placing more emphasis on creative thinking strategies would more fully enrich the Lisk experience.

CHAPTER 6

DISCUSSION AND CONCLUSIONS

The purpose of this study was to examine how the teaching of musicianship skills using the Lisk “Creative Director” series facilitates the development of 21st century learning skills in instrumental music students. I specifically examined how the teachers presented their lessons using the strategies of the Lisk “Creative Director” series, and I observed how the students responded. In addition, I looked for references to the 21st century learning skills of critical thinking, creative thinking, collaboration, and communication that were made by the teachers using the Lisk approach, and I observed how the students utilized those learning skills when solving real-world musicianship challenges. I was curious to know specifically if the students actually recognized that they were using the Lisk approach as a unique entity and whether or not they thought it was helpful to their efforts to acquire advanced musicianship performing skills and concepts.

Data were collected from semi-structured individual interviews, field notes, observations, and student and teacher writing prompts. Interviews were recorded using a Phillips Voice Tracer DVT 1300 digital recording device, and then saved as .mp3 files from which they were later transcribed.

Discussion

Research question one. What are the pedagogical strategies used to cultivate overall musicianship in the Lisk “Creative Director” band series and how do they facilitate the development of 21st century learning skills of instrumental music students?

Use and effectiveness of the Lisk approach. In this section I discuss the effectiveness of the Lisk approach, how teachers discovered the Lisk approach, and how they use specific Lisk-centered techniques.

Effectiveness of the approach. The teachers in this collective case study were constantly seeking ways to teach musicianship skills using the most effective strategies possible. The Lisk approach addresses musical nuances, expression, and interpretation in a direct way and it is one of the few approaches to teaching instrumental music that does so (Molnar, 2005). Consistent with research conducted by Molnar (2005), the teachers involved in this collective case study all agreed that using the Lisk approach in their classrooms helped them to cultivate musicianship skills in their students. Since so much of the Lisk approach is based upon engaging students to use reflective questioning and creative thinking, as well as motivating students in a musical ensemble to communicate with one another as they work together in a team environment, there was a connection between the Lisk approach and the 21st century learning skills of critical thinking, creative thinking, collaboration, and communication. Twenty-first century learning skills are the basic vehicles used to shape the students' development of musicianship skills, including concepts of expression, feeling, and interpretation (Shuler, 2011). When these skills were coupled with all of the music theory fundamentals that the approach emphasizes (notes, scales, chords, intonation, tone, balance, blend, dynamics, articulations, and rhythms), the Lisk "Creative Director" approach addressed all of the main points that most musicians believe should be a part of any instrumental or vocal music curriculum, and this was consistent with Molnar's (2005) findings. Because the approach is inclusive and structured, and yet adaptable in the way that it may be presented, the directors who use the approach emphasized that it has made a major difference in their teaching. The director from Lake Onondaga High School pointed out that he

believes the Lisk approach saved his program because students are no longer using method books in their individual learning to any appreciable degree at the present time, unless they are taking private lessons on their instruments. This is significant because the Lisk approach addresses so many of the salient points found in method books that go into the teaching of a broad scope of musicianship skills.

Discovery of the Lisk approach. The teachers in this study discovered the Lisk series through either attending workshops or seminars presented by Lisk or were former students of Lisk. None of these teachers indicated that they learned about this approach through any curricular means in a preservice music teacher education program. There is a lack of research about the extent of introduction and implementation of Lisk approach at the college and university level, yet it would appear that the teachers from the schools in this study learned about the approach in a consistent way. Whether it be as former students of Lisk, attending individual workshops at conferences, conducting individual research, direct contact with Lisk, or attending one of the a very limited number of colleges and universities to employ the Lisk approach, there do not appear to be many other ways for teachers to receive instruction in the Lisk approach. What makes this significant is that, beyond the number of Lisk “Creative Director” publications available to use as guides, it can be a challenge for teachers to become proficient in the use of the approach without systematic training in the implementation of the approach. It requires that the teachers invest the necessary amount of time to learn the Lisk approach thoroughly to take full advantage of what it has to offer.

Utilization of the Lisk approach. The teachers interviewed and observed in this study used a variety of strategies outlined in the Lisk “Creative Director” series. Based upon comparative data from the three “Creative Director” schools in this study, the most popular

concepts presented were reflective thinking, imagery, musical focus, circle of fourths, assessment, grand master scale, internalization, tone, balance, and blend, beatless tuning, dynamics, articulations, and musicianship. The use of these techniques is consistent with research completed by Molnar (2005), which showed that these same concepts were the most popular ones used in middle school band rehearsals. Molnar (2005) found that the rehearsals always utilized the circle of fourths and the same categories dealing with sound quality, scales, and musicianship were emphasized throughout. These concepts were probably the most popular because most middle school bands, by their developmental nature, constantly work to improve the fundamental sound quality, listening, and tuning skills of all their student musicians. It is important to note that all of the musical concepts listed here are fundamental to the teaching of instrumental music in all approaches (Blocher et al., 1997; Froseth, 1971; Molnar, 2005). However, the teachers and students of the three participating schools in this study indicated that what makes the Lisk “Creative Director” series unique is that it cultivates specific approaches and strategies to address the teaching of all of these concepts in an interrelated way, a conclusion supported by Molnar (2005). I found that the teachers participating in this study stated that the Lisk approach guides music educators to see “the big picture” in teaching musicianship skills in ways that facilitate their sequential curricular presentation. The Lisk approach emphasizes the need to establish clear goals for all musical compositions introduced in the curriculum in order to ultimately present performances that demonstrate the most appropriate musicianship skills possible.

The participants of this study also pointed out that the heart of the techniques used in the “Creative Director” series is the circle of fourths, from which all other activities evolve, especially the grand master scale, the chord work, and the warm-up exercises related to tone

quality, intonation, balance, and blend. This is in line with Lisk's own assessment of his approach (1987, 1991). Lisk (1987, 1991) stated that every rehearsal activity in this approach emanates from the circle of fourths because of the note and chordal relationships it cultivates. The participants also indicated that the use of reflective thinking, assessment, and imagery were key techniques for using the "Creative Director" approach successfully. Teacher and student participants agree that these key techniques work together to contribute to the development of higher-level concepts in musical expression and interpretation that lead to comprehensive musicianship and stimulate critical thinking, creative thinking, collaboration, and communication. These techniques help student musicians to address musical challenges in organized, sequential ways that facilitate critical and creative thinking within individuals and collaboration and communication among group members.

The participants were pleased to incorporate the Lisk-centered techniques in their classrooms. The teachers in this study all felt that by using the "Creative Director" approach, the quality of their instruction improved significantly. They also shared informal personal observations that they were unaware of any other colleagues using the Lisk approach who were dissatisfied with any aspects of it.

Research question two. How are 21st century learning skills cultivated in a Lisk-centered classroom? In this section, I address the ways in which 21st century learning skills are cultivated in the classrooms of the participating schools, including critical thinking, creative thinking, collaboration, and communication from the perspectives of both teachers and students.

Cultivation of 21st century learning skills. The students of the three participating schools of this study used the 21st century learning skills of critical thinking, creative thinking, collaboration, and communication at varying levels depending upon the school and the teacher.

The teachers in this study used an extensive variety of student-centered learning techniques from the Lisk approach in their individual classrooms, though the Lake Onondaga band program, which was the only school that used all four learning skills extensively, was more advanced than the other two programs when solving challenges about music-making.

Critical thinking. Teachers and students in all three participating schools addressed the cultivation of critical thinking skills in the Lisk approach areas of instrumental warm-ups. They would confront a musical problem, whether it was related to tuning, balance, blend, rhythm, or a number of other things, and ask students to think through the alternatives for solving that problem, and then select the best possible result. As found in previous research (Bundra, 1993; Johnson, 2011; Shuler, 2011), critical thinking instruction in music can cultivate musicianship skills and musical independence through thoughtful and sequential music instruction.

Students from all three participating schools recognized critical thinking as one of the main learning skills that musical ensemble members need to use when analyzing a performance and attempting to make a performance the best that it can be. This finding is consistent with research by Bundra's (1993) findings that critical thinking can enhance overall musicianship skills, as well as research by Johnson (2011), who found that critical thinking can help students make intelligent musicianship decisions as performers. The students acknowledged that it is an important problem-solving skill that they use extensively both in music settings and outside of music. The students referred to critical thinking as a process requiring the ability to effectively analyze and assess challenges that are brought before them. The students pointed out that entire music rehearsals are filled with examples of musical challenges that require critical thinking. For example, critical thinking is utilized when a musician performs a musical line and then, through analysis and assessment, determines whether or not that line has been performed accurately,

effectively, and at the highest level of quality possible. The students associated the concept of “thinking in the moment” and “thinking on your feet” when referring to critical thinking in a musical rehearsal, as so much of this process takes place immediately after a musical line is performed.

These findings show that critical thinking is an important decision-making process in the development of overall musicianship skills by fostering an analytical thought process that provides solutions for musical challenges. Of all four 21st century learning skills, I found that critical thinking received the most emphasis from the participants.

Creative thinking. The teachers and students in the three schools participating in the study addressed the importance of creative thinking in the making of music, including the areas of innovation, creative questioning, and imagination. The Lisk approach warm-ups fostered creative thinking and creative approaches to varying degrees in all three school districts with varying levels of success depending upon the time and emphasis that the teachers from these schools extended to this skill. Students were encouraged to spontaneously create through musical improvisation, be expressive when performing musical phrasing, and to be sensitive to musical nuances and dynamic shifts.

The student participants defined creative thinking as a learning skill that enables students to find new and innovative solutions to challenges in musical performance. The students from all three schools consistently referred to creative thinking as “thinking outside of the box”, a label used by Lisk (1987, 1991) himself, where new and perhaps unorthodox solutions to problems could be developed. These findings are consistent with those by Mark (1996), who determined that creative thinking helps students to innovate and create new ways of doing things and Evenhouse (2014b), who found that creative thinking stimulates thoughtful questioning and

imagination in students. Students acknowledged that when they assume roles as musical performers, they are required to use creative thinking to deal with the concepts of emotion and expression, as they pointed out that the degree of intensity when performing with emotion, interpretation, and expression in music is based upon the unique creative responses of all the individual musicians working together collaboratively. The students all agreed that creative thinking is an essential learning skill that has many applications in situations throughout life.

Of the four 21st century learning skills addressed by teachers and students in the three schools, creative thinking received the least emphasis of the four learning skills. In the Lake Onondaga school, creative thinking was fostered through spontaneous improvisation, the use of reflective questioning that required creative thinking in response, and the presentation of musical challenges to students that provided opportunities for students to perform with creative interpretations in musical expression. In the other two schools, Deer Creek and Grand Falls, specific opportunities for individual student creative expression, such as through improvisation, were not presented in the classes that I observed. While fewer overall creative thinking strategies were observed in Deer Creek and Grand Falls, it is important to note that this study only reports what was observed during the field observations. It is possible that more emphasis on creative thinking could be taking place in these two schools, but it was just not observed to an appreciable degree during the classroom visits. Stimulating creative music-making in school music programs is important to being in line with the national standards of music education, and the Lisk approach reflects those standards in its teaching strategies, though only as much as the teacher is willing to implement creative music-making. Creative thinking is a necessary piece of being artistically creative, and creativity is a significant part of music-making.

