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The development of musical improvisation in second grade children

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University of Northern Iowa

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The development of musical improvisation in second grade children

Abstract
The purpose of this qualitative case study was to investigate if second-grade children could develop a solo improvisation on an Orff xylophone. Participants were five African-American children who attended a model school that followed an inquiry-based approach curriculum. These children also had a chance to learn music from a faculty and the researcher, who had been exploring constructivist methods of teaching music, with a special emphasis on invented songs, instruments, and notations. The three-day study focused on how children were able to create a solo improvisation. The study was guided by the following questions: (1) Can second grade children develop improvisations on a song they have just learned? (2) What kind of improvisations do they develop? (3) Can second-grade children analyze their own improvisations? If so, how do they describe them? In order to analyze their level of musical complexity, a coding, based on Music Educators National Conference (MENC) K-4 performance standard, was developed to analyze the progression of children's improvisation. Children's interviews, done immediately after the improvisations, were transcribed and analyzed to demonstrate children's reflection. The data revealed that all children could improvise. Those who played and improvised other songs in the classroom embedded those songs in their improvisation. Implications are provided for researchers and teachers in the field of early childhood education.
THE DEVELOPMENT OF MUSICAL IMPROVISATION
IN SECOND GRADE CHILDREN

An Abstract of a Thesis
Submitted
in Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Education

Akiko Yoshizawa
University of Northern Iowa
December 2011
ABSTRACT

The purpose of this qualitative case study was to investigate if second-grade children could develop a solo improvisation on an Orff xylophone. Participants were five African-American children who attended a model school that followed an inquiry-based approach curriculum. These children also had a chance to learn music from a faculty and the researcher, who had been exploring constructivist methods of teaching music, with a special emphasis on invented songs, instruments, and notations. The three-day study focused on how children were able to create a solo improvisation. The study was guided by the following questions: (1) Can second grade children develop improvisations on a song they have just learned? (2) What kind of improvisations do they develop? (3) Can second-grade children analyze their own improvisations? If so, how do they describe them? In order to analyze their level of musical complexity, a coding, based on Music Educators National Conference (MENC) K-4 performance standard, was developed to analyze the progression of children's improvisation. Children's interviews, done immediately after the improvisations, were transcribed and analyzed to demonstrate children's reflection. The data revealed that all children could improvise. Those who played and improvised other songs in the classroom embedded those songs in their improvisation. Implications are provided for researchers and teachers in the field of early childhood education.
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Entitled: The Development of Musical Improvisation in Second Grade Children

has been approved as meeting the thesis requirement for the

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Date

12/13/11

Dr. Michael J. Licari, Dean, Graduate College
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CHAPTER I

INTRODUCTION

This study originated from my personal struggle to find an appropriate learning environment to improvise on a music instrument, something I have been passionate about since my childhood. I was raised in an artistic but traditional Japanese family, and my experience with music improvisation was always based on a behaviorist, teacher-directed method. My father was a composer, maestro and a classical piano teacher who strongly followed a traditional music instruction method. My daily piano practice was more about perfecting technical and artistic skills through a great amount of practice rather than being creative. During breaks, I remember improvising pieces from a popular song, and being scolded. “Practice more and memorize your piece first,” my father used to say. “You play later,” referring to improvisation as something optional and less serious. He also added that there were appropriate instructions on how to improvise, but he did not suggest them to me.

I later abandoned the thought of becoming a pianist, pursuing my own career as an early childhood educator in Japan. I became a preschool and a kindergarten teacher and then I became a director of preschool and kindergarten. Music was always part of my life, but I did not pursue a competitive career as a classical piano performer.

After my long transforming journey from being a musician to an early childhood educator, I was reconnected with an opportunity to work with children at an inquiry-based curriculum school, in the Midwest. This school served low-income, African-American children from three to eight years old, and it provided a rich, inquiry-based
music curriculum, instructed daily by a faculty who had been exploring constructivist methods of teaching music in the classrooms, since the establishment of the school. Three times a week, I worked as a graduate assistant to this faculty in the first and second grade classroom for a year and a half. Occasionally, I was also given the opportunity to take the lead as a music teacher. In the classroom, children explored instruments, learned about physics of sound, played songs on musical instruments, learned improvisations, composed songs, made lyrics, arranged music, and learned about notations. I also learned the effect of the inquiry approach on children, when learning took place especially when children were scaffolded. I observed an activity where children had to create endings to children’s songs through inquiry, which was a rich activity to develop children’s problem-solving skills through music. On another occasion, I observed a group of children performing jam sessions, playing various musical instruments during the center time. These children made decisions who would play first, play together, be the maestro, and who would play last. When they made mistakes, they stopped the group and discussed how they could improve their music parts, so that everyone would be satisfied. As an audience, which was the role I was told by the children, I remember getting fascinated by their communication, organization and their passion to create music together. These children had something very unique. I cannot name all the learning that took place in the duration of my assistantship, but this rich music environment certainly became an inspiration to my study.

As I learned more about the school and the children, my bitter memories of childhood came back. There was a great difference between my father's behavioristic
approach and the constructivist approach I have learned in the first and second grade classroom. At this model school, children were autonomous (Piaget 1932/1965), confident and outspoken. The children were not scolded for providing an unsatisfactory performance, and they were not told to stop playing, if they played a song other than the songs introduced in the class. Children’s ideas were respected and encouraged.

I was inspired to conduct a study on music improvisation with the children, with a special focus on the solo improvisation. My goal was to see what second grade children would do, when given opportunities to improvise alone on an Orff xylophone. In the next section, I provide an overview of improvisation, and a brief history of Western and Eastern improvisation.

Overview of Improvisation

Improvisation, comes from the Latin word *improvisus*, or unforeseen. Improvisers produce their music extemporaneously, not knowing exactly what happens until the very moment of their performance (Hast, Cowdery, & Scott, 1999). In order to understand improvisation, which is often treated as opposite to composition, it is also important to understand the role of composition, or *componere*, in Latin. Composers carefully plot out their pieces, writing them down or in their minds; therefore, it might give an impression that anything written down and performed is composition. However, for most creative musicians, composition and improvisation are related processes that often flow one into the other. They are more like two ends of a continuum, instead of opposites. A composition may involve “unforeseen” elements in performance, such as the feelings of a pianist at the time of the performance, affecting the interpretation even if the pianist
never changes the notes. An improvisation, on the other hand, may involve elements that are “put together” beforehand, just like composition.

History of Improvisation in Western Countries

In Western culture, improvisation began with the ancient Greeks, who practiced music as an artistic discipline and a form of self-amusement (Dobbins, 1980). The elaborated improvisation became a significant part of the European tradition with the evolution of Gregorian chants, which are referred to as oral compositions, with a series of individual chant patterns that stray into another pattern creating a continuous act of harmonic extemporization (Treitler, 1992).

During the Renaissance period (1400-1600), instrumental music gained new importance, and the improvisation of melody became an important practice rather than harmonic improvisation. Thus, early operas such as Monteverdi’s L’incoronazione di Poppea, consisted of a score that showed only the figured bass and vocal parts with an occasional instrumental interlude, and singers added ornamentation to their melodic lines (Gould & Keaton, 2000).

In the Baroque period (1600-1760), the keyboard performer was expected to improvise a complete accompaniment from a bass line, and by the late seventeenth century, improvising entire fugues was required of any organist. J.S. Bach is one of the most famous improvisers and composers of that period who contributed to the history of improvisation by creating a set of pieces, now known as Musikalisches Opfer (Gould & Keaton, 2000).
During the Classical (1730-1820) and Romantic period (1815-1910), many composers were also skilled improvisers. For example, Mozart “had been known to change his clavier parts on the go, and most of his larger piano works, such as Sonatas and Fantasies, have number of different cadences written down, but Mozart himself would play a new cadence every performance” (Stefanuk, 2004). Beethoven, when introduced to Mozart, impressed him with his improvising skills, and after Mozart’s untimely death, Beethoven received “Mozart’s spirit” from the hands of Haydn (Landon, 1970). Concerto scores during the classical and romantic period simply included a blank measure, with an indication of “cadenza,” which signifies that at this point the performer is to improvise the passage alone, while the orchestra would wait for the final coda (Gould & Keaton, 2000).

Improvisation became more challenging as it expanded through the contemporary age. Some of the gradual decline of improvisation in Western music is explained by scholars as follows: (1) integrity of the musical structure became too complex for an improvisation of pitches and durations to be dependably supportive (Gould & Keaton, 2000); (2) flexibility was less allowed at schools and institutions, forcing them to restrict deviation from original music scores; and (3) gradual transfer of economic power from the church and traditional nobility of Europe to the middle class society affected the artistic development (Moore, 1992). The historic and cultural transformations of that time emphasized the degree and the role of improvisation affecting the quality of music performance today. The fact that many associate the word improvisation with jazz, another music genre based on chromatic harmonies, serial
techniques, and improvisation, helps explain the decline of improvisation from mainstream classical music. Jazz, at the present moment, is "the only Western art form of our century that has evolved legitimately from folk traditions" (Dobbins, 1980, p.40).

History of Improvisation in Eastern Countries

Contrary to Western music culture, the history of music improvisation in Eastern culture survived through aural and oral tradition, being passed on by careful rote imitation of folk music from one generation to the next (Dobbins, 1980; Signell, 1980). Improvisation in Asian countries can be defined from culture to culture, ranging from East to West, Russia, and countries located in Central and Southern areas. Each of these countries is known for following a distinct rule of improvisation. Turkey, Persia and the Arab countries, for example, improvise using a modal system, which is a complex and unwritten rule for generating melodies based on the music components such as scale, melodic contour, and stopping tones (Signell, 1980). These distinctive modals, by comparison, can be found only in certain European medieval church modes.

The history of Asian improvisation evolved through shared languages, literature and history. It is considered to be a highly personal experience, as instrumentalists are often invited to play a solo improvisation, and those who have command over the "most difficult, creative, magical, and dangerous," (Signell, 1980, pp.133-134) receive the highest praise and esteem. Folk songs in cultures relying on an aural tradition rarely are performed twice in the same way, and improvisation is best described as something that "arrives" as the apprentice learns from the teacher through trial and error (Bailey, 1993).
The value of aural tradition is also illustrated in classical folk songs in Japan, India, Vietnam, Thailand and other areas of South East Asia. New verses and subtle variations are developed from a spontaneous feeling of the moment, and accompanying ensembles often are thrown together with "whatever indigenous instruments happen to be available at the time" (Dobbins, 1980, p. 39). The simple, repetitive nature of folk music allows both for the strengthening of social and cultural identification through group singing and performing, and for cultivation of a modest but significant degree of individuality. The folk music in the Eastern countries serves as a purpose beyond the basic need for self-expression, and has survived for centuries in their tradition through improvisation.

The Japanese folk song used in this study is one of many aural traditional songs Japanese children learn from their parents. Composed by Takeshi Inoue (1894-1974), Tulip Song has been sung from generation to generation just like any other traditional folk songs in Japan.

Status of Music Improvisation

Dobbins (1980) writes that "improvisation should be introduced in the earliest stages of education to become a natural and fully functioning part of a person’s creative skills" (p.41). The Content Standard Three by Music Educators National Conference (MENC) states that improvisation is to be introduced in the melodies, variations, and accompaniments at each grade level beginning with preschool (Stauffer & Davidson, 1996).
With the decline of improvisation in Western Music, I investigated the current status of music education, especially related to the improvisatory performance in primary grade classrooms.

In a study involving 8506 active elementary public school principals, surveys showed that most participants consider the criterion “improvise and compose music” to be the least important music learning outcome (Abril & Gault, 2006). The principals reported that the No Child Left Behind Act, budgets, standardized tests, and scheduling had the most negative effects on their music programs (p. 1). In most situations, school principals and staff are responsible for making curricular decisions. Quite often the decision is based on variety of beliefs and rationales. The results showed that music curricula focused less on creativity, improvisation and composition, and demanded more focus on history, theory, and performance.

Burnsed (1999) also studied the effect of time constraints on the quality of music curricula. Results showed that with the increasing demand for uniformed curricula and standards, primary grade children attending public schools were not given enough time to improvise. School curricula followed a rigid list of academic checkpoints, and music was usually taught only once or twice a week in the elementary school for a total of about 40 minutes of music instruction a week.

In a study conducted by the National Center for Education Statistics (Carey, Kleiner, Porch, & Farris, 2002), 16% of elementary school music specialists indicated no emphasis onto improvising melodies, variations, and accompaniments, 50% indicated minor emphasis, 27% indicated moderate emphasis, and only 7% indicated major
emphasis. Music specialists reported that improvisation might be viewed as more appropriate for secondary school students.

The decreased interest in improvisation alarms music researchers, music specialists, and educators in general who believe in the importance of promoting children's creative thinking. Music seems to be aesthetically recognized and reviewed, but the truth is that music is perceived as ancillary to other more "academic" subjects (Krehbiel, 1990; Mercer, 1988; Sheldon, 1995; Steinel, 1988). While Content Standard Three of the Music Educators National Conference (MENC) suggests improvisation of melodies, variations, and accompaniments at each grade level beginning with preschool (Stauffer & Davidson, 1996), the reality portrays the challenges of instructors who are faced with the dilemma of finding sufficient time to nurture their students' musical creativity and keeping up with other core subject standards.

**Statement of the Problem**

In most elementary school systems, music instruction occurs outside the classroom. Because music classes are separated from the core curriculum and treated as a special class taught only by specialists in the field, classroom teachers are less informed about the potential capacity of children in the field of music. Improvisation, a spontaneous activity that is unique to the player, is an activity that is not fully explored or developed in most music classes. Time constraints and direct instruction may be the reason why improvisation is not implemented in the curriculum. In addition, teachers are challenged to provide individual attention to the children, and they may feel intimidated by the thought that improvisation is something to be taught, not explored or created. I see
the same thing happening with the studies conducted with children on improvisation. The
researcher is usually a musician or a music professor, and I was unable to find an early
childhood educator investigating children’s improvisation. Music is almost invisible in
the field of early childhood curriculum, with very few resources for teachers to use in the
classroom. I strongly feel that this should not be the way it is. Children enjoy the act of
music creation, and adults should not have the misconceptions that music, especially
music improvisation, is only for trained musicians.

Relevance of the Study

In this study I addressed the need for early childhood educators to create time to
observe, nurture and facilitate children’s natural musical activity in the classroom. Music
can be integrated during center time, and it should provide opportunities for teachers and
children to learn from each other and share with others. This study was not addressed to
music educators, music psychologists and music specialists collecting information solely
for music or behavioral purposes. This study is dedicated to early childhood teachers and
administrators so that they can realize what children can do, when given the opportunity
to be creative and autonomous. It is my hope that the data collected from my study can
provide useful and practical information on how to implement music improvisation
during classroom activities.

Research Questions

The purpose of this study was to observe second grade children create an
improvisation on an alto xylophone. I focused on the process and the product of
improvisation. Three questions guided the study.
1. Can second grade children develop an improvisation on a song they have just learned?
2. What kind of improvisations do they develop?
3. Can second grade children analyze their own improvisations? If so, how do they describe them?
CHAPTER 2
REVIEW OF LITERATURE

In this qualitative case study, I investigated the opportunities and possibilities of second-grade children improvising on a Japanese children’s song on an Orff xylophone. I was specifically interested in the assessment of children’s thinking processes during the improvisation and the product of children’s improvisation. In this chapter, I review the literature in the following areas related to the questions that guided my study: (a) process-oriented studies of children’s music improvisation; and (b) product-oriented studies of children’s music improvisation.

Process-Oriented Studies of Children’s Music Improvisation

Improvisation has been considered as an integral part of music skill since the very beginning of music history; however, past and recent studies, particularly of primary grade children’s thinking process of improvisation, have been infrequent.

Donald Pond and Gladys Evelyn Moorhead at the Pillsbury Foundation School were possibly the earliest, and the most cited researchers that studied children’s spontaneous music activities from 1937 to 1944 (Moorhead & Pond, 1941, 1942, 1944; Moorhead, Sandvik & Wight, 1951). The purpose of the Pillsbury Study was to encourage and investigate the musical development of children aged two to six-years-old. The school offered an environment full of enticing and exotic music instruments, mostly from the East, and supportive, musically knowledgeable adults. Children at Pillsbury were free to explore and make music with a variety of instruments during the day, in a loosely structured setting. Their methods of study involved naturalistic observation and
analysis, and the study was holistic, case-oriented, and non-comparative. Moorhead and Pond began the study with no defined procedure, possessing only a strong desire to see how children naturally developed musically. In the course of seven years, children spontaneously sang, chanted and played instruments. Results showed that young children have an innate understanding of formal procedures when sounds are being structured, and they could make patterns, shapes, and structures whose elements are rhythmic figures and intervals. They also found that when the children first began to improvise on musical instruments, they focused on exploring the timbre and other sound qualities (Moorhead & Pond, 1978).

Ainsworth (1970) developed a study on the process of improvisation with secondary school children. His focus was to observe the nature of creativity in music, defined as the process of making informed decisions about a musical task, and to study the processes involved in manipulating musical material. Ainsworth selected two samples. The experimental sample received music instruction and the control sample did not receive music instruction. In order to measure the musical aptitude, which is defined as musical potential or capacity (Lehman, 1968), Ainsworth used the Bentley Measures of Musical Ability (Bentley, 1966), a tool that assesses pitch discrimination, tonal memory, chord analysis, and rhythm memory. In addition, Ainsworth used the Musical Creativity Task, a tool developed by the author himself, to assess a general measure of creativity. This measurement consisted of asking the participants to: (a) make up a tune of any length on the xylophone; (b) indicate when the tune was finished; and (c) repeat the tune again. Participants were asked to describe and comment on how they made up
the tune that they had just performed. Results indicated that musical decisions reflect an internalized selection process influenced by specific variables, such as musical experience, ability and skills.

Another study focusing on the process of improvisation was developed by Veronica Cohen (1980). Her study was similar to Pond's work in which she also used a naturalistic setting and techniques, with the exception of using a modern videotape technology. Cohen's study included observing a kindergarten setting that featured a music center that was open for children to explore during certain times of the day. Her focus was on how kindergarten age children learned to produce sound, or musical gestures. This was a longitudinal study, involving three years of observation. Cohen participated actively, focusing also on two children for additional interaction and observation. Discussing her methodology, Cohen noted the following:

This is not a conventional study in which the researcher set up a plan and then followed it, reporting in what ways it was successful or not. Instead, borrowing on the naturalistic, exploratory and yet scientific tradition exemplified in some of the most important of Piaget's studies, it searched through observations over many years...focusing finally on a few of two children's musical productions that held the most promise for revealing the underlying structure and dynamics of children's spontaneous music. (p.1).

Cohen's data included results of observation and personal interviews. Her analysis involved: (1) exploration of instruments, musical elements, and relationships between sounds; (2) practice toward the mastery of certain skills; and (3) production of musical gestures. Her result indicated that even at an early age, children tended to specialize, engaging in reproduction and arrangement of known melodies. She also mentioned that children needed more freedom to discover the music within themselves.
without the constraint of musical rules imposed by teachers. Cohen’s study provided depth and detail about children’s behavior, which contributed greatly to the understanding of children’s thinking processes during a free, spontaneous activity. She affirmed that the experience was not just aural but also visual, kinesthetic, and tactile.