Collaboration. Students and teachers alike in the three participating school districts stressed the importance of collaboration when addressing musical performance challenges. I found that the subject of “teamwork” was consistently associated with collaboration in all three schools, from both students and teachers. The warm-ups and other techniques of the Lisk approach fostered collaboration on many levels in all three schools, and especially with the development of ensemble tuning, tone, balance, and blend. For an ensemble to perform at a successful musical level, it needs to have all of its members to function as component parts to a total whole. This means that the group members need to play with consistent tone quality and tuning, and consistent interpretation and expression. The listening skills that are needed among ensemble members to achieve this consistency need to be continuously cultivated. Through collaboration with one another, ensemble members help the entire group achieve musical consistency. As found in previous research (Sawyer, 2008), when classrooms are designed in more collaborative and creative ways, children learn more effectively in them, and musical ensembles are well suited for this kind of classroom design. Collaboration skills go hand-in-hand with studying music (Shuler, 2011), and the students in all three cases listed collaboration as a primary learning skill that they all use extensively.

I found that the concept of developing teamwork and working with others across the ensemble was a recurring theme. To achieve musical success in an ensemble, students agreed that good collaboration among all ensemble members and music teachers was essential. Students also shared how they used collaboration skills in various academic settings and in different classes such as government and social studies, English and language arts, mathematics, and the sciences, along with extra-curricular areas such as athletic teams. The students frequently referred to using additional learning skills at the same time when collaborating with others, such

as the usage of communication skills while collaborating with a group or looking at a problem critically or creatively through group collaboration. Several of the students also shared the opinion that music students had more experience collaborating with others than non-music students because of the demands that musical ensembles place on the need to work together. These findings are consistent with a study by Kinney (2004) who concluded that participation in musical ensembles was a positive influence on collaboration and expression. The significance of this is that collaboration was identified to be a major skill of the 21st century learning skills emphasized by the teachers and students alike in musicianship training.

Communication. Teachers and students recognized the importance of communication between the conductor and the students and among the students themselves in all three participating schools. The Lisk approach warm-ups and other assorted techniques place a high priority on the use of communication skills.

Good communication skills when working with other people in a musical ensemble were recognized as important by the students in all three participating schools. This finding is consistent with research by both Evenhouse (2014b) and Shuler (2011). The ability to communicate ideas clearly and succinctly among themselves as musical ensemble members with their music teachers while also being able to accurately describe various musical nuances to one another is an important learning skill. Several of the students pointed out that communication in music happens in forms that are both verbal and non-verbal, and that communication takes place on many levels, between one another, between students and teachers, and between ensembles and audiences. The students explained the need to have good communication skills working in tandem with the other learning skills such as collaboration and critical and creative thinking not only in musical groups but also when trying to problem solve in any of their other academic or

athletic endeavors outside of music. Once again, students reinforced that this is a learning skill that they use extensively throughout their lives. Communication was a significant 21st century learning skill that was reinforced through music in the three participating schools.

Research question three. What impact do students believe that the Lisk “Creative Director” series has had on the development of their musicianship skills and their 21st century learning skills? To address this question, I examined the impact that the approach has had on the students’ learning of 21st century learning skills in the participating schools, the extent that students utilized 21st century learning skills in their learning routines, and the extent that students could identify and describe the 21st century learning skills.

Impact. The students from all three participating schools in this study were overwhelmingly positive about their experiences with the Lisk approach. All of the students were aware that the Lisk series was a unique approach to developing musicianship skills. All recognized how integral that the 21st century learning skills of critical thinking, creative thinking, collaboration, and communication were to the cultivation of the musicianship skills taught through the Lisk approach. The students could see the extra-musical benefits of applying the skills taught through the Lisk approach to other areas of their lives. When the teaching of music is more student-centered, students have more ownership of their education, making them positive, motivated learners (Johnson, 2011; Mark, 1996; Molnar, 2005; Wenger, 1998).

Students pursuing a career in music education indicated a desire to utilize the Lisk approach as a part of their own overall teaching strategy. They recognized the benefits that the Lisk approach had on their own personal musical development and appreciated the musical clarity and understanding that the Lisk approach fostered not only in their own musical experiences but also in those of their peers. Aside from the wealth of skills that students

acknowledged acquiring through training in the Lisk approach, the musical ensembles from the three participating schools demonstrated a high level of musicianship with noteworthy tuning, tone, balance, and blend and with two of the schools, Grand Falls and Lake Onondaga, achieving a level of artistry in their playing that is normally associated with college and other advanced musical performing groups. In this way, the Lisk approach can contribute to musically sophisticated ensemble experiences for all of the students who experience it, while equipping the students with learning skills and musicianship skills that contribute valuable multi-dimensional elements to the overall quality of life of all of these students.

The extent to which the students utilized the 21st century learning skills. The students from the three participating schools in this study continuously utilized the 21st century learning skills while dealing with the musicianship challenges that were presented to them. As found by Younker (2002), 21st century learning skills, and especially critical thinking skills, apply to all areas of musical performance. In the current study, critical thinking was the most utilized of the four 21st century learning skills, followed by collaboration, then communication, and finally, creative thinking. This suggests that the teachers placed the most emphasis on critical thinking skills in the daily rehearsal classroom regimen, with collaboration and communication skills valued almost as much. To fully utilize the Lisk “Creative Director” series to its potential benefits, these teachers might place more emphasis on creative thinking since the approach lends itself to the teaching of all the 21st century learning skills. The internalization processes cultivated in the Lisk approach are related to the skills of critical thinking, creative thinking, collaboration, and communication.

The extent to which the students were able to define and describe 21st century learning skills. The students from all three cases in this study were articulate in their ability to describe

the significance of 21st century learning skills in their total education. Prior to this study, most of them were not familiar with the term “21st century learning skills”. However, once they thought about the amount of time that they had used critical thinking, creative thinking, collaboration, and communication, they realized that they have been using these concepts all along and that they were all part of the Lisk approach. They made the connection that the Lisk approach emphasized the development of independent thinkers in making music. This was significant because none of the teachers of this study placed any conscious emphasis on the 21st century learning skills and yet their students still managed to recognize their value when asked about these skills specifically. The association of the Lisk approach with the 21st century learning skills strengthened the value of the Lisk approach in the minds of the students in this study. The students recognized that the Lisk approach places significant emphasis on the importance of cultivating independent learners as musicians, and that the 21st century learning skills were important across all disciplines. This was consistent with Allsup’s (2012) recommendation that it should be an obligation of the schools to prepare young people to be independent thinkers so that they can respond to a fast-changing world in new ways. Every student participant consistently alluded some kind of benefit to the use of 21st century learning skills, even if they were not familiar with the label attached to this group of skills emphasizing critical thinking, creative thinking, collaboration, and communication.

Implications

Twenty-first century learning skills. The association of teaching of 21st century learning skills with the teaching of music has broad implications for the perceptions of educational leaders regarding the role of music in the overall curricula of the schools. As educators identify the overarching ideals that should be defined as necessary components of the

core values of schools, the teaching of 21st century learning skills is key, since they can be used to facilitate student learning in any subject taught in schools. With the emphasis of 21st century learning skills usage in the teaching of music, the subject of music becomes well suited to be used as a vehicle for the cultivation of 21st century learning skills that may be applied across the curricula of all disciplines. The Lisk approach embraces the use of 21st century learning skills in the teaching of music.

However, it is important to keep in mind that the value of studying music as a core discipline should not be diminished to achieve some other extra-musical end. Lisk believed that music should be taught in the schools primarily for its own sake, as it deserves to be treated with the same respect as all other academic core subjects (Lisk, 1987, 1991). While valuing music as a core subject, it can be, at the same time, an effective vehicle through which to teach 21st century learning skills that enable student learning in all other academic disciplines. In this way, the subject of music becomes elevated as a key element in facilitating the general educational missions of schools to cultivate their essential core values.

As 21st century learning skills become more widely used across schools around the world, there are broad implications on the effectiveness of schools as they prepare students to become productive, independent lifelong learners in the information age of the 21st century. The development of critical thinking, creative thinking, collaboration, and communication skills in students may result in a more highly-educated population and a workforce that is better prepared to meet the challenges of 21st century jobs that have not yet been created as well as future problems that have not even been recognized. How instruction and schools may change to deal with the challenges of the future remains to be seen, with student-centered learning leading the charge. It is evident that dramatic change will come to 21st century society in general, leading to

more innovative thinking, collaborative problem-solving, creative imagination, and improved communication among all citizens, and schools will need address this change by retooling and recalibrating the services they provide to remain effective and relevant.

As educators place more recognition on the value of 21st century learning skills in the overall education of students, schools will place more emphasis on insisting that teachers identify these skills in their pedagogy. There may also be more business partnerships with educational institutions that will emphasize the need for teaching of these skills in all academic disciplines. It is my hope that when these business partnerships realize the value of music education as a vehicle to cultivate these learning skills, these organizations will advocate for more music education. Music educators would be wise in embracing the importance of this aspect of connected learning between music and 21st century learning skills as a way to strengthen support for music education.

The Lisk approach. The Lisk approach is a template to lay over a teacher's existing instruction as a music educator. It is not a prescribed step-by-step method, and it will not look exactly the same from one teacher to the next. It is an effort to provide teachers with creative strategies that will bring more depth and meaning to their instructional practices. The approach is significant because it helps music teachers to align their work with broader educational core values identified by schools that tie the work of all academic disciplines together. Identifying the contributions that the teaching of music makes towards the emphasis on school core values adds one more layer of relevancy to the discipline of music as an important core subject in the total educational curricula.

The impact that the Lisk approach had on the participants in the current study suggests that school music programs may be well served if the teachers of those programs take the time to

learn and implement the Lisk approach in their own situations. For the majority of students who will not be making music a career but who will enjoy it perhaps as an avocation, the learning and musicianship skills derived through the Lisk approach easily transpose into a plethora of multi-dimensional life skills in thinking, being creative, working together, and communicating with one another. If the Lisk approach became the widespread norm in teaching instrumental music, it is possible that high levels of musical artistry could become attainable for all participating students in these programs. The implications of this on college and university music programs and community ensembles would be enormous as well, because the bar for training students to become artist-level musicians and teachers would also be raised.