Kanellopoulos (1999), a Greek researcher, focused her ethnographic and open-ended study on children’s conception of musical improvisation as demonstrated in their practice of spontaneous music making. Fieldwork was carried out with a class of ten eight-year-olds with no prior musical training. In the course of three one-hour meetings per week, throughout a period of five months, the children improvised on various instruments, and were encouraged to discuss their pieces. The researcher assumed the role of informal interviewer and co-player. Children were immersed into a meaning-making process, giving specific meanings to notions such as player, audience, teacher, playing, and inquiring. Interpreting the children’s insights within the context of their musical conduct became the principal means for the analysis. Results indicated that children, in the absence of a traditional teacher, developed a learning community where they created a meaningful context for organizing their engagement with “sound production, sustained it through interaction and developed it through accumulation of experience” (p.189). The researcher also learned that the process of improvisation had nothing to do with skills, but with holistic concepts that are immanent to the nature of music and its making: thoughtfulness and shared intentionality. Children created about two hundred improvisations, but the author refers to them as a single and collectively shaped oeuvre (Meyerson, 1948), defined as an immersion into the creation of improvised
pieces. Kanellopoulos (2007) also studied about young children improvising in a group environment. She contributed in the literature through the descriptions of how improvisation is affected by shared understanding and the presence of others in the creative process. The researcher stated that “musical improvisation emerges as a source of genuine musical experiences and a core means for the creation of communities of practice, dialogue and reflection” (p.120). While her study included children older than preschool age and did not specifically focus on the rhythmic and melodic characteristics of improvisation, the social nature of improvisational processes is something to be considered when conducting a study with children in a group setting.

Summary of Process-Oriented Research

Studies of the processes of improvisation generally involve careful observation and taking field notes. However, the methodology to observe children’s improvisation has not yet been clearly distinguished. The extent of methodologies used by the authors range from being extremely naturalistic and open-ended to somewhat behaviorist, similar to controlled analysis of technical skills in composition. Moorhead and Pond (1941, 1942, 1944), Moorhead et al. (1951), Cohen (1980), and Kanellopoulos (1999, 2007) observed how and why children produced and organized sound using various instruments in different social contexts, but it was unclear whether their focus of research and the process of children’s improvisation were affected by numerous variables in their studies. In Pillsbury study, the researchers observed a random number of children, somewhere between 15 and 20, but these children were not identified with the corresponding instrument or instruments they were using to improvise. Also, there was no account for at
what age children engaged in the various forms of music making. The study shows uncertainty as to how long the children were at school during the seven years of study, which affects the timeline, the quality and the quantity of data collection, solely based on observation and field notes. Cohen (1980) also followed a loosely structured situation, but unlike Moorhead and Pond’s work (Moorhead & Pond, 1941, 1942, 1944), she provided much richer detail about the behavior of the children and did so with an overview as to where the behavior might fit in the mental representation and process. Her videotape observations contributed to the literature as an essential tool to record the process of improvisation. However, Cohen collected the data in the kindergarten classroom with all children, but later focused on only two. The school day was short, lasting two and a half hours, and the curriculum was based on providing 12 to 15 activity centers, with a limit of four children in each center. Cohen studied her participants in the music center, with children coming in and out. Her several transitions as a researcher, going from the role of a participant-observer, then to the role of a teacher of special interest were effective in analyzing the “mind of the child” (p. 2). What is unclear is how far the researcher could focus on and evaluate the improvisational skills of every child in the music center environment, which provided various instruments such as piano, alto xylophone, two bongo drums, Autoharp, mandolins, tone bells, large cymbal, and an assortment of rhythm instruments and home-made instruments. Cohen’s study was holistic, emphasizing on the musical gestures as mentioned earlier, which has been defined by the author as “the expression of a musical idea which can range from a significant group of a few notes to an entire piece” (p.1).
Kanellopoulos’ study (1999, 2007) was no different than the studies conducted by Moorhead and Pond, and Cohen. The study focused on the group setting, but more on observing how children’s improvisations were affected by shared understanding. Ten eight-year-old children were engaged in the conversation, without structured interview questions. What guided the study was a set of philosophical themes developed by the researcher, which related to the areas of thoughtfulness, shared intentionality, and children’s concept of music itself. Questions such as “Can a cat make music?” or “What is a piece of music?” were asked during their improvisation, enhancing the analysis of children’s in-depth reflections on what music could and should be. Questions comparing and contrasting their improvisation with their peers were also recorded.

In contrast, Ainsworth (1970) conducted a study with older individual children, in particular adolescents that had to stay an extra year in school for political reasons. His scheme was to attempt to provide a one-year curriculum for 16-year-old secondary school students, specifically those who might otherwise have left at 15, “because of legislation that decided the students to remain at school for an extra year” (p.43). Under these circumstances, Ainsworth studied the participants to examine the nature of elementary creativity in music. It is unclear how creative participants were during the study while being affected by their social environment. However, efforts to study the musical thought processes with participants within a controlled environment were illustrated in his study. His study with two adolescents, however, could not be directly compared to my study because of the size of the sample and the age difference.
Product-Oriented Studies of Children's Music Improvisation

Researchers have conducted more studies on the product of improvisation, possibly because the investigation of musical characteristics and skills is more obtainable through a controlled methodology than the thought-processes of the improviser.

Among the most cited ones, Flohr (1979) investigated melodic and rhythmic improvisatory behavior of children aged four, six, and eight in tasks designed to stimulate various phases of the improvisatory response. Twelve children, four from each age group, met with the researcher for ten individual 15-minute sessions during which they were provided opportunities to: (1) freely explore the instrument; (2), participate in guided exploration involving a series of tasks that used melodic and rhythmic echoes, imitation of concrete sounds, given emotions, and musical dialogs; and (3) improvise a melody while the researcher played a simple ostinato on another Orff xylophone. Flohr recorded his sessions and used descriptive notes and transcriptions. His results indicated that: (1) young children were able to improvise patterns that are related to musical stimuli; (2) young children were able to form musical images in response to verbal stimuli; and (3) as children get older, tonal orientation and cohesiveness improve. The study was not designed to be generalized and was presented as a series of case studies.

In his second study using a similar methodology, Flohr (1985) studied ten children aged two, three, four and five-years-old over a four-year period. Children were given opportunities to improvise on an Orff xylophone using a pentatonic scale. As in the first study, the children met individually with the researcher for 15 minutes and worked over the three phases: free exploration, improvisation based on an emotion (sad, happy),
and improvisation of a melody over a bordun accompaniment. Results showed that there are three distinctive stages of children’s music development: the *motor energy* (ages two to four), in which the child uses of roughly equal duration and repeated pitches; the *experimentation* (ages four to six), which characterizes an emphasis on trying new ideas with little regard to the larger context; and *formal properties* (ages six to eight), in which structural characteristics such as tonality and repetition for larger patterns occur. Flohr’s studies (1979, 1985) confirmed that young children were able to use musical patterns to unify their improvisations.

Freundlich (1978) conducted a case study with two fifth graders. He investigated the development of musical thinking by examining a child’s spontaneous solution to a musical problem where the problem is a traditional musical frame (standard 12 bar blues) and the solution is an improvisation within that frame using a simple diatonic xylophone. Freundlich succeeded in: (1) demonstrating a procedure for getting data on children’s musical thinking; (2) establishing a mode of analysis for the data; and (3) exploring the educational ramifications of improvisatory experiences. Data were collected through eleven five-minute structured jam sessions, and they demonstrated that children could generate authentic musical ideas without referral to notation. The musical concepts provided by the improvisation procedure were found to be logically organized and feasible to the study of improvisation.

Laczo (1981) conducted an investigation of children in lower and higher elementary school in Budapest. He examined the improvisations of children of different
ages and musical education and found that the amount of students' music experience and music education does have an effect on their ability to improvise.

Also in Budapest, Kalmar and Balasko (1987) studied the melodic improvisations sung by children from two preschools. Three groups of ten children participated in this study. The study revealed that there is a presence of a *musical mother tongue*, which is defined as musical material taught in school or children's environment. Many improvisations appeared to be *creative transformations* of learned musical material. The authors wrote that many of the children's folk songs, in respect to volume, tonality, intervals, structure, phrases and rhythm patterns, are identifiable in the children's improvisations (p.81). The amount and quality of children's musical experience is evident in the improvisations. A significant finding of this research is that children who showed the highest levels of creative music performance were taught in settings where the teacher was musically well educated and creative.

Reinhardt (1990) studied 105 preschool children to develop understanding of the rhythmic elements found in the improvisations of three, four and five-year-olds and to determine any significant differences in the use of rhythm among the improvisation. The author studied individual children and conducted an interview that was divided into three parts. The first part provided an opportunity for each child to explore the xylophone for five minutes. The second part consisted of a conversation with the researcher while playing on a xylophone. The third part began with a researcher playing a children's lullaby, followed by an invitation by the researcher to the children to play their song as an exchange. The researcher accompanied by playing a bordun on the xylophone.
Improvisations were analyzed based on beat, meter, duration and pattern. Reinhardt found that 104 of the 105 children provided a steady beat in their improvisations. The same statistic held for the recognition of meter, duration and pattern. The researcher stated that a possible weakness to the study was that examples of beat, durations, and pattern were provided in the accompaniment played by the researcher. However, this study contributed to music teaching and learning since the ability for preschool children to improvise has been shown.