With the fast-paced changes that are happening in education right now and expected for the future, it is important for music teachers to remain current in understanding educational trends and continuing their professional development to become the most effective teachers possible. The Lisk approach is a resource that can be used to layer over a teacher's music education preparation that can positively enhance their effectiveness as arts educators. Music teachers need to take advantage of meaningful professional development opportunities that will strengthen their standing as important contributors to the overall education of all children. If those in the field of music education do not embrace the ever-evolving changes in the profession, the perception of relevance of the discipline of music to the overall education of children stands to be diminished significantly.

Lisk is in the process of releasing a new book in 2018 entitled *The ART of Musical Expression* where he develops more ideas on musical artistry, artistic expression, and musical feeling that may be connected with his "Creative Director" series. Lisk also recently released books on artistic nuance and lyrical conducting to assist directors in framing important ideas

about the teaching of musicianship with an emphasis on musical phrasing and expression. The Lisk approach has always emphasized the cultivation of musicianship, and these books extend those ideas to even higher levels than have been previously addressed. Some music teachers have expressed interest in establishing an Edward Lisk Teacher Training Institute that both prospective and seasoned music educators could attend to receive training in the Lisk approach. If there were more opportunities for teacher instruction available in this approach, it could become more popular, and could have a positive impact upon the overall level of music education.

Suggestions for Further Research

The Lisk “Creative Director” series is a unique approach that has been gaining popularity and attention from directors all over the world for the past thirty years. For future study, it would be interesting to compare instrumental music classroom activities that foster 21st century learning skills from more traditional approaches to teaching band with a Lisk-centered band program, in order to see if the same learning skills are emphasized in a similar way.

It should be noted that the teaching of successful wind band classes using traditional teaching techniques address many of the same musical elements as the classes using the Lisk “Creative Director” approach. It would be useful to compare how the musical elements are taught, comparing the Lisk approach to a more traditional approach, by examining how traditional strategies develop musicianship skills as compared to the in-depth examination of musicianship viewed through the multiple lenses of the Lisk approach.

In all of the data collected from observations of classrooms in the three participating schools, it is worth noting that the amount of observed musical elements, Lisk approach concepts, and 21st century learning skills coincidentally grows in a way that corresponds to an earlier reference to the size and experience of the schools participating in this collective case

study. It would be interesting to know if schools using this approach from the elementary level to the secondary level are able to use a higher order of musicianship and learning skills than schools that only use this approach at the secondary level.

Several times in this study, participating directors addressed the fact that this approach is not addressed or presented in any meaningful way in most collegiate music education programs. This leads me to wonder if there is a higher level of usage of the Lisk approach among recent graduates of colleges and universities who do learn about the “Creative Director” approach through their respective undergraduate music education programs versus their peers from other college and university programs that do not expose their students to this approach. Further research could explore this idea.

Conclusion

The Lisk “Creative Director” series represents a unique approach for teaching musical performance that is based upon a natural learning process (Lisk, 1987, 1991). It begins by introducing students to the first seven notes of the musical alphabet and expands upon this foundation through the full range of musical performance techniques and musical elements. The thorough acquisition of this knowledge transforms the students’ awareness of musicianship from knowing basic fundamentals of music to experiencing a high level of musical artistry using the learning skills of critical and creative thinking, collaboration, and communication. The goal of the “Creative Director” series is to expand the depth of musical understanding for students who learn about musical performance. The development of a creative way of life as taught through creative musical experiences is the desired end.

One of the most important things that makes the Lisk approach unique from more traditional ways of teaching instrumental music is that it helps the teacher to efficiently address

more musical elements and concepts within a typical rehearsal classroom period than what is generally covered in instrumental classes taught using more traditional means. I was struck by how much more musical material was covered in the ensemble rehearsals of the three schools participating in this study than what I am accustomed to seeing in informal observations of ensembles that use more traditional approaches. It also seemed to me that more 21st century learning skills were utilized in these rehearsal classrooms using the Lisk approach than in more traditional instrumental music rehearsal settings in my experience.

During this project, it was interesting to compare the three different music programs that comprised this comparative case study. Deer Creek Community High School was the smallest band program with one instrumental music teacher for the entire district in a rural, agricultural community. Grand Falls Senior High School was a school twice the size of Deer Creek with two high school bands, a training group and a select wind ensemble, conducted by a teacher who was a part of an instrumental music staff of several in a somewhat affluent community. Lake Onondaga High School was twice the size of Grand Falls with four high school bands, and three high school band directors who are part of a large district wide instrumental music faculty, in a balanced blue and white collar suburban community outside of a major city. The students of the Deer Creek program, which was a developing band program, were focused on the fundamentals of the Lisk approach. The Grand Falls students, with a highly accomplished high school select band and orchestra, were focused on applying the fundamentals of the Lisk approach to an overall musicianship performance context, and they had highly developed listening and intonation skills that translated into a band sound that was superior to some college bands. The Lake Onondaga program, with four high school bands, a full symphony orchestra, and all of the directors being highly trained in the Lisk approach, had a very sophisticated approach where the

students spoke eloquently about elements of musicianship and demonstrated an understanding of the musical theory behind what they do. The circle of fourths and grand master scale are still important, but the main focus for these students is comprehensive musicianship. The group plays with a band sound that is also superior to some college bands. The Lake Onondaga program was very multi-dimensional in its development, and the students there had the advantage of working with an entire staff of music educators who all received instruction in the Lisk approach.

The Lisk approach is much more than the circle of fourths and the grand master scale. It is a philosophy and a process for preparing students in comprehensive musicianship grounded in solid educational principles and 21st century learning skills. Based upon my personal experience and in informal communications with all three directors, no one knows anyone using this approach who is dissatisfied with it. The Lisk “Creative Director” series is a unique and effective approach to the teaching of musicianship and performance skills in developing student musicians. Because of its emphasis in deep thinking, internalization, and the concept of “the mind’s eye,” an ability to make mental images about musical concepts in one’s mind, this approach encourages students to utilize the 21st century learning skills of critical thinking, creative thinking, collaboration, and communication. As a music educator for over forty years, I believed that it was important to know my subject area thoroughly so that I could share as much information with my students as possible. However, I have come to the realization that education needs to be about process as much as product. When we understand how people learn, we can understand how to better teach them. At the secondary school where I previously taught, faculty members worked diligently to find techniques that promoted improved student learning. They focused upon an approach that facilitated student learning through the concept of “systems thinking” developed by the Waters Foundation of Boston in which dynamic systems interact to

form larger systems, and how the comprehension of the processes improved sequential education (Waters, 2018). Being familiar with that project helped me to understand that education needs to be about teaching students the 21st century learning skills that they will need to facilitate a process of lifelong learning. Lisk has developed an approach to learning music that is rooted in teaching the process of learning while still being flexible enough for the director to be creative and design a program of learning that meets the unique needs for his or her own music program.

APPENDIX A

LESSON PLAN TOPICS & QUESTIONS: LISK “CREATIVE DIRECTOR” SERIES

The following lesson plan form was given to teachers to inform the researcher about the use of the Lisk “Creative Director” series in the classrooms of the participating schools.

| |
|-------------------------------------------------------------------------------------------------------|
| Ensemble: |
| Musicianship Concept (Please provide a different form for each concept being taught.) |
| Literature being used where concept will be emphasized: |
| What are the reasons for focusing upon this concept? |
| Outcomes – What do you want students to be able to do? Skill Knowledge Affective |
| Strategies – How will you teach this concept? What will be the learning activities? |
| Assessment – How will you find out what students have learned? |

APPENDIX B

SEMI-STRUCTURED INTERVIEW PROTOCOL

Teaching Musicianship Skills Using the Lisk “Creative Director” Series and How the Lisk Approach Facilitates the Development of 21st Century Learning Skills
in Instrumental Music Students
Thomas E. Reynolds - University of Massachusetts at Amherst

Script: Thank you for agreeing to be interviewed for this project. I want to learn more about your thoughts on the Lisk “Creative Director” series and 21st century learning skills. This interview will take approximately 30 minutes to complete. After each interview you will be provided a transcript for your review.

I will be recording our conversation so that I can transcribe it later and will be taking a few notes during the interview. As a reminder, the consent/assent form assures that: 1) your participation in this study will remain anonymous; 2) your participation is voluntary and you may stop at any time if you feel uncomfortable; and 3) you may ask that the recorder be turned off at any point in the interview if there is something you do not want to be recorded. Again, thank you for agreeing to participate.

[Turn on the audio recorder]

Time of interview:

Date:

Place:

Interviewer:

Thank you for agreeing to be interviewed for this project. I want to ask you questions about the Lisk “Creative Director” series and 21st century learning skills. Remember that you can stop the interview at any time if you feel uncomfortable for any reason. Is it OK with you if I audio record your interview? Are you ready? I am now going to turn on the audio recorder.

Interview #1 - Teachers/Administrators

1. Tell me about the Lisk “Creative Director” series and how you use it in your program.
2. How did you hear about this approach and how long have you been using it?
3. What appeals to you about this approach?
4. Do you think this approach is important? Why or why not?
5. What have you noticed about students involved in the program with this approach?
6. What 21st century learning skills did you teach to deal with musicianship challenges?
7. Why did you decide to focus upon teaching or presenting certain musicianship skills?
8. What did you want your students to learn today?
9. Do you think that you were successful in teaching the concept(s) presented today?

10. What effect have these techniques had in your teaching about musicianship?
11. What musical gains have you seen in the students? Non-musical gains?

Interview #2 – Teachers/Administrators

1. How has the program changed over the year?
2. Have the students shown any changes? If so, how?
3. Did your perception about teaching musicianship skills change after using these techniques?
4. Do you think this approach is important? Why or why not?
5. What musical gains have you seen in the students? Non-musical gains?
6. What effect have these techniques had in your teaching about musicianship?
7. What effect have these techniques had in your teaching about 21st century learning skills?
8. Will you continue to support using the approach in the future? Why or why not?
9. What changes would you like to see in the approach?
10. Is there anything else you would like me to know about the approach or your thoughts on it?

Interview #1 – Students (Individual)

1. Tell me about the Lisk “Creative Director” approach. What do you think of it?
2. What instrument do you play? How important is it to you?
3. What do you feel that you learned from this approach?
4. What do these rehearsal techniques teach you about musicianship?
5. How did you use the musicianship skills that you learned in your subsequent performances?
6. What 21st century learning skills did you use to deal with musicianship challenges?
7. How well did you learn certain musicianship skills? Please tell me whatever you can about this.
8. What do you think that your teacher wanted you to learn today?
9. Do you think that you were successful in learning the concept(s) that the teacher presented?
10. Do you think this approach is important? Why or why not?

Interview #2 – Students (Individual)

1. What do you think of the Lisk “Creative Director” approach?
2. Has the experience been positive or negative for you? How?
3. What have you learned about musicianship through this approach?
4. What 21st century learning skills have you learned through this approach?
5. How do you feel that you have grown as a result of using this approach?
6. Do you think this approach is important? Why or why not?
7. What would you change about the approach?
8. How effective has this approach been in helping you to learn about musicianship and 21st century learning skills?
9. Has your attitude changed about the value of this approach over time? Please explain.
10. Is there anything else you would like me to know about the approach or your thoughts on it?