**Summary of Product-Oriented Research**

Research studies on the product of improvisation have generally indicated that children were able to develop melodic and rhythmic improvisational skills over time (Azzara, 1992; Brophy, 1999, 2005; Flohr, 1979; Laczo, 1981; Reinhardt, 1990). However, many studies seem to focus on the stages of music development, contrasted and compared with the age of children. Flohr (1979, 1985) and Reinhardt (1990) focused on the controlled assessment methods, intervening in children’s improvisations by providing specific themes, and accompanying them with an additional xylophone, played by the researcher. This method reminds me of Orff-Schulwerk activities, which involves singing, use of *borduns* for accompaniment, use of improvised rhythms, improvised movement and improvised pitches from the pentatonic scale (Martin, 1993). Children in these studies may have not had the freedom as Cohen (1980) advocated in her study, since the researchers controlled the framework and the tasks of these studies. It seems to me that this type of controlled methodology is far from being spontaneous. It is unclear if
the children would perform the same way if unaccompanied or provided with a more open-ended task.

Researchers who focused on other aspects of improvisation inspired me to conduct my study. Freundlich (1978), although his participants were older children, created a problem-solving situation in his study, where children had to solve the problem spontaneously. Laczo (1981) focused on lower and higher elementary school children, and his study brought evidence of how children’s improvisation could be affected by their environment. Kalmar and Balasko (1987) developed the concept of musical mother tongue with preschool children, which highly affected the quality of improvisation.

Chapter Summary

The process-oriented studies of children’s music improvisation presented in this chapter focused on a naturalistic approach with few interventions and less defined procedures. The variables ranged from sample size to a variety of types of instruments used in the investigation, making it difficult to generalize. The product-oriented studies of children’s music improvisation were well defined, although the methodology used was perhaps too controlled, defying the meaning of improvisation, which is a spontaneous activity.

While these studies are useful in focusing on the process or the product of improvisation, they do not provide data, which incorporates both. The current study attempts to address both types of investigations, allowing the participants to improvise within a framework, but also to follow their thought processes during and after the improvisation.
CHAPTER 3  
METHODOLOGY

Research Design

This study was designed to investigate how second-grade children would develop a solo improvisation on a xylophone. A qualitative case study seemed to be the appropriate method to investigate this topic, since it allowed me to “understand the complex interrelationships among all that exists” (Stake, 1995, p.37). The focus of my study was to observe independent improvisation of children who have had a rich music background in the classroom. By using this methodology, I strived to recognize the “uniqueness of individual cases and contexts as important to understanding” (p.39).

Site Selection

A model early childhood education school affiliated with a state university in Midwest was selected as a site for this study. The school followed an inquiry-based curriculum for children aged three years through second grade, and it served sixty-six children living in a low-income, ethnic minority population area. Wolk (2008) defined inquiry-based school as a place that has “an active environment, and a true community of learners” (p.118). As a model school, the facilities provided high quality equipment and technology, and classrooms were equipped with individual observation booths for research purposes. The school also had a research room, a conference room, and a commons area. For the purpose of my study, I chose the research room for the first day, the conference room for the second day, and the commons area for the last day. Video recordings of individual improvisation were collected in the conference room, for the
purposes of children's privacy and the acoustic quality. The research room and the commons area were selected based on availability and space.

Entry Access

As a graduate assistant, I worked at the model school assisting teachers and a faculty member. I had daily access to the facility. Before conducting the research, the purpose and the implication of the study were written and delivered to the school director and to the classroom lead teacher to obtain approval. Once approved, I collected the signatures of parents and children who were interested in participating in the study (see Appendix A for consent forms). In accordance with the Human Participants Procedures of the Institutional Review Board, parents were informed that their children's participation was completely voluntary, and that both the parents and the children had the rights to withdraw any time from the study, or not to participate at all.

Participants

Six second-grade, African-American children were initially selected for this research. One child moved out of school before the data collection started; therefore, the study focused on the remaining five. These five children were the total number of second-grade students in the class of combined first and second-grade level. I chose the second-grade level because I knew the children well from the beginning of the school year, and the children were comfortable spending individual and group time with me. Table 1 lists the participants in an alphabetical order by name, gender and age.
Table 1

Participants, Gender and Age

<table>
<thead>
<tr>
<th>Participant</th>
<th>Gender</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alison</td>
<td>F</td>
<td>8</td>
</tr>
<tr>
<td>Joe</td>
<td>M</td>
<td>8</td>
</tr>
<tr>
<td>Sylvia</td>
<td>F</td>
<td>8</td>
</tr>
<tr>
<td>Tania</td>
<td>F</td>
<td>8</td>
</tr>
<tr>
<td>Wilma</td>
<td>F</td>
<td>8</td>
</tr>
</tbody>
</table>

One boy and four girls participated in the study. All children were eight years old at the time, and they knew each other since they were preschoolers, in the same model school.

Materials

A wooden, two-octave scale Orff xylophone was used for this study. I selected this instrument because it was accessible at the model school, and it was an instrument that was easy for children to learn and play. Karl Maendler, a German instrument maker, manufactured the xylophone in 1928, after he was inspired by the ideas of German composer, Carl Orff (Gray, 1995). The Orff xylophone has a unique feature of removable bars, enabling performers to play only the specific or selected bars with notes that sound nice. For example, if a child needed to play only two notes on the xylophone, the rest of the bars could be removed, allowing the child to be a successful performer. The xylophone with removable bars was invented with Orff’s philosophy in mind, which stated that learning is meaningful only when it brings satisfaction to the learner, and that satisfaction arises from the ability to use acquired knowledge for the purpose of creating (American Orff-Schulwerk Association, 2011). For this study, children were given an
option to use the xylophone with a complete set of bars, or remove them for their
convenience. They were also given an option to use single mallet to play with one hand,
or double mallets, to play with both hands.

Data Procedures

Data collection for this study was informed by qualitative case study methods that
were used by other music researchers investigating improvisation (Cohen, 1980; Flohr,
1979, 1985; Moorhead & Pond, 1941, 1978). Conduct of activities, data collection and
data analysis are introduced in the following section.

Conduct of Activities

Before introducing the children to the study, I used to visit the children’s
classroom frequently as a graduate assistant, teaching music with a faculty who had been
exploring constructivist methods of teaching music in the classroom. Children knew me
well, also through other school projects, which gave me a reason to believe that I could
begin the study with a group of children or with a single child.

The study was conducted over a period of three days. The goal for the first day
was to teach children how to play a Japanese folk tune, Tulip Song by Takeshi Inoue. I
chose this song because I wanted the children to improvise based on a melody that they
had not heard of before. Tulip Song was composed using a pentatonic scale, which was a
common, five-note scale used in most Japanese children’s folk songs.

First, I invited the children to the research room. We sat in a circle, and I gave
them an overview what we were going to do. I explained how children would learn the
song from me by copying what I do, and practicing on the xylophone by passing it to the
child sitting next. Second, I showed them how to use the removable bars carefully, and explained that they had an option of keeping all the bars in place while playing, or removing them, if needed. Third, I asked them to observe carefully, while I played the Japanese folk tune twice using a single mallet. I explained that they had an option of using one mallet or two, if needed. Finally, I offered them the xylophone, and asked them to take turns playing three times each, and passing the xylophone to the next child. Each child practiced the song three times, while others observed.

The goal for the second day was for every child to improvise on a xylophone, and be interviewed after their performance. I invited each child to the conference room, and asked to sit on the floor, facing a video camera. Each child had 10 minutes to play on the xylophone, and I explained that the improvisation had to be based on the folk tune they had learned the day before. When I spoke with children, I replaced the word “improvise” with “make your own song,” to clarify my objective, and to define in a language children understood. As in first day, I mentioned that they could remove the bars from the xylophone, if that was necessary for them to perform. Playing with one or two mallets was also offered as an option. Before the children started playing, I mentioned that they would be interviewed immediately after their performance. The six questions from the semi-formal interview are listed in the Appendix C.

The goal for the third day was to collect children’s reflections on their improvisation. We gathered in the commons area as a group. I had a TV monitor in the room, and explained that we would be discussing their improvisation. I also added that they were free to share their thoughts with each other and to show recorded performances
on the monitor to their peers. I participated as an observer and as a facilitator on this day, and commented on their improvisations while children shared their stories.

Data Collection

The three days dedicated to this study included different tasks and functions, and the collection method varied depending on the task for each day. Multiple methods were used to collect children’s data, such as:

- Descriptive field notes
- Reflective field notes
- Videotaping
- Semi-formal interviews

On the first and the third day, descriptive field notes were taken. I found it important to collect detailed notes on children’s thoughts, opinions, and their thinking processes. I wrote notes consisting of key phrases, quotes, and words on a clipboard paper. I also wrote their names down whenever they spoke. After I finished the tasks for the first and the third day, I immediately typed in details and reviewed the notes. I also used reflective notes by adding my memos and ideas in a written form (Bogdan & Biklen, 2003). The second day was the most important day for my study; therefore, besides taking field notes, I also asked a school videographer to videotape children’s improvisation. I used two video cameras. The first one, operated by the videographer, was set on a tripod across from the child and the xylophone, to capture a complete visual. The second one was set at an angle, to capture only the child’s hands movements and the instrument. I sat positioned to the side, taking field notes of each child’s actions, and their
thought processes that showed in their improvisation. The interview following the improvisation was also videotaped. All videotaped recordings were transcribed and analyzed. The recordings offered the advantages of viewing the improvisation and the interviews several times for careful analysis, and captured unexpected actions that were important for the analysis (Gall, Gall & Borg, 2003). The videotaped data were combined and analyzed with the field notes.