Interview #1 – Student Focus Group

1. Tell me about the Lisk “Creative Director” approach. What do you think of it?
2. What instrument do each of you play?
3. What do you like about playing your instrument?
4. How long have you been in the program?
5. Why did you want to participate?
6. What effect does the Lisk “Creative Director” approach have on the musicianship skills of your group?
7. Do students in your group effectively use 21st century learning skills when solving group musicianship challenges?
8. How well does your group respond to solving musicianship challenges while using the Lisk “Creative Director” approach?
9. What does your group like about the approach?
10. What would your group change about the approach?

Interview # 2 – Student Focus Group

1. Tell me what you have learned about music using the Lisk “Creative Director” approach.
2. Tell me what you have learned besides music.
3. Has your group improved musically as a result of using the approach? If so, how?
4. Did your group think critically and creatively with one another more effectively as a result of this approach? If so, how?
5. Did your group collaborate and communicate with one another more effectively as a result of this approach? If so, how?
6. What is the most important thing you have learned this year from the Lisk “Creative Director” approach?
7. What is the most important change, if any that you have witnessed in your group this year as a result of using the Lisk “Creative Director” approach?
8. Does your group like the Lisk “Creative Director” approach? Why or why not?
9. What would your group change about the Lisk “Creative Director” approach?
10. Is there anything else you would like me to know about the approach or your thoughts on it?

APPENDIX C

WRITING PROMPTS FOR STUDENT JOURNAL

Lisk “Creative Director” Series Study
Writing Prompts for Journal

Name _____
Date _____

Focus on questions 1-3 on the first visit, complete questions 4-6 on the second visit.

1. Please briefly describe what you know about the following 21st Century Learning Skills:

- Critical Thinking –

- Creative Thinking –

- Collaboration –

- Communication –

(If you need more space, please use the back of this paper.)

2. When you are learning about music and musical techniques, how would you apply any of the 21st Century Learning Skills listed above to overcome musical performance challenges? Please indicate which skills that you would use and examples of how you would use them.

(If you need more space, please use the back of this paper.)

3. In your experience, what subjects do you study that require that you use any or all of the 21st Century Learning Skills listed earlier? Please provide a couple of examples of the specific subject(s) and the use of the specific skill or skills.

(If you need more space, please use the back of this paper.)

4. How would you describe how learning about music can also influence what you learn about using the 21st Century Learning Skills listed earlier?

(If you need more space, please use the back of this paper.)

5. Do you think that you learn to use 21st Century Learning Skills as much, less, or more when you study music as compared to other subjects at school that you study? Please explain your answer.

(If you need more space, please use the back of this paper.)

6. What does your teacher do in class to help you to become a better overall musician? Please describe a few specific examples.

(If you need more space, please use the back of this paper.)

APPENDIX D

WRITING PROMPTS FOR TEACHER JOURNAL

Lisk “Creative Director” Series Study
Writing Prompts for Teacher’s Journal

Name _____

Date _____

Focus on questions 1-3 on the first visit, complete questions 4-6 on the second visit.

1. Do you generally make a direct or indirect reference to 21st Century Learning Skills when you present a lesson in musicianship? Please provide a brief description of that reference(s).

(If you need more space, please use the back of this paper.)

2. Do you notice a difference in the way in which students deal with musical technique/musicianship skills since you have started using the Lisk “Creative Director” Series? If so, please describe the difference(s) briefly.

(If you need more space, please use the back of this paper.)

page 2

3. What aspects of teaching musical technique/musicianship skills have been facilitated through the use of the Lisk “Creative Director” Series? Please provide a couple of examples of the specific skill or skills.

(If you need more space, please use the back of this paper.)

4. Have you noticed a change in the way that students use 21st Century Learning Skills in your rehearsals through the Lisk “Creative Director” Series? Please describe a specific example(s).

(If you need more space, please use the back of this paper.)

5. Do you think that you learn to use 21st Century Learning Skills as much, less, or more when you teach music as compared to other colleagues of other subjects at your school? Please explain your answer.

(If you need more space, please use the back of this paper.)

6. Have you found that the Lisk “Creative Director” series has had any direct impact on your own overall musicianship, or on the way that you teach musicianship? If so, please describe a few specific examples.

(If you need more space, please use the back of this paper.)

APPENDIX E

CERTIFICATION OF HUMAN SUBJECTS APPROVAL



University of Massachusetts Amherst
108 Research Administration Bldg.
70 Butterfield Terrace
Amherst, MA 01003-9242

**Research Compliance
Human Research Protection Office (HRPO)**
Telephone: (413) 545-3428
FAX: (413) 577-1728

Certification of Human Subjects Approval

Date: February 16, 2017
To: Thomas Reynolds, Music & Dance
Other Investigator: Sara Jones, Music & Dance
From: Lynnette Leidy Sievert, Chair, UMASS IRB

Protocol Title: Teaching Musicianship Skills Using the Lisk "Creative Director" Series and How the Lisk Approach Facilitates the Development of 21st Century Learning Skills in Instrumental Music Students
Protocol ID: 2017-3631
Review Type: EXPEDITED - NEW
Paragraph ID: 6.7
Approval Date: 02/16/2017
Expiration Date: 02/15/2018
OGCA #:

This study has been reviewed and approved by the University of Massachusetts Amherst IRB, Federal Wide Assurance # 00003909. Approval is granted with the understanding that investigator(s) are responsible for:

Modifications - All changes to the study (e.g. protocol, recruitment materials, consent form, additional key personnel), must be submitted for approval in e-protocol before instituting the changes. New personnel must have completed CITI training.

Consent forms - A copy of the approved, validated, consent form (with the IRB stamp) must be used to consent each subject. Investigators must retain copies of signed consent documents for six (6) years after close of the grant, or three (3) years if unfunded.

Adverse Event Reporting - Adverse events occurring in the course of the protocol must be reported in e-protocol as soon as possible, but no later than five (5) working days.

Continuing Review - Studies that received Full Board or Expedited approval must be reviewed three weeks prior to expiration, or six weeks for Full Board. Renewal Reports are submitted through e-protocol.

Completion Reports - Notify the IRB when your study is complete by submitting a Final Report Form in e-protocol.

Consent form (when applicable) will be stamped and sent in a separate e-mail. Use only IRB approved copies of the consent forms, questionnaires, letters, advertisements etc. in your research.

Please contact the Human Research Protection Office if you have any further questions. Best wishes for a successful project.

APPENDIX F

SCHOOL RECRUITMENT LETTER

March 1, 2017

Dear colleague,

My name is Thomas Reynolds and I am a music educator from Templeton, Massachusetts who is working on a doctoral dissertation entitled "Teaching Musicianship Skills Using the Lisk "Creative Director" Series and How the Lisk Approach Facilitates the Development of 21st Century Learning Skills in Instrumental Music Students" in a PhD program at the University of Massachusetts-Amherst. I have attended several of the Lisk workshops held at Villanova University in Philadelphia, PA and Gordon College in Wenham, MA over the years.

It has come to my attention that you utilize the Lisk "Creative Director" series in one or more of your school ensembles as a part of your instrumental music curriculum. If it would be possible, I would like to invite you and some of your students to participate in this study.

In order to participate in this study, it would involve a limited number of interviews and observations. I would need to interview four selected students for about 30 minutes each at two different times in the second semester, in addition to observing a couple of rehearsals during each visit. There will be two meetings during two different visits...2 meetings in March and two in June. The students would be involved in 1 meeting individually per visit, and 1 meeting with the other 3 students in a group focus session per visit. The same 2-meeting format for students would happen during the second visit later in the spring. There will be questions that I will be able to provide in advance that covers the topics that we are covering...I will send you copies of the questions. Also, I will want to interview you once during each visit for about 60 minutes as a part of the data collection process. The questions will be sent in advance and are also fairly straightforward. There is a very brief journal process that goes along with this, but it is fairly simple and won't take much time.

I have a letter that invites students to participate in this study that I would like to give out in order to select participants. There is a consent form that students (13-17 years of age) and their families would need to complete with their parents'/guardian's signatures from UMass-Amherst in order for me to interview them for the project. These same students 13-17 would need to sign a separate assent form. Students 18 years old or older who would sign a different consent form for themselves. Another consent form would need to be signed by the participating teachers. I will get this information to you as soon as the IRB gives me the OK to proceed.

Once again, if I could interest you in participating in this study, I would also need to know if there are any things that I would need to do in order to visit your school to begin this research. The number of times that I would be interacting with your three students will be limited to 4 sessions - 2 in 30 minute individual sessions and 2 in 30 minute group sessions. I would like to observe 1 or 2 rehearsals as well, hopefully unobtrusively, so that I do not distract you or your students.

Thanks very much for your consideration! My contact information is 617.529.9402 (cell) and treynold@worldpath.net (email).

With best wishes,

Thomas E. Reynolds
Program Supervisor, Music Education
University of Massachusetts – Amherst

Office email: tereynol@music.umass.edu
Home email: treynold@worldpath.net
(617) 529-9402

APPENDIX G

STUDENT RECRUITMENT LETTER

March 1, 2017

Dear Student,

Your school has been selected to participate in a study of an instrumental music teaching approach that has been growing in popularity among American school music teachers over the past twenty years - the Edward S. Lisk “Creative Director” series. Your school was selected to participate in this study because your director is known to be very well versed in the use of this approach in your school music program. Consequently, I would like to invite you as a student to participate in this study.

Let me begin by introducing myself. My name is Thomas Reynolds and I am a music educator from Templeton, Massachusetts who is working on a doctoral dissertation entitled "Teaching Musicianship Skills Using the Lisk “Creative Director” Series and How the Lisk Approach Facilitates the Development of 21st Century Learning Skills in Instrumental Music Students” in a PhD program at the University of Massachusetts-Amherst.

I am interested in collecting information that would help me to better understand how effective this approach is with students in learning about music as well as the 21st Century Learning Skills of critical thinking, creative thinking, collaboration, and communication. As a student experiencing this approach first hand, it would be valuable to me to know whether or not you find this approach helpful to you as you learn about music and these skills in your school ensemble.

In order to participate in this study, it would involve a limited number of interviews and observations. I would need to interview four selected students for about 30 minutes each at two different times in the second semester, in addition to observing a couple of rehearsals during each visit. There will be two meetings during two different visits...2 meetings in March and two in June. The students would be involved in 1 meeting individually per visit, and 1 meeting with the other 3 students in a group focus session per visit. The same 2-meeting format for students would happen during the second visit later in the spring. There is a very brief journal process that goes along with this, but it is fairly simple and won't take much time.

Commonly asked questions by students are as follows:

What is a research study?