Data Analysis

I reviewed the data each day, and noted children’s organized actions and found patterns I could categorize. I developed a coding category to analyze the product of the performance and the process of the interview. For the product coding, data were sorted into a table by the quality and the quantity of children’s melodic and rhythmic improvisation, which aligns with the K-4 performance standards and the levels from The National Association for Music Education (MENC – originally called Music Educators National Conference). Based on MENC standards, listed in Appendix C, the quantity and the complexity of rhythmic and melodic variation or embellishment determine the participants’ improvisational level. The process coding was created to identify the thinking process of children reflecting about their performances during the semi-formal interview. I focused the process coding primarily on the second day; however, some findings from the first and the last day were also included.

By having four sources of data (descriptive field notes, reflective field notes, videotaping and semi-formal interviews), I was able to look for convergence and the
results from each source provided conclusions true to the patterns and unique findings in the study.
CHAPTER 4

RESULTS

The purpose of this study was to investigate if second-grade children could develop an improvisation from a Japanese folk tune on an Orff xylophone. Previous studies on music improvisation with primary grade children ranged from focusing on objective, structured elements and methods for improvisation to studies based on subjective or creative thinking interpretations requiring little or no training in music. To strike a balance between these extremes, this study investigated how an improvisation based on an unfamiliar folk tune provided a unique individual outcome. Five individual children were given 10 minutes to improvise without adult intervention. The results presented in this chapter inform the product and the process of children’s improvisation (Kratus, 1991). The study was guided by the following questions:

1. Can second grade children develop improvisation on a song they have just learned?
2. What kind of improvisations do they develop?
3. Can second grade children analyze their own improvisations? If so, how do they describe them?

My findings in this chapter focused primarily on the second day; however, some findings from the first and the last day were also included. The questions above guided the discussion, and I used vignettes and Tables to provide the results of each child’s performance, instead of describing directly from the notated music transcription.
Making Rhythmic and Melodic Improvisation from a Japanese Folk Song

This section will define the contents of my coding in the Table 2 and provide the answer to the first two questions of this study: (1) Can second grade children develop improvisation on a song they have just learned? And (2) What kind of improvisations do children develop? Table 2 and the vignettes of individual children describe the actions and progressions of improvisation. Table 2 is sorted by the quantity and the quality of children’s melodic and rhythmic improvisation, which aligns with MENC K-4 performance standards. The musical keys (the scales children used to improvise), the original Tulip Song melody, and the music notes found in the vignettes are identified using the seven letters of the Latin alphabet (A, B, C, D, E, F and G). The Tulip Song with the music notation is on Appendix B. Each horizontal box in the Table 2, to the right of the music key, is equivalent to the segment of time, or the measure of the melody. At the top of these eight measures, the original Tulip Song is highlighted in light green. These letters match the notes and the melody children learned as a base melody on the first day. The row with children’s name shows the coding, which describes how they played in relation to the original melody. For example, if a child played the same original song without varying, the coding would be indicated as “S,” for “Same.” This means the child did not improvise during that specific segment compared to the original tune. The rows are numbered in Arabic numerals by children’s names. The columns are numbered in Roman numerals, and represent the quantity of completed improvisations.
Table 2

Patterned Regularities of Melodic and Rhythmic Variations

<table>
<thead>
<tr>
<th>No.</th>
<th>Key</th>
<th>Children's Improvisation in Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>I</td>
</tr>
<tr>
<td>Original Tulip Song Melody</td>
<td>F</td>
<td>FGA</td>
</tr>
<tr>
<td>Joe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>C</td>
<td>T</td>
</tr>
<tr>
<td>2</td>
<td>C</td>
<td>T</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>R/M</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>R/M</td>
</tr>
<tr>
<td>5</td>
<td>C High</td>
<td>T</td>
</tr>
<tr>
<td>6</td>
<td>D,F</td>
<td>H/R/M</td>
</tr>
<tr>
<td>7</td>
<td>D</td>
<td>T/M</td>
</tr>
<tr>
<td>8</td>
<td>C,D</td>
<td>T/R/M</td>
</tr>
<tr>
<td>9</td>
<td>C</td>
<td>T/R/M</td>
</tr>
<tr>
<td>10</td>
<td>A,C</td>
<td>H/R/M</td>
</tr>
<tr>
<td>11</td>
<td>C</td>
<td>T/R/M</td>
</tr>
<tr>
<td>12</td>
<td>C</td>
<td>T</td>
</tr>
<tr>
<td>Sylvia</td>
<td>1</td>
<td>F</td>
</tr>
<tr>
<td>Wilma</td>
<td>1</td>
<td>F</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>R/M</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>R/M</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>R/M</td>
</tr>
<tr>
<td>Alison</td>
<td>1</td>
<td>F</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>Tania</td>
<td>1</td>
<td>F</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>M</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>R/M</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>R/M</td>
</tr>
</tbody>
</table>

S: Same as Original Tulip Song
M: Melodic Improvisation
T: Transposition to Another Key
R: Rhythmic Improvisation
H: Harmony
X: Aborted
O: Other tune

No coding was entered, when the child played a different song.
No coding was entered, when the child did not complete at least the first half of the total eight (8) measures.
The individual vignettes describe children’s detailed performances identified with their names and the length of performances noted in minutes and seconds. The same coding as in the Table 2 will be used to describe children’s improvisation.

Vignette 1
Joe (8:31) Joe looked at the xylophone bars for two seconds, then immediately began improvising, starting on C key, instead of F, which is Tulip Song’s original key (Row 1). Joe played twice, a tempo (Row 1 and 2). Then, he played twice again in F key (Row 3 and 4), added syncopation, and added the ending to the song. Joe looked satisfied with this ending. Next, he transposed back to C key, playing again a tempo, but this time playing at an octave higher (Row 5). Joe improvised only the ending of each phrase. In his next attempt, Joe picked two mallets to play. He played F and D keys together, and added rhythmic and melodic improvisation (Row 6). He went back to playing with single mallet, still in D key, and carefully elaborated an improvisation in minor key (Row 7). Then, he started with a C key on the next try, but ending in D minor (Row 8). Joe continued playing in C, this time in major key, and included rhythmic and melodic improvisation (Row 9). He tried again with both mallets, using A and C, in minor keys (Row 10). Lastly, he tried a couple more times in C key with a single mallet.

Joe constantly challenged himself playing in a minor scale or creating a unique syncopated rhythm. His mind seemed to follow a pattern by searching a song he knew, then mixing a portion of his song with the Tulip Song. He repeated the same strategy with rhythm, adding familiar syncopations he learned in the classroom to the Tulip Song.

Some of Joe’s memories seemed to be accidental. He would hit a certain key, then he would remember the rest of the song. However, most of his process of improvisation indicated that he could hear the sound in his mind, which Gordon (1999) defined as audiation. Audiation is a cognitive process of mentally hearing and comprehending music, even when no physical sound is present. Joe slightly nodded when he could audiate, then touched the bars gently in search for the right note. When the notes sounded
right, he played them harder with confidence, or he would repeat in the next music phrase.

Joe did not enjoy ending on the wrong note. Whenever the mallet hit a note he disliked, Joe made a face, or would make noises with his mouth, expressing the disapproval. When he got stuck, he would play a completely different song, or he would go back to playing the original melody without improvisation. He also made a motion to erase the xylophone bars when he disliked the sound, as if he would do on a paper with an eraser. After improvising twelve times, Joe looked up as he had tried all possible combinations. I interviewed him following his performance, which will be described in the next section.

Vignette 2
Sylvia (8:55) Sylvia played the *Tulip Song* in the original F key, then she stopped and played from the beginning again, adding a slight change in rhythm (Row 1). In the first two measures (Column I, Column II) she improvised the rhythm, but did not improvise the melody. She finished playing half of the *Tulip Song*. After her first attempt, still in F key, Sylvia started playing a song from her church, which also begins with F key. She completely shifted her task and started playing an improvised medley of all the songs she knew how to play. Many of her songs included nursery rhymes she learned in the classroom. Some songs were improvised; others were played in the original form. Sylvia added the bars back into the xylophone, when she realized that she needed all keys to play the medley. Besides the first improvisation, Sylvia did not repeat the *Tulip Song* melody again.

Sylvia made motions as she was playing on the xylophone while I was still explaining her task. The recorded video showed that shortly before she was told to start, she placed the mallet on some xylophone bars, as if she was playing. After playing the video several times, I noticed that she was actually playing the original *Tulip Song* once, then again, playing an improvised one. Like Joe, Sylvia indicated that she could audiate.
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video several times, I noticed that she was actually playing the original Tulip Song once,
then again, playing an improvised one. Like Joe, Sylvia indicated that she could audiate.
However, when she was told to start improvising, she improvised only the first two measures of the first half of the *Tulip Song*, and then continued playing other songs she enjoyed playing in the classroom. She did not seem to be bothered by the fact that she was being observed or videotaped, and she showed no signs of anxiety from the beginning to the end. Sylvia played continuously with one mallet, occasionally switching to two mallets for certain songs that required the use of both mallets, but soon went back to playing with just one. I coded the first improvised version of *Tulip Song* only, because it was audible.

**Vignette 3**

Wilma (6:03) Wilma carefully played the first measure, just as in the original melody of *Tulip Song*. From the second measure on, she improvised the melody until the fourth measure (Column IV). She played a tempo. Then, she improvised the rhythm and the melody until the end of the song (Row 1). Her second attempt started with the melody and the rhythm improvisation (Row 2). She played in F key, using the same pattern of melodic and rhythmic improvisation until the end (Rows 3 and 4).