A research study is a way to find out new information about something. You do not need to be in a research study if you don't want to.

Why are you being asked to be part of this research study?

- You are being asked to take part in this research study because we are trying to learn more about the Lisk “Creative Director” band series and its relation to 21st century learning skills. We are inviting you to be in the study because you participate in an instrumental music program that uses the Edward S. Lisk “Creative Director” series in its curriculum, and you responded to an invitation from the researcher. About 4 student participants from your school will be in this study.

If you join the study what will you be asked to do?

We want to tell you about some things that you will be asked to do if you are in this study.

- You will participate in four interviews of 30 minutes in length – two during the first visit and two during the second visit. Two of these interviews will be in focus groups – one in each visit.
- Interviews will be audio recorded.
- You will be in the study for four to five months.

What will the researcher do with the information that I provide?

- The researcher will conduct observations, and analyze my responses and comments.

How will being in this study affect me?

- There are no anticipated risks or discomforts for you as you participate in this study. You may benefit from the study, as it will help you understand the significance of the specific teaching methodology being used by your instructor(s) to the overall music education profession.
- I am researching the effect of teaching music using the Lisk “Creative Director” series on students’ understanding of 21st century learning skills. This study might find out things that will help other people someday.
- You do not have to answer questions that cause you to be uncomfortable.

Do your parents know about this study?

- This study was explained to your parents and they said that we could ask you if you want to be in it. You can talk this over with them before you decide. If you want to be in the study, your parents will need to sign a form too.

Who will see the information collected about you?

- The information collected about you during this study will be kept safely locked up. Nobody will know it except the people doing the research.
- The study information specifically about you will not be given to your parents (or teachers). The researchers will not tell your friends.

What do you get for being in the study?

- There will be no compensation for any of the student participants in the study.

Do you have to be in the study?

- You do not have to be in the study. No one will be upset if you don’t want to do this study. If you don’t want to be in this study, you just have to tell us. It’s up to you.
- You can also take more time to think about being in the study.

What if you have any questions?

- You can ask any questions that you may have about the study. If you have a question later that you didn’t think of now, you can call Mr. Thomas Reynolds at (617) 529-9402.
- You can also take more time to think about being in the study and also talk some more with your parents about being in the study.
- If you have any concerns about your rights as a research subject, you may contact the University of Massachusetts Amherst Human Research Protection Office (HRPO) at (413) 545-3428 or humansubjects@ora.umass.edu.

Other information about the study:

- You can change your mind and stop being part of it at any time. All you have to do is tell the person in charge. It’s okay.

There is a consent form that students (13-17 years of age) and their families would need to complete with their parents’/guardian’s signatures from UMass-Amherst in order for me to interview you for the project. These same students 13-17 would need to sign a separate assent form. Students 18 years old or older who would sign a different consent form for themselves. If you would be interested in participating in this study, please print your name, grade, and circle your gender at the bottom of this

paper and return it to me when I arrive at your school. Four students will be selected, based upon interest and diversity of gender and grade, and appropriate consent/assent forms will be distributed to the selected students.

Thanks very much for your consideration! If you have any further questions, my contact information is 617.529.9402 (cell) and treynold@worldpath.net (email).

With best wishes,

Thomas E. Reynolds
Program Supervisor, Music Education
University of Massachusetts – Amherst
Office email: tereynol@music.umass.edu Home email: treynold@worldpath.net
(617) 529-9402

Student's Name _____ Grade _____ Gender M F

School Name _____

APPENDIX H

CONSENT FORM FOR PARTICIPATION IN A RESEARCH STUDY – ADULT

STUDENTS 18+

Consent Form for Participation in a Research Study

University of Massachusetts Amherst
Adult Student 18 years old and older

Researcher(s): Mr. Thomas E. Reynolds, PhD candidate in music education and Dr. Sara Jones, Assistant Professor from the Music Education Area, Department of Music and Dance at the University of Massachusetts Amherst

Study Title: Teaching Musicianship Skills Using the Lisk “Creative Director” Series and How They Facilitate the Development of 21st Century Learning Skills in Instrumental Music Students

1. WHAT IS THIS FORM?

This form is called a Consent Form. It will give you information about the study so you can make an informed decision about participation in this research. We encourage you to take some time to think this over and ask questions now and at any other time. If you decide to participate, you will be asked to sign this form and you will be given a copy for your records.

2. WHO IS ELIGIBLE TO PARTICIPATE?

Teachers and selected students 18 years old and older from three specific school districts were selected as possible participants in this study because of their participation in an instrumental music program that uses the Edward S. Lisk “Creative Director” series in its curriculum. Students were invited to participate in this study by the researcher.

3. WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of this research study is to examine the pedagogical strategies used to cultivate overall musicianship in the Lisk “Creative Director” band series and how these strategies facilitate the development of 21st century learning skills of instrumental music students.

The Lisk “Creative Director/Alternative Rehearsal Techniques” series, is a blend of all of many methodologies, techniques, and theories (Lisk, 1987, 1991). Because of the emphasis placed on connected learning the development of the musical minds of instrumental music students, the “Creative Director” series is uniquely positioned to be a method that contributes to the students’ development of 21st century learning skills via critical thinking, creative thinking, collaboration, and communication. The Lisk series helps music educators to demonstrate the importance of teaching instrumental music to achieve significant goals that have been outlined for general education.

4. WHERE WILL THE STUDY TAKE PLACE AND HOW LONG WILL IT LAST?

The study will take place in three selected school districts in the that utilize the Edward S. Lisk “Creative Director” series in the instrumental music curriculum. Participation will take a total of about two hours over a period of approximately four months.



5. WHAT WILL I BE ASKED TO DO?

If you agree to participate in this study, we will ask you to:

- Participate in four interviews of 30 minutes in length – two during the first visit and two during the second visit. Two of these interviews will be in focus groups – one in each visit.
- The questions will be related either to the Lisk “Creative Director/Alternative Rehearsal Techniques approach being used by the participating music director, or 21st century learning skills. The interviews will take place in the participating school.
- Complete written questions in a journal for 15 minutes during both visits.
- Participate in classes where the researcher will conduct observations of the program and analyze student work in order to gain a better understanding and evaluation of the program structure. Specifically, the researcher will be observing and noting how students respond to the unique elements of the Lisk "Creative Director" Series approach strategies that the teacher utilizes in the classroom. These include such concepts as aural and visual imaging, usage of the Circle of Fourths chart, the Ruler of Time rhythmic measurement of sounds and silences, dynamic and color shifts, hemisphericity and musical performance, the cultivation of ensemble tuning, color of sound, and tone quality, use of digital patterns, cerebral internalization, and the shift from mechanical technique processes to artistic processes, all unique to the Lisk approach. The researcher will seek to discover if the students demonstrate any appreciable differences in their overall musicianship comprehension utilizing these unique Lisk concepts versus more traditional music learning and playing strategies.

6. WHAT ARE MY BENEFITS OF BEING IN THIS STUDY?

You may not directly benefit from this research; however, we hope that your participation in the study may help you to understand the significance of the specific teaching methodology being used by their instructors to the overall music education profession. For music educators, it is hoped that participation in this study will inform their teaching.

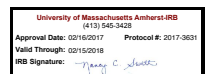
7. WHAT ARE MY RISKS OF BEING THIS STUDY?

We believe there are no known risks associated with this research study; however, a possible inconvenience may be the time it takes to complete the study.

8. HOW WILL MY PERSONAL INFORMATION BE PROTECTED?

Any information that is obtained in connection with this study and that can identify you will remain confidential. It will be disclosed only with your permission or as required by law. All interviews will remain confidential, with no names provided within the context of the interview. Interview participants will be assigned pseudonyms to protect their identity in the dissemination of the data.

The following procedures will be used to protect the confidentiality of your study records. Interviews will be recorded on digital audio files. The researchers will keep all study records, including any codes to your data, in a secure location. Confidentiality will be maintained by means of storage in a locked office at the University of Massachusetts-Amherst and will be password protected. Research records will be labeled with a code. A master key that links names and codes will be maintained in a separate and secure location at the University of Massachusetts-Amherst. The master key and audiotapes will be destroyed three years after the close of the study. All electronic files including databases and spreadsheets containing identifiable information will be password protected. Any computer hosting such files will also have password protection to prevent access by unauthorized users. Only the members of the research staff will have access to the passwords. At the conclusion of this study, the researchers may publish their findings. Information



will be presented in summary format and you will not be identified in any publications or presentations.

9. WILL I RECEIVE ANY PAYMENT FOR TAKING PART IN THE STUDY?

There will be no compensation for any of the participants.

10. WHAT IF I HAVE QUESTIONS?

Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact the researcher(s), Thomas E. Reynolds at (617) 529-9402 or you may contact the local faculty sponsor in your school at _____. If you have any questions concerning your rights as a research subject, you may contact the University of Massachusetts Amherst Human Research Protection Office (HRPO) at (413) 545-3428 or humansubjects@ora.umass.edu.

11. CAN I STOP BEING IN THE STUDY?

You do not have to be in this study if you do not want to. If you agree to be in the study, but later change your mind, you may drop out at any time. There are no penalties or consequences of any kind if you decide that you do not want to participate.

12. WHAT IF I AM INJURED?

The University of Massachusetts does not have a program for compensating subjects for injury or complications related to human subjects research, but the study personnel will assist you in getting treatment. As stated earlier, there are no anticipated risks or discomforts associated with this study.

13. SUBJECT STATEMENT OF VOLUNTARY CONSENT

When signing this form I am agreeing to voluntarily enter this study. I have had a chance to read this consent form, and it was explained to me in a language which I use and understand. I have had the opportunity to ask questions and have received satisfactory answers. I understand that I can withdraw at any time. A copy of this signed Informed Consent Form has been given to me.

Participant Signature:

Print Name:

Date:

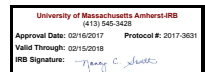
Checking this box indicates adult student's permission for student's interviews to be audio recorded for written transcription use only by the researcher.

By signing below I indicate that the participant has read and, to the best of my knowledge, understands the details contained in this document and has been given a copy.

Signature of Person
Obtaining Consent

Print Name:

Date:



APPENDIX I

ASSENT FORM – OLDER CHILD/YOUNG ADULT 13-17 YEARS OLD

Assent Form

Older Child/ Young Adult: 13-17 years old

Project Title: Teaching Musicianship Skills Using the Lisk “Creative Director” Series and How They Facilitate the Development of 21st Century Learning Skills in Instrumental Music Students

Principal Investigator: Thomas E. Reynolds – University of Massachusetts - Amherst

What is a research study?

A research study is a way to find out new information about something. You do not need to be in a research study if you don’t want to.

Why are you being asked to be part of this research study?