Wilma quickly found a pattern she enjoyed improvising. Most of the time her rhythmic improvisation was based on quarter notes divided in eight, which meant she played the notes twice. The repeating notes and the syncopated rhythm was an exact match from the second-grade children’s favorite original music, *Shari’s Song*. This song had a short pause at the end of each phrase, and so did Wilma’s. Occasionally, she would vary the pattern, so she added a note instead of a pause. Wilma’s improvisation became a fusion of Japanese folk tune and an African-American synchronized rhythm.

**Vignette 4**

Alison (1:41) Alison improvised the melody at the last measure of each phrase (Rows 1 to 4, Column IV; Rows 1 and 4, Column V). She played four times, but during the second and the third try, she included a different children’s song
melody (Row 2 and 3, Column V to VIII). Alison finished her improvisation by playing the *Tulip Song* again.

Alison' improvisation time was the shortest. She started by playing the original version of *Tulip Song*, but soon stopped to remove the C bar, located an octave higher. After the C bar removal, she also removed the high D bar, and placed where the C was before. Alison' improvisation focused only at the end of each phrase, and it was a melodic improvisation, not rhythmic. She struggled to find the right ending note, and solved the problem by replacing a note that was on an unrelated key from the original scale of *Tulip Song*. Her second attempt was to end with an additional note where there was already an ending note. This did not end well, either. In the process of finding the ending to the song, Alison hit the C key, which triggered her to play the *Twinkle, Twinkle, Little Star*, a song starts with the same key. Immediately after playing the complete song, she played the *Tulip Song* again, but this time shortening in half, and ending with another additional note. Her accidental attempt to play the *Twinkle, Twinkle, Little Star* in the middle of the *Tulip Song* indicated that she might have made a spontaneous decision to add another familiar melody in between.

**Vignette 5**

Tania (9:18) Tania played gently, exploring the melody variation (Row 1). She gradually implemented both the rhythmic and the melodic improvisation (Row 3 and 4). She also added syncopation on her third try. Tania continued similar performing patterns until the end.

Tania focused on her improvisation for a long time, and it was the longest of all the children. Her improvisation was based on delivering similar patterns of variations. Tania did not show signs of frustration when she missed some keys, due to the lack of firm grip while holding a mallet. Her melodic variation was based on her notes going up,
and then down, which was similar to Wilma’s improvisation. Tania used less complex rhythmic variation than Wilma.

All children improvised the *Tulip Song*. Four out of five children improvised in the key of F, which was the original key in the *Tulip Song*. These four children also removed some xylophone bars to avoid dissonance, and to facilitate their performance. However, video data shows that children were not consistent about the selection and the removal of the xylophone bars. Children did not have a system, and they removed any bars they thought they were unnecessary. Only one child did not remove at all, but others moved anything from two bars to six bars. Further observation in the video showed that when children played a note that did not sound right to their ears, they removed that note from the xylophone. It was also observed that when they needed a certain note back, they added the missing note back to the xylophone.

Children’s improvisation consisted of *songs and rhythms* they learned at school, as well as songs they have learned in their cultural environment. Table 3 shows a list of songs children chose to use during the improvisation. The table also shows the area in which these songs were affected: the melody, the rhythm or both.

**Songs Children Used During Improvisation**

Three songs, one originally composed by a classroom assistant teacher, a familiar children’s song, and a Hebrew song were observed during the children’s improvisation. The original song was called *Shari’s Song* and it was a popular classroom song during the time of this study. This song was composed by an assistant teacher, who was experimenting with an ascending scale progression of parallel thirds played in a
syncopated rhythm. The teacher was inspired by what the children were doing in the music center activity, and took interest in what the children were doing. Children helped her finish the ending to the song, and Shari’s Song became a collaborative song. After the song was completed, the children wanted to learn how to play. They practiced Shari’s Song intensively during the classroom center time. However, not all children learned how to play Shari’s Song. Some children preferred to learn other songs, such as Twinkle, Twinkle Little Star, Shabbat Shalom and I’m A Little Tea Pot. The following Table 3 lists the songs children had in their minds, while they were improvising.

Table 3

<table>
<thead>
<tr>
<th>Participants</th>
<th>Song(s) that influenced children’s improvisation</th>
<th>Area(s) that influenced the improvisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joe</td>
<td>Shabat Shalom, Shari’s Song, Twinkle, Twinkle Little Star</td>
<td>Rhythm, Melody and Rhythm, Melody</td>
</tr>
<tr>
<td>Sylvia</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Wilma</td>
<td>Shari’s Song</td>
<td>Melody and Rhythm</td>
</tr>
<tr>
<td>Alison</td>
<td>Twinkle, Twinkle Little Star</td>
<td>Melody</td>
</tr>
<tr>
<td>Tania</td>
<td>Shari’s Song</td>
<td>Melody and Rhythm</td>
</tr>
</tbody>
</table>

Children’s syncopated rhythm progression during their individual improvisation was either an exact match from Shari’s Song or slightly modified. Three children adopted the rhythm, and one of them played with two mallets, which was one of the main technical characteristics of Shari’s Song. Shabbat Shalom rhythm was also used by one of the children, which added an interesting rhythm to the Tulip Song improvisation. This
Hebrew children’s song added an interesting multicultural mix to the *Tulip Song*, which was a *Japanese song composed in pentatonic scale*. *Twinkle, Twinkle Little Star* was popular as a melody. A couple of children tried to embed this song to the *Tulip Song* as an additional or combined melody, but they were not as successful, because of the different key *Twinkle, Twinkle Little Star* was based on.

Children’s choice of songs in Table 3 provided the evidence that their improvisation was strongly affected by their musical environment and prior experience with the xylophones. The presence of a Hebrew song in Joe’s improvisation, an African-American boy, indicated that their learning environment affected his thinking. The same could be said when Shari, the assistant teacher, played a song filled with syncopation, a common style of rhythm seen in her African-American culture. The combination of these unique songs, combined with the *Tulip Song*, a pentatonic tune taught in Japanese kindergarten for Japanese children, produced an intriguing style of improvisation.

Children also recognized that no matter where the song was originated, consonance, the combination of notes that sound good together, was extremely important in music. When children improvised, they did not neglect when they made mistakes caused by a dissonance. They played until the melody or the rhythm sounded right, in an effort to eliminate the dissonance.

Overall, children were extremely focused during their performance. They seemed to enjoy the creative process of improvisation, which was filled with modification and trial and error. At times, they demonstrated dissatisfaction because their melody or rhythm did not fit, but this was the nature of improvisation, and they seemed to accept the
fact that playing spontaneously sometimes does not lead to a finished or a perfect song. The study was significant in that individuals had the opportunity to improvise however they wanted within a comfortable time limit. In the next section, I will analyze the product (Kratus, 1991) of children's improvisation based on the MENC K-4 performance standards.

**Using MENC Performance Standards to Evaluate Children's Improvisation**

Improvisation is one of the content standards in the MENC (Stauffer & Davidson, 1996). Within the content standard, there is also an achievement standard that states that students improvise simple rhythmic variations and simple melodic embellishments on familiar melodies. MENC's *assessment strategy* provides a two-fold task that evaluates students' proficiency level on melodic and rhythmic improvisation. Based on the quantity and the complexity of rhythmic or melodic variation, the students were evaluated and categorized into basic, proficient and advanced levels. The basic level has one place at which rhythmic or melodic variation is used. The proficient level has at least two places at which rhythmic or melodic variation is used, and the advanced level is defined as having consistency with any technique or variation used, without changing the rhythmic structure or melodic contour. MENC provides examples of rhythmic variation as a tune that contains syncopation, dotted rhythms, quarter notes divided into eights, eighth triplets, or sixteenths. MENC provides examples of melodic variation or embellishment as a tune that contains acciaccaturas, passing tones, and trills. Using these examples, I counted how many times children varied rhythmically and melodically per completed improvisation. Table 4 shows the quantity of variation attributes provided by
the children. The discussion following the table informs the children’s MENC level, or the product of the improvisation.
### Summary of Children's Improvisations

<table>
<thead>
<tr>
<th>Child</th>
<th>Number of times song was played</th>
<th>Total number of measures played</th>
<th>Number (%) of measures same as original song</th>
<th>Number (%) of measures transposed</th>
<th>Number (%) of measures melodic improv and rhythmic improv only</th>
<th>Number (%) of measures melodic improv and rhythmic improv transposed</th>
<th>Number (%) of measures melodic improv only</th>
<th>Number (%) of measures rhythmic improv only</th>
<th>Number (%) of measures other songs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sylvia</td>
<td>1</td>
<td>4</td>
<td>2 (50%)</td>
<td>0</td>
<td>0</td>
<td>2 (50%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wilma</td>
<td>4</td>
<td>32</td>
<td>1 (3.2%)</td>
<td>0</td>
<td>3 (9.4%)</td>
<td>0</td>
<td>28 (87.5%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Alison</td>
<td>4</td>
<td>32</td>
<td>18 (56.3%)</td>
<td>0</td>
<td>6 (18.8%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8 (25%)</td>
</tr>
<tr>
<td>Tania</td>
<td>4</td>
<td>32</td>
<td>6 (18.8%)</td>
<td>0</td>
<td>10 (31.3%)</td>
<td>0</td>
<td>16 (50%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Joe</td>
<td>12</td>
<td>82</td>
<td>0 (17.1%)</td>
<td>14 (17.1%)</td>
<td>0</td>
<td>17 (20.8%)</td>
<td>0</td>
<td>24 (29.3%)</td>
<td>27 (32.9%)</td>
</tr>
</tbody>
</table>
Joe had the most unique style of improvisation of all the children, and he had the most number of completed improvisations. He included the rhythm from *Shabbat Shalom* and *Shari’s Song*. The syncopation contained dotted rhythms and quarter notes divided into eights, sometimes sixteenth. Joe was persistent, and as he completed one pattern, he added more challenges on the next pattern. His improvisation was based on techniques acquired from classroom music center, where he spent time with the faculty who taught music. He could add different songs, chords, or transpose the song to another key. His creative skill was to blend some aspects from other songs, and refine each improvisation in his unique way. Joe’s improvisation would be categorized in MENC as having an advanced skill level, both in melodic and rhythmic improvisation.