- You are being asked to take part in this research study because we are trying to learn more about the Lisk “Creative Director” band series and its relation to 21st century learning skills. We are inviting you to be in the study because you participate in an instrumental music program that uses the Edward S. Lisk “Creative Director” series in its curriculum, and you responded to an invitation from the researcher. About 4 student participants from your school will be in this study.

If you join the study what will you be asked to do?

We want to tell you about some things that you will be asked to do if you are in this study.

- You will participate in four interviews of 30 minutes in length – two during the first visit and two during the second visit. Two of these interviews will be in focus groups – one in each visit.
- Interviews will be audio recorded.
- Complete written questions in a journal for 15 minutes during both visits.
- You will be in the study for four to five months.

What will the researcher do with the information that I provide?

- The researcher will conduct observations, and analyze my responses and comments.

How will being in this study affect me?

- There are no anticipated risks or discomforts for you as you participate in this study. You may benefit from the study, as it will help you understand the significance of the specific teaching methodology being used by your instructor(s) to the overall music education profession.
- I am researching the effect of teaching music using the Lisk “Creative Director” series on students’ understanding of 21st century learning skills. This study might find out things that will help other people someday.
- You do not have to answer questions that cause you to be uncomfortable.

| | |
|-----------------------------------------|-----------------------|
| University of Massachusetts Amherst-IRB | |
| (413) 545-3428 | |
| Approval Date: 02/16/2017 | Protocol #: 2017-3631 |
| Valid Through: 02/15/2018 | |
| IRB Signature: <i>Nancy C. Smith</i> | |

Do your parents know about this study?

- This study was explained to your parents and they said that we could ask you if you want to be in it. You can talk this over with them before you decide. If you want to be in the study, your parents will need to sign a form too.

Who will see the information collected about you?

- The information collected about you during this study will be kept safely locked up. Nobody will know it except the people doing the research.
- The study information specifically about you will not be given to your parents (or teachers). The researchers will not tell your friends.

What do you get for being in the study?

- There will be no compensation for any of the student participants in the study.

Do you have to be in the study?

- You do not have to be in the study. No one will be upset if you don't want to do this study. If you don't want to be in this study, you just have to tell us. It's up to you.
- You can also take more time to think about being in the study.

What if you have any questions?

- You can ask any questions that you may have about the study. If you have a question later that you didn't think of now, you can call Mr. Thomas Reynolds at (617) 529-9402.
- You can also take more time to think about being in the study and also talk some more with your parents about being in the study.
- If you have any concerns about your rights as a research subject, you may contact the University of Massachusetts Amherst Human Research Protection Office (HRPO) at (413) 545-3428 or humansubjects@ora.umass.edu.

Other information about the study:

- If you decide to be in the study, please write your name below.
- You can change your mind and stop being part of it at any time. All you have to do is tell the person in charge. It's okay.
- You will be given a copy of this paper to keep.

If you want to be in this study, please sign your name below.

Signature _____

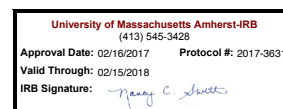
Date _____

Participant Name _____

Date _____

Name of Person obtaining consent _____

Date _____



APPENDIX J

PARENT PERMISSION FORM

Parent Permission Form

University of Massachusetts Amherst

PARENT PERMISSION FOR MINOR TO PARTICIPATE IN RESEARCH

Teaching Musicianship Skills Using the Lisk “Creative Director” Series and How They Facilitate the Development of 21st Century Learning Skills in Instrumental Music Students

Mr. Thomas E. Reynolds, a PhD candidate in music education and his advisor, Dr. Sara Jones, Assistant Professor, from the Music Education Area, Department of Music and Dance at the University of Massachusetts Amherst (UMass Amherst) are conducting a research study.

Your child was selected as a possible participant in this study because he/she participates in an instrumental music program that uses the Edward S. Lisk “Creative Director” series in its curriculum, and was recommended for participation as a response to an invitation to him/her from the researcher. Your child’s participation in this research study is voluntary.

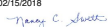
Why is this study being done?

The purpose of this study is to examine the pedagogical strategies used to cultivate overall musicianship in the Lisk “Creative Director” band series and how these strategies facilitate the development of 21st century learning skills of instrumental music students. The Lisk “Creative Director/Alternative Rehearsal Techniques” series, is a blend of all of many methodologies, techniques, and theories (Lisk, 1987, 1991). Because of the emphasis placed on connected learning the development of the musical minds of instrumental music students, the “Creative Director” series is uniquely positioned to be a method that contributes to the students’ development of 21st century learning skills via critical thinking, creative thinking, collaboration, and communication. The Lisk series helps music educators to demonstrate the importance of teaching instrumental music to achieve significant goals that have been outlined for general education.

What will happen if my child takes part in this research study?

If you agree to allow your child to participate in this study, we would ask him/her to:

- Participate in four interviews of 30 minutes in length – two during the first visit and two during the second visit. Two of these interviews will be in focus groups – one in each visit.
- The questions will be related either to the Lisk “Creative Director/Alternative Rehearsal Techniques approach being used by his/her director, or 21st century learning skills.
- Interviews will be audio recorded.
- The interviews will take place in his/her school.
- Complete written questions in a journal for 15 minutes during both visits.

| | |
|------------------------------------------------------------------------------------------------------|-----------------------|
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| Approval Date: 02/16/2017 | Protocol #: 2017-3631 |
| Valid Through: 02/15/2018 | |
| IRB Signature:  | |

- The researcher will observe students in class. Specifically, the researcher will be observing and noting how students respond to the unique elements of the Lisk "Creative Director" Series approach strategies that the teacher utilizes in the classroom. These include such concepts as aural and visual imaging, usage of the Circle of Fourths chart, the Ruler of Time rhythmic measurement of sounds and silences, dynamic and color shifts, hemisphericity and musical performance, the cultivation of ensemble tuning, color of sound, and tone quality, use of digital patterns, cerebral internalization, and the shift from mechanical technique processes to artistic processes, all unique to the Lisk approach. The researcher will seek to discover if the students demonstrate any appreciable differences in their overall musicianship comprehension utilizing these unique Lisk concepts versus more traditional music learning and playing strategies.

How long will my child be in the research study?

Participation will take a total of about two hours over a period of approximately four months.

Are there any potential risks or discomforts that my child might experience from participating in this study?

There are no anticipated risks or discomforts. Your child can withdraw from the study at any time.

Are there any potential benefits to my child if he or she participates?

There may be no direct benefits for your child from participation in the study. However, your child may benefit from the study, as it may help him/her understand the significance of the specific teaching methodology being used by their instructors to the overall music education profession.

Will my child receive compensation for participating?

There will be no compensation for any of the participants.

How will information about my child's participation be kept confidential?

Any information that is obtained in connection with this study and that can identify your child will remain confidential. It will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of storage in a locked office at the University of Massachusetts-Amherst and will be password protected. All interviews will remain confidential, with no names provided within the context of the interview. Interview participants will be assigned pseudonyms to protect their identity in the dissemination of the data.

What are my and my child's rights if he or she takes part in this study?

- You can choose whether or not you want your child to be in this study, and you may withdraw your permission and discontinue your child's participation at any time.
- Whatever decision you make, there will be no penalty to you or your child, and no loss of benefits to which you or your child were otherwise entitled.

| | |
|-----------------------------------------------------------|-----------------------|
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| Approval Date: 02/16/2017 | Protocol #: 2017-3631 |
| Valid Through: 02/15/2018 | |
| IRB Signature: <i>Nancy C. Abbott</i> | |

- Your child may refuse to answer any questions that he/she does not want to answer and still remain in the study.

Who can I contact if I have questions about this study?

- **The research team:**

If you have any questions, comments or concerns about the research, you can talk to the one of the researchers. Please contact:

- Mr. Thomas E. Reynolds, a candidate for the PhD degree program in music education (617) 529-9402, tereynol@music.umass.edu
- Dr. Sara Jones from the Music Education Department, Department of Music and Dance (413) 545-7001, skjones@umass.edu at the University of Massachusetts Amherst

- **UMass Amherst Human Research Protection Office (HRPO):**

If you have questions about your child's rights while taking part in this study, or you have concerns or suggestions and you want to talk to someone other than the researchers about the study, please call the HRPO at (413) 545-3428 or email humansubjects@ora.umass.edu

You will be given a copy of this information to keep for your records.

SIGNATURE OF PARENT OR LEGAL GUARDIAN

Name of Child

Name of Parent or Legal Guardian

Signature of Parent or Legal Guardian

Date

Checking this box indicates parent or legal guardian permission for student's interviews to be audio recorded for written transcription use only by the researcher.

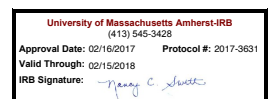
SIGNATURE OF PERSON OBTAINING CONSENT *[include only if consenting in person]*

Name of Person Obtaining Consent

Contact Number

Signature of Person Obtaining Consent

Date



APPENDIX K

CONSENT FORM FOR PARTICIPATION IN A RESEARCH STUDY - TEACHERS

Consent Form for Participation in a Research Study

University of Massachusetts Amherst
Teacher and Administrator

| | |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Researcher(s): | Mr. Thomas E. Reynolds, PhD candidate in music education and Dr. Sara Jones, Assistant Professor from the Music Education Area, Department of Music and Dance at the University of Massachusetts Amherst |
| Study Title: | Teaching Musicianship Skills Using the Lisk “Creative Director” Series and How They Facilitate the Development of 21 st Century Learning Skills in Instrumental Music Students |

1. WHAT IS THIS FORM?

This form is called a Consent Form. It will give you information about the study so you can make an informed decision about participation in this research. We encourage you to take some time to think this over and ask questions now and at any other time. If you decide to participate, you will be asked to sign this form and you will be given a copy for your records.

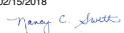
2. WHO IS ELIGIBLE TO PARTICIPATE?

Teachers and selected students 18 years old and older from three specific school districts were selected as possible participants in this study because of their participation in an instrumental music program that uses the Edward S. Lisk “Creative Director” series in its curriculum. Students were invited to participate in this study by the researcher.

3. WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of this research study is to examine the pedagogical strategies used to cultivate overall musicianship in the Lisk “Creative Director” band series and how these strategies facilitate the development of 21st century learning skills of instrumental music students.

The Lisk “Creative Director/Alternative Rehearsal Techniques” series, is a blend of all of many methodologies, techniques, and theories (Lisk, 1987, 1991). Because of the emphasis placed on connected learning the development of the musical minds of instrumental music students, the “Creative Director” series is uniquely positioned to be a method that contributes to the students’ development of 21st century learning skills via critical thinking, creative thinking, collaboration, and communication. The Lisk series helps music educators to demonstrate the importance of teaching instrumental music to achieve significant goals that have been outlined for general education.

| | |
|----------------------------------------------------------------------------------------------------|-----------------------|
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| Approval Date: 02/16/2017 | Protocol #: 2017-3631 |
| Valid Through: 02/15/2018 | |
| IRB Signature:  | |

4. WHERE WILL THE STUDY TAKE PLACE AND HOW LONG WILL IT LAST?

The study will take place in three selected school districts in the that utilize the Edward S. Lisk “Creative Director” series in the instrumental music curriculum. Participation will take a total of about two hours over a period of approximately four months.

5. WHAT WILL I BE ASKED TO DO?

If you agree to participate in this study, we will ask you to:

- Participate in two interviews of 60 minutes in length – one during the first visit and one during the second visit.
- The questions will be related either to the Lisk “Creative Director/Alternative Rehearsal Techniques approach being used by the participating music director, or 21st century learning skills. The interviews will take place in the participating school.
- Complete written questions in a journal for 15 minutes during both visits.

6. WHAT ARE MY BENEFITS OF BEING IN THIS STUDY?

You may not directly benefit from this research; however, we hope that your participation in the study may help you to understand the significance of the specific teaching methodology being used by your music instructors to the overall music education profession. For music educators, it is hoped that participation in this study will inform their teaching.

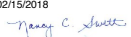
7. WHAT ARE MY RISKS OF BEING THIS STUDY?

We believe there are no known risks associated with this research study; however, a possible inconvenience may be the time it takes to complete the study.

8. HOW WILL MY PERSONAL INFORMATION BE PROTECTED?

Any information that is obtained in connection with this study and that can identify you will remain confidential. It will be disclosed only with your permission or as required by law. All interviews will remain confidential, with no names provided within the context of the interview. Interview participants will be assigned pseudonyms to protect their identity in the dissemination of the data.

The following procedures will be used to protect the confidentiality of your study records. Interviews will be recorded on digital audio files. The researchers will keep all study records, including any codes to your data, in a secure location. Confidentiality will be maintained by means of storage in a locked office at the University of Massachusetts-Amherst and will be password protected. Research records will be labeled with a code. A master key that links names and codes will be maintained in a separate and secure location at the University of Massachusetts-Amherst. The master key and audiotapes will be destroyed three years after the close of the study. All electronic files including databases and spreadsheets containing identifiable information will be password protected. Any computer hosting such files will also have password protection to prevent access by unauthorized users. Only the members of the research staff will have access to the passwords. At the conclusion of this study, the researchers may publish their findings. Information will be presented in summary format and you will not be identified in any publications or presentations.

| | |
|----------------------------------------------------------------------------------------------------|-----------------------|
| University of Massachusetts Amherst-IRB (413) 545-3428 | |
| Approval Date: 02/16/2017 | Protocol #: 2017-3631 |
| Valid Through: 02/15/2018 | |
| IRB Signature:  | |

9. WILL I RECEIVE ANY PAYMENT FOR TAKING PART IN THE STUDY?

There will be no compensation for any of the participants.

10. WHAT IF I HAVE QUESTIONS?

Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact the researcher(s), Thomas E. Reynolds at (617) 529-9402 or you may contact the local faculty sponsor in your school at _____. If you have any questions concerning your rights as a research subject, you may contact the University of Massachusetts Amherst Human Research Protection Office (HRPO) at (413) 545-3428 or humansubjects@ora.umass.edu.

11. CAN I STOP BEING IN THE STUDY?

You do not have to be in this study if you do not want to. If you agree to be in the study, but later change your mind, you may drop out at any time. There are no penalties or consequences of any kind if you decide that you do not want to participate.

12. WHAT IF I AM INJURED?

The University of Massachusetts does not have a program for compensating subjects for injury or complications related to human subjects research, but the study personnel will assist you in getting treatment. As stated earlier, there are no anticipated risks or discomforts associated with this study.

13. SUBJECT STATEMENT OF VOLUNTARY CONSENT

When signing this form I am agreeing to voluntarily enter this study. I have had a chance to read this consent form, and it was explained to me in a language which I use and understand. I have had the opportunity to ask questions and have received satisfactory answers. I understand that I can withdraw at any time. A copy of this signed Informed Consent Form has been given to me.

Participant Signature:

Print Name:

Date:

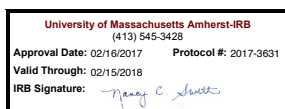
Checking this box indicates adult student’s permission for student’s interviews to be audio recorded for written transcription use only by the researcher.

By signing below I indicate that the participant has read and, to the best of my knowledge, understands the details contained in this document and has been given a copy.

Signature of Person
Obtaining Consent

Print Name:

Date:

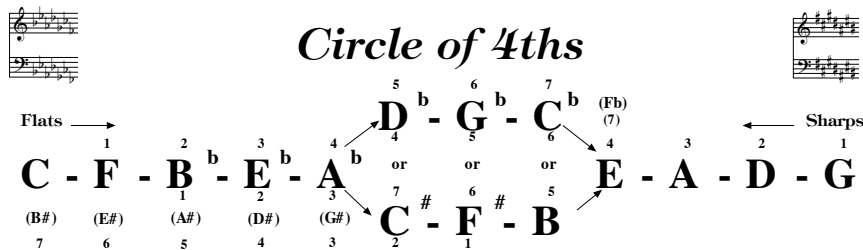


APPENDIX L

CIRCLE OF FOURTHS CHARTS

Introducing the Circle of 4ths

- Students read pitch letter names from left to right continuing through the entire row of pitches and *return to assigned starting pitch*. Director can assign any starting pitch.
- Transposition:
 - Bb** instruments... *count back 2* from assigned concert pitch (Bb concert = 1-F, 2-C = C starting pitch)
 - Eb** instruments.... *count back 3* " " " " " (Bb = 1-F, 2-C, 3-G = G is starting pitch)
 - F** instruments..... *count back 1* " " " " " (Bb = 1-F is starting pitch)
 - C** instruments..... *start on concert pitch*
- Student has choice of Db, Gb, Cb, or C#, F#, or B (easiest for student)
- DO NOT use or refer to any type of written musical notation.
- Students are to play the row of notes/pitch in a comfortable range (*no extreme high or low pitches*)
- Pitches can be assigned *note duration, rhythm patterns, scales, chord qualities, dynamics, or any combination.*



The top number indicates the number of flats or sharps in that particular scale.
The bottom number indicates the correct order of flats or sharps.

Woodwind Choir

| Group 1 | Group 2 | Group 3 | Group 4 |
|-----------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------|-----------------------------------------------------------|
| Piccolo Oboe Eb Clarinet 1st Flute 1st Clarinet 1st Alto Sax | 2nd Flute 2nd Clarinet 2nd Alto Sax | 3rd Clarinet Alto Clarinet Tenor Sax | Bass Clarinet Bassoons Bari Sax Contra Clarinets |

Brass Choir

| Group 1 | Group 2 | Group 3 | Group 4 |
|--------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------|----------------------------------------------|
| 1st Cornet 1st Trumpet 1st French Horn 1st Trombone | 2nd Cornet 2nd French Horn 2nd Trombone | 3rd Cornet 2nd Trumpet 3rd Trombone 3rd & 4th French Horn | Baritone Euphonium Tuba String Bass |

Percussion

Vibraphone (soft mallets) Xylophone (soft mallets) Marimba (soft mallets) Tympani

(Circle of 4ths available for: Elementary and Beginners Band, Middle and High School Band, and Orchestra)

GROUPING ASSIGNMENTS

- The grouping assignments are determined by the part/position student plays in band.
- Grouping assignments and parts should be adjusted to best accommodate band size, instrumentation, and grade level (elementary, middle school or high school).
- Build chord qualities or intervals through group assignments (major, minor, dominant, dim.).

*The students first reaction will be quite different from the normal rehearsal habits established. The removal of written musical notation allows the students to focus on LISTENING and TONE QUALITY... students develop confidence in '*what they are hearing*' and make musical decisions with the '*quality of sound/tone they are producing.*'

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Circle of 4ths

C - F - B^b - E^b - A^b - D^b - G^b - C^b (F^b) **E - A - D - G**

Flats → 1 2 3 4 5 6 7 ← Sharps

(B[#]) (E[#]) (A[#]) (D[#]) (G[#]) **C - F - B** (F^b) (7)

7 6 5 4 3 2 1

The top number indicates the number of flats or sharps in that particular scale.
 The bottom number indicates the correct order of flats or sharps.

Woodwind Choir

| | | | |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------|
| Group 1 Piccolo Oboe Eb Clarinet 1st Flute 1st Clarinet 1st Alto Sax | Group 2 2nd Flute 2nd Clarinet 2nd Alto Sax | Group 3 3rd Clarinet Alto Clarinet Tenor Sax | Group 4 Bass Clarinet Bassoons Bari Sax Contra Clarinets |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------|

Brass Choir

| | | | |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Group 1 1st Cornet 1st Trumpet 1st French Horn 1st Trombone | Group 2 2nd Cornet 2nd French Horn 2nd Trombone | Group 3 3rd Cornet 2nd Trumpet 3rd Trombone 3rd & 4th French Horn | Group 4 Baritone Euphonium Tuba String Bass |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------|

Percussion

Vibraphone (soft mallets) Xylophone (soft mallets) Marimba (soft mallets) Tympani

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Circle of 4ths - Minor Scales

a - d - g - c - f **D^b - G^b - C^b** **c[#] - f[#] - b - e**

C - F - B^b - E^b - A^b or or or **E - A - D - G**

(B[#]) (E[#]) (A[#]) (D[#]) (G[#]) **C[#] - F[#] - B**

The small letter (a - d, etc.) above the shadowed capital letter indicates the relative minor scale.

Woodwind Choir

| | | | |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------|
| Group 1 Piccolo Oboe Eb Clarinet 1st Flute 1st Clarinet 1st Alto Sax | Group 2 2nd Flute 2nd Clarinet 2nd Alto Sax | Group 3 3rd Clarinet Alto Clarinet Tenor Sax | Group 4 Bass Clarinet Bassoons Bari Sax Contra Clarinets |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------|

Brass Choir

| | | | |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Group 1 1st Cornet 1st Trumpet 1st French Horn 1st Trombone | Group 2 2nd Cornet 2nd French Horn 2nd Trombone | Group 3 3rd Cornet 2nd Trumpet 3rd Trombone 3rd & 4th French Horn | Group 4 Baritone Euphonium Tuba String Bass |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------|

Percussion

Vibraphone (soft mallets) Xylophone (soft mallets) Marimba (soft mallets) Tympani

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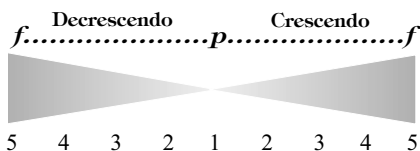
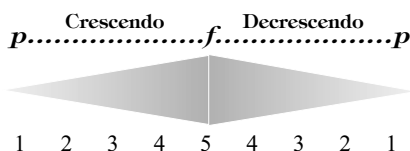
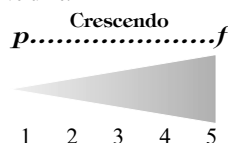
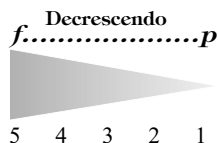
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APPENDIX M

DYNAMICS, COLOR SHIFTS, AND GRAND MASTER SCALE

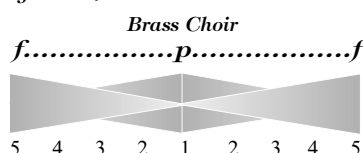
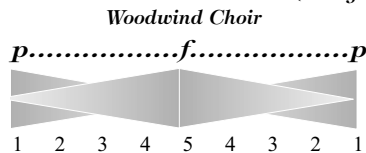
Dynamics & Variations

The *smaller* number indicates *less* volume.
The *larger* number indicates *greater* volume.