Sylvia was able to audiate, but she developed only one improvisation based on the *Tulip Song*. She added a dotted rhythm in the first two measures, but she did not vary the melody. Her improvisational skills, according to MENC’s performance standards, would be basic, since there was only one place of improvisation.

Wilma’s improvisation was based on using the rhythm from *Shari’s Song*. Her improvisation included dotted rhythm and quarter notes divided into eights. Just as *Shari’s Song*, she played her improvisation using the same style of syncopation, but she added a note at the end when she ascended, and added a pause when she descended. Also, instead of repeating the melody twice as in the original *Tulip Song*, she played only once. Wilma’s performance skills would be categorized as advanced according to MENC.
Alison' focus was on the ending of the *Tulip Song*. She added an additional eight note instead of a quarter, and then added another quarter note, a C, which sounded disconnected to the original Tulip Song key, which was F. By doing that, Alison connected the C note to the first note of *Twinkle, Twinkle Little Star*, and played the song from the beginning to the end. She played the *Tulip Song* again at the end, and ended with the same additional disconnected notes. Alison’ attempt to improvise, blending the two songs together, was a unique idea. However, the combination of songs composed in different scales challenged her skills to find the right balance. Her MENC performance skills would be categorized as basic or proficient.

Tania used *Shari’s Song* as a reference to her melodic improvisation. She initially played by varying only the ending to the song, but then continued her improvisation by playing the original notes using the quarter notes divided into eights. She gradually changed the song by adding the syncopation as in *Shari’s Song*. Her performance skills on MENC would be proficient.

Knowing songs with complex melodies and rhythmic styles were the key to obtain a higher score in the MENC performance and achievement standard. Combining these songs with the *Tulip Song*, without breaking the flow of the original melody, produced an effective outcome that added to the uniqueness of children's original improvisation. Children, who had less music repertoire, had a much simpler style of improvisation. I found it crucial for each child to know some songs they could refer to, melodically and rhythmically; otherwise, improvisation would not exist. Those who could use their repertoire of quality songs provided a richer product of rhythmic and
melodic improvisation. In the next section, I will analyze the data from the interview, conducted immediately after the children’s improvisation.

**Children’s Semi-Formal Interviews and Their Thought Process on Improvisation**

Six interview questions were formed to understand children’s thinking processes about their performances during the semi-formal interview. The interview answers the last question of this study: Can second grade children analyze their own improvisations? If so, how do they describe them? I conducted a semi-formal interview immediately after the children’s improvisation. I also gathered the children on the third day to view their video-recorded improvisation from the day before, with a purpose to reflect and share their experiences in improvisation. The semi-formal interview was video recorded and transcribed (See Appendix C), but on the third day I used the field notes instead of video recording, because I wanted to create a casual and a relaxing atmosphere for the children.

The semi-formal interview consisted of six questions: (1) Tell me about your song. How did you come up with the idea? (2) Did you have the idea before you played, or while you were playing? (3) How did you find the ending to your song? (4) Does your song remind you of any other song or songs you have learned, played, or heard before? (5) Did your song come out the way you wanted it to be? (6) What makes your song special or different than the original folk tune? These questions were asked as soon as the child ended the improvisation, and they were carried in a casual, conversational tone.

**Question 1: Coming Up With an Idea**

When individual children were asked to reflect back on the origin of his or their improvisations, each child indicated that he or she had followed no plan. A few children
tried to demonstrate how they “came up with an idea” by playing the xylophone, but when they played, they were improvising again, so their explanation was not justified since they could not replicate their original improvisation. However, these children mentioned that they were “trying to match” with other songs. Wilma mentioned *Shari’s Song*, and Alison mentioned *Twinkle, Twinkle Little Star*. Joe referred to the technique, playing with two mallets, instead of one. Tania said she wanted to add more keys to play.

Results of transcripts indicate that children came up with the idea as they played. The style of their music improvisation depended heavily on the type of songs the children were thinking about during that time.

**Question 2: Having Ideas Before Playing**

Joe answered that he had an idea before. He demonstrated how he had an idea, but that his ideas were changing as he improvised. All other children answered that they had the idea “while they were playing.” Their answers indicate that they were performing an improvisation.

**Question 3: Finding an Ending to the Improvised Song**

A few children seemed to have an idea on how to end their improvisation. Tania said she was thinking of the ending while she was “playing the whole song.” Alison thought of ending in G key, because it was “easier.” Wilma seemed to add a creative touch, by using *Shari’s Song*, but “ending with a different letter (music note or key).” Sylvia simply “made up one.” Joe wanted to show me how he ended the song, but could not explain if he had an idea. None of the children seemed to know exactly *how their* improvisations were supposed to end. Just as the improvisation itself, they had a vague
idea while they were playing, influenced by songs they knew or heard before, but they struggled to find the right combination of their song, and the Tulip Song, which was written in a different key. Some children forced the ending by adding a note, even the note did not match with the improvised piece. Others were partially successful, hitting the right note at times, but not throughout the process of improvisation. The fluid state of improvisation challenged the children during their performance.

Question 4: Songs that Influenced the Improvisation

Table 3 (p. 40) in this chapter demonstrated the result of songs children had in their minds during their improvisation, and in which area the songs affected their performance. Table 5 below shows what children mentioned about the songs during the interview.

Table 5

<table>
<thead>
<tr>
<th>Participants</th>
<th>Song(s) that influenced children’s improvisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joe</td>
<td>Shabbat Shalom, Twinkle, Twinkle Little Star</td>
</tr>
<tr>
<td>Sylvia</td>
<td>N/A</td>
</tr>
<tr>
<td>Wilma</td>
<td>Shari’s Song</td>
</tr>
<tr>
<td>Alison</td>
<td>Twinkle, Twinkle Little Star</td>
</tr>
<tr>
<td>Tania</td>
<td>Shari’s Song</td>
</tr>
</tbody>
</table>
With the exception of Joe not mentioning Shari's Song, which he adopted to play with two mallets and in thirds, all children provided the same results as in Table 3, where I presented the results based solely on the video recorded observation of their performances. The similarities of responses from both results provided evidence of how children processed their thoughts, because the interview was conducted immediately after the improvisation, and children accurately remembered about their performances.

Question 5: Feeling of Satisfaction with the End Result

All children gave an affirmative response regarding the end result of their improvisation. Children either said a short “yes!!” response, or nodded their head up and down. They seemed proud to have their own improvised song.

Question 6: Is the Improvisation Special or Different?

Joe mentioned that his improvisation was special because he “put a lot of work in it.” Sylvia said that mixing all the songs she knew made the improvisation special, even though she did not incorporate the original Tulip Song after one play. Wilma felt special because her improvisation sounded like Shari’s Song. Alison said it was special because it ended in a different letter (different music note), and Tania did not know if it was special. All children seemed to know that their improvisation was different than the original melody they learned a day before. For some children, “special” meant effort; others interpreted “special” as something simply different than the original song or the song they enjoyed to play in the classroom.

These six questions revealed the thought processes of children’s improvisation from their perspective. Children enjoyed the improvisational task, even though it did not
provide completion, or full satisfaction, which is, by default, the nature of improvisation. The art of improvisation, which is an ongoing process, was captured through observation, field notes, and children’s interview.

Children’s Reflection on the Third Day

On the last day of this study, I invited the children to the commons area, and suggested that they share their performing experiences with their peers. I also had a xylophone with me, in case children wanted to “talk” about their music piece by performing directly on the xylophone. At first, all children were very interested about what their peers played individually the day before. I played the video recording on a TV monitor, and they attentively watched each other’s improvisation. After each child’s videotaped performance, I stopped the recording, and I was expecting the children to share their improvisation with the group, just like they do in their classrooms. However, the children did not speak much. Few children mentioned the names of the songs they recognized from their friends’ improvisation, but in general, the children preferred to play the instrument again, so they could continue with their own improvisation. I decided to stop the video, and confirmed whether they wanted to play more, back in the classroom. The children all answered, “Yes!”

Summary

The purpose of this study was to investigate if second-grade children could develop an improvisation on an Orff xylophone. An unfamiliar pentatonic scale folk song was introduced to children prior to the study. Five children developed a solo improvisation based on that song. A coding system was developed to identify the
performance levels by MENC performance standards. The results reported in this chapter informed the individual level differences, as well as their use of melodic and rhythmic patterns similar to other songs learned during the school year. Children who knew different combinations of melodies and rhythms, ranked a higher score in the MENC performance standards. Those who had limited performance skills or knowledge of other songs, ranked low. Regardless of their performance levels, all children recognized when there was a note that did not fit well in their melody, and they tried to fix it. All children were satisfied with the experience, and they were proud to experience the process of improvisation as well as the product (Kratus, 1991).