Color Shifts

(Percy Grainger Dynamics)



The GRAND MASTER SCALE!

An example of the GRAND MASTER SCALE. Observe the asterisk* above the last note of each scale indicating *mental/thought preparation* for the next scale. This example only allows 4 beats to 'think' and prepare for the next key signature.

WHY the Grand Master Scale? The Octave of Reason!

1. Establishes a new musical value and worth for scale knowledge and performance.
2. Establishes a spontaneous reaction to all keys.
3. Removes individual or section technic problems...balances ensemble technic!
4. Removes mindless repetition of technical passages found in solo or ensemble music.
5. Provides a meaningful approach to sight reading.
6. Provides a foundation for harmonic understanding, improvisation & literature analysis.
7. Provides a foundation for solo and ensemble intonation (playing in a 'pitch center').
8. Provides access to a full range of band literature.

There is sufficient time in daily rehearsals to play all major scales. The time consumed varies from 2' 20" with the illustrated example (quarter = 108) to 45" for scales played in eighth notes.

Those unable to play all scales are to *sustain* the keynote (tonic) for the duration of that scale and continue to the next scale.

Apply articulation patterns from band music. Play all scales in a comfortable range.

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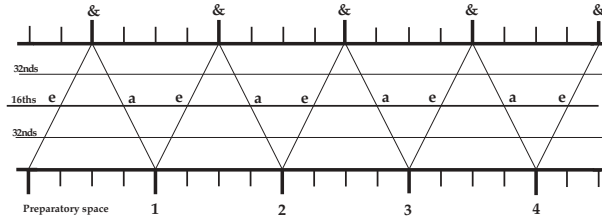
APPENDIX N

THE RULER OF TIME

Silence and the Space of Time

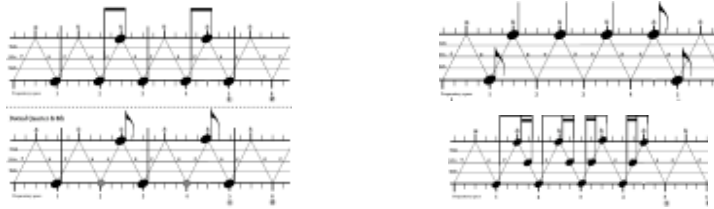
(Volume 3, Chapter 2)

The Ruler of Time

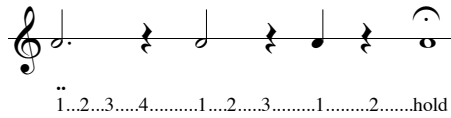


1. The length and width of the Ruler of Time are determined by tempo.
 - a. The slower the tempo, the longer and wider the space of subdivided silence.
 - b. The faster the tempo, the shorter and narrower the space of subdivided silence.
2. The lower and upper horizontal lines represent the down and up beat (arrival points).
3. The three horizontal lines between the lower and upper horizontal lines represent 16th and 32nd note subdivision.

Ruler Rhythms



A Stroke of Sound on the Canvas of Silence!



Controlling the "right" side of a note or phrase

APPENDIX O

SCALE MASTERY

Scale Mastery

Establishing a MIND - BODY - EAR - EYE connection for error free performance.

Step 1....Introducing the process

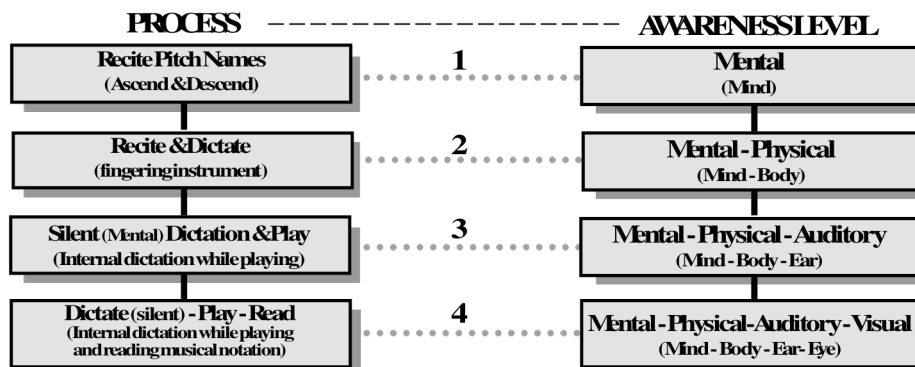
Recite Musical Alphabet

Recitation tempo ♩ = 60

- | | |
|----------------------------|---------------------------------------------------|
| 1. Ascending | A- B- C- D- E- F- G- A- B- C- D- E- F- G- A- etc. |
| 2. Ascend & Descend | A- B- C- D- E- F- G- A- G- F- E- D- C- B- A |
| 3. Vary starting letter | D- E- F- G- A- B- C- D- C- B- A- G- F- E- D |
| 4. Recite with accidentals | D- E- F#- G- A- B- C#- D- C#- B- A- G- F#- E- D |

It is important to maintain a steady tempo/pulse without hesitation or repeating letters.

Step 2....Applying the process with instrument



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APPENDIX P

CODEBOOK SAMPLE

| CODE | GROUP |
|--------------------------------------------------------------------------|----------------------------------|
| collaboration | 21st century learning skills |
| communication | 21st century learning skills |
| creative thinking | 21st century learning skills |
| critical thinking | 21st century learning skills |
| 21st century skills don't use term | 1. 21st Century Learning - Main |
| all 21st century skills important in life | 1. 21st Century Learning - Main |
| all 21st century skills important in music performance | 1. 21st Century Learning - Main |
| English connects them the best | 1. 21st Century Learning - Main |
| English requires all four skills | 1. 21st Century Learning - Main |
| film class requires learning skills | 1. 21st Century Learning - Main |
| solve math problems | 1. 21st Century Learning - Main |
| use skills more in music | 1. 21st Century Learning - Main |
| used in English | 1. 21st Century Learning - Main |
| band students constantly use critical thinking | 1a. Critical Thinking |
| chemistry uses critical thinking determining formulas | 1a. Critical Thinking |
| computer programming uses critical thinking | 1a. Critical Thinking |
| history critical thinking analyzing events data | 1a. Critical Thinking |
| math critical thinking with tool belt of skills | 1a. Critical Thinking |
| band students involved in creative thinking | 1b. Creative Thinking |
| creative writing of essays and stories done in English | 1b. Creative Thinking |
| English for creative interpretations | 1b. Creative Thinking |
| band students more practice with collaboration | 1c. Collaboration |
| collaboration important in an ensemble | 1c. Collaboration |
| government class projects | 1c. Collaboration |
| learning music enhances collaboration | 1c. Collaboration |
| less collaboration in other subjects outside of music it's your own work | 1c. Collaboration |
| any interactions with people become communication | 1d. Communication |
| band students more confident with communication | 1d. Communication |
| communicate verbally and/or mentally | 1d. Communication |
| communicating message in other languages | 1d. Communication |
| communication verbal | 1d. Communication |
| learning music enhances communication | 1d. Communication |
| accidentals | 2. Elements Music/Musical Issues |
| air stream | 2. Elements Music/Musical Issues |
| all-county | 2. Elements Music/Musical Issues |
| all-state | 2. Elements Music/Musical Issues |
| application of musical concepts | 2. Elements Music/Musical Issues |
| appropriate music level | 2. Elements Music/Musical Issues |

| CODE | GROUP |
|------------------------------------------------|----------------------------------|
| arpeggios | 2. Elements Music/Musical Issues |
| articulations | 2. Elements Music/Musical Issues |
| assemble multiple parts | 2. Elements Music/Musical Issues |
| attentive in rehearsals | 2. Elements Music/Musical Issues |
| audience back and forth | 2. Elements Music/Musical Issues |
| audition issues | 2. Elements Music/Musical Issues |
| balance | 2. Elements Music/Musical Issues |
| band geek | 2. Elements Music/Musical Issues |
| be adaptable with music choices and instrument | 2. Elements Music/Musical Issues |
| beginning experiences with music | 2. Elements Music/Musical Issues |
| blend | 2. Elements Music/Musical Issues |
| buzzing on mouthpieces | 2. Elements Music/Musical Issues |
| can't fix things from concert podium | 2. Elements Music/Musical Issues |
| choir | 2. Elements Music/Musical Issues |
| chord balancing | 2. Elements Music/Musical Issues |
| chord construction | 2. Elements Music/Musical Issues |
| chord progressions through circle | 2. Elements Music/Musical Issues |
| clarinets three octaves | 2. Elements Music/Musical Issues |
| comfortable as a musician | 2. Elements Music/Musical Issues |
| confidence factor in music | 2. Elements Music/Musical Issues |
| contest music material | 2. Elements Music/Musical Issues |
| contrast | 2. Elements Music/Musical Issues |
| correct entrances | 2. Elements Music/Musical Issues |
| correct notes | 2. Elements Music/Musical Issues |
| cousin played instrument | 2. Elements Music/Musical Issues |
| description of form | 2. Elements Music/Musical Issues |
| develop style and technique | 2. Elements Music/Musical Issues |
| did not want to sing | 2. Elements Music/Musical Issues |
| discover something new in music every day | 2. Elements Music/Musical Issues |
| don't take program for granted | 2. Elements Music/Musical Issues |
| double tongue | 2. Elements Music/Musical Issues |
| dynamics | 2. Elements Music/Musical Issues |
| embouchure | 2. Elements Music/Musical Issues |
| emotion | 2. Elements Music/Musical Issues |
| expressive | 2. Elements Music/Musical Issues |
| fingerings | 2. Elements Music/Musical Issues |
| following in ensemble | 2. Elements Music/Musical Issues |
| form | 2. Elements Music/Musical Issues |
| grade 6 beginners | 2. Elements Music/Musical Issues |
| group lessons | 2. Elements Music/Musical Issues |
| group stayed together | 2. Elements Music/Musical Issues |
| had to choose band or choir | 2. Elements Music/Musical Issues |
| harmony | 2. Elements Music/Musical Issues |
| improve ensemble performance | 2. Elements Music/Musical Issues |

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