The study suggested that children who had rich learning environment were confident and creative during the process and the product of the improvisation (Kratus, 1991). Regardless of children’s levels and experiences in music, these second graders provided a unique result, blending a repertoire of multicultural songs and rhythms in their improvisation. In the next chapter, I discuss the implication of these findings in the current music education status in early childhood classrooms and present suggestions to future research in this area.
CHAPTER 5
DISCUSSIONS AND IMPLICATIONS

In the preceding pages, I have presented a case study investigating five children’s improvisation on a xylophone. In this chapter, I discuss how the findings from this study contribute to the literature on improvisation. First, I summarize the study to provide a context for the chapter. Second, I present the findings based on the three questions of this research. Finally, I suggest implications for teaching, and offer ideas for future research.

Summary of Study

This study originated from my own personal journey to find an appropriate learning environment to improvise, something I was passionate about. I was brought up in an artistic, but traditional Japanese family, and my experience with music was bitter, based on behaviorist, teacher-directed instruction. Improvisation was not something I could do under those circumstances, since it was considered as a meaningless form of distraction. After my long transforming journey from being a musician to an early childhood educator, I had an opportunity to work at a school in the Midwest, which served low-income children from three to eight years old. At this model school, I found that children participated in constructivist music curriculum, with a faculty who spent years exploring constructivist methods of teaching music in the classrooms. Children at the school had autonomy, creativity and passion for music. Together with this faculty mentor, I regained my interest in pursuing the dormant childhood memory within me, and I visited the classroom to teach and interact with the children. Soon later, I decided to conduct the study on children’s solo improvisation. The purpose of this study was to
investigate if second-grade children could develop an improvisation on an Orff xylophone.

Five African-American second-grade children were selected for this study. These five children were the total number of second-grade students in the class of combined first and second-grade level. The study was conducted over a period of three days. The goal for these three days were: (1) teach children how to play a Japanese folk tune, *Tulip Song*, by Takeshi Inoue on a xylophone; (2) videotape individual children as they improvise the *Tulip Song* into their own song; (3) interview children about their thought processes during their improvisation; and (4) provide children with an opportunity to reflect on their improvisation as a group. Data were collected using descriptive and reflective field notes, videotaping and semi-formal interviews. I analyzed the data by dividing them into two categories: process and product. For the product of improvisation, I developed a coding to analyze their performances. For the process of improvisation, I based my analysis on the semi-formal interviews collected after their performances.

**Findings**

Three research questions guided the study of improvisation on second-grade children. I present the findings based on these three questions.

1. Can second grade children develop improvisations on a song they have just learned?
2. What kind of improvisations do they develop?
3. Can second-grade children analyze their own improvisations? If so, how do they describe them?
The results of this study informed that all children could develop an improvisation regardless of their performance levels. Children, who had a repertoire of songs other than the original *Tulip Song*, demonstrated their ability to vary their improvisation, by integrating different patterns, rhythms or melody. One child could transpose, and play on a different key without altering the original melody. Another child played a medley of different songs, starting with the *Tulip Song*.

The study suggested that children who lived in a rich musical environment were creative in their improvisation. This supports the findings by Laczo (1981) who stated the importance of environment affecting the quality of improvisation; and is also consistent with the study by Kalmar and Balasko (1987), who developed the concept of *musical mother tongue*, defined as a musical material taught in school or children's environment. Children also demonstrated that they had problem-solving skills during the improvisation, addressing the issue of finding the right note to the ending. This is consistent with Freundlich's study (1978), which investigated the development of musical thinking by examining a child's spontaneous solution to a musical problem.

The process of children's improvisation, collected immediately after the performance and on the third day, did not demonstrate cohesiveness in any of the children. This seemed to be due to the natural act of spontaneous activity itself, where performers do not keep track of their step-by-step memory. Improvisation is a continuous act of creation, made by an unforeseen element, *and the act of playing* on the spot proved to be more of a priority to the children than reflecting on their product.
Implications

The findings discussed in the above section are based on the results of observations of five children in a low-income, ethnic population area in Midwest. The findings may not be representative of the second grade children in general and may not reflect the ethnic population. The findings provide guidance for the implications related to music tasks provided by researchers, and guidance for music teachers and non-music teachers at an early childhood level. The implications are drawn from the results of this study, the literature on improvisation, and my experiences being a musician, a preschool and kindergarten teacher, a preschool and a kindergarten director, a professional development trainer for teachers, and a graduate student inspired by an inquiry-based approach curriculum. I present the implications for researchers, and music or non-music teachers.

Implications for Researchers and Teachers

In finding the review of the literature, I encountered that music researchers conducted all studies related to music improvisation, and not early childhood researchers. The researchers were professors of universities teaching music for college students, or they were graduate students conducting a music study for their major in music. From my experience being a professional development trainer in early childhood environment, I have noticed that most core classroom teachers believe that music should be taught only by music professionals, and not by a classroom teacher. One implication of this for researchers in general, is that early childhood educators should also conduct studies in music, because the teachers in early childhood classes usually incorporate music
activities in their curriculum. I have seen that most children in the classrooms love music in some form, and early childhood educators should have support from the researchers in the same field to study the extent of children’s creativity through music. The implications for teachers are that classroom teachers should always offer music activities without fear and anxiety, in a classroom setting. Allowing children to explore different instruments introduced by teachers, and facilitating the process of music making during center time, provide extensive opportunities for both the children and the educator to learn from each other about music.

Suggestions for Future Research

This exploratory research project needs to be followed up with a larger study before reaching firm conclusions. As many researchers have mentioned, there is no single answer to what an improvisation should be or sound like. Results of this study suggest that improvisation does not need to be taught in a traditional way, and that when given a rich environment and an opportunity to learn, explore and participate, children can improvise even at different stages of performance levels. The child who has tried different patterns of improvisation in this study had a strong focus and passion to improvise in the classroom. Providing him with rich scaffolding, guidance and environment, produced a significant difference in his performance skills. Follow-up studies could be done in a reversed cultural situation, where children from a different culture could be asked to improvise on an Orff xylophone for the same amount of time, but based on an American, syncopated folk tune.
Another suggestion could be to provide the same task to a control group of at least 20 to 30 children who received traditional music education classes on how to improvise, contrasted with a group of children who would have little or no music instruction in improvisation. Intervening during the improvisation or forcing them to fit into the study tasks is not recommended, as it might depress the creativity of the children. Improvisation needs to be initiated and motivated from and by the children, and ended when the children are “done.” Limiting variables, but allowing ample time to explore and continue the improvisation, would be the keys to a successful study.

The satisfaction children obtained from this study, by creating their “own” solo improvisation, surpassed any obstacle they may have encountered in the process. It certainly indicated that creativity and inspiration need to be nurtured and motivated, rather than constrained by an unnecessary adult-initiated intervention. Exposure to a variety of songs, melodies, and rhythmic patterns could be important for the development of music skills. If children are offered many opportunities and a rich music environment, they may feel free to create and understand that music improvisation is an enjoyable process and that the product may happen with or without a strict foundation of music education. Scaffolding seems to be the key to a rich learning experience.

The current study is just the beginning. With continued research, music education could make a difference in how music is perceived in the classroom and in the area of early childhood education.
REFERENCES


APPENDIX A

MUSICAL TERMS MENTIONED IN THIS STUDY
### Vocabulary Used to Identify Participants' Improvisational Skills and Others

#### Vocabulary List in Alphabetical Order

<table>
<thead>
<tr>
<th>Vocabulary</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acciaccatura</td>
<td>Short grace note sounded together with the principal note or chord, but quickly released</td>
</tr>
<tr>
<td>Audiation</td>
<td>A term for hearing music in the mind with understanding</td>
</tr>
<tr>
<td>Bordun</td>
<td>An open 5th, generally played on Orff instruments on the first and fifth degree of the scale of the piece</td>
</tr>
<tr>
<td>Diatonic Scale</td>
<td>Of or using only the seven tones of a standard scale without chromatic alterations</td>
</tr>
<tr>
<td>Dotted Rhythm</td>
<td>Rhythms in which long notes alternate with one or more short ones</td>
</tr>
<tr>
<td>Mallet</td>
<td>Light hammer with a rounded head for striking a percussion instrument</td>
</tr>
<tr>
<td>Measure</td>
<td>Metric unit between two bars on the staff; a bar</td>
</tr>
<tr>
<td>Melodic Contour</td>
<td>Shape or an outline of the melodic line</td>
</tr>
<tr>
<td>Note</td>
<td>Fundamental tone of a musical sound as distinguished from its overtones</td>
</tr>
<tr>
<td>Ostinato</td>
<td>A motif or phrase which is persistently repeated in the same musical voice.</td>
</tr>
<tr>
<td>Passing Tone</td>
<td>Note that connects two consonant pitches by stepwise motion and usually occurs on a weak beat</td>
</tr>
<tr>
<td>Pentatonic Scale</td>
<td>Of or using only five tones, usually the first, second, third, fifth, and sixth tones of a diatonic scale</td>
</tr>
<tr>
<td>Rhythm</td>
<td>Regular recurrence of grouped strong and weak beats, or heavily and lightly accented tones, in alternation</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Scale</td>
<td>Series of tones arranged in a sequence of rising or falling pitches in accordance with any of various systems of intervals</td>
</tr>
<tr>
<td>Syncopation</td>
<td>Shift of accent in a passage or composition that occurs when a normally weak beat is stressed</td>
</tr>
<tr>
<td>Tempo</td>
<td>Speed at which music is or ought to be played, often indicated on written compositions by a descriptive or metronomic direction to the performer</td>
</tr>
<tr>
<td>Triplets</td>
<td>Rhythm played three notes in the space of two</td>
</tr>
<tr>
<td>Tone</td>
<td>Sound of distinct pitch, quality, and duration; a note; quality or character of sound</td>
</tr>
<tr>
<td>Transpose</td>
<td>To play music in a key or at a pitch level different from the one in which it is written</td>
</tr>
<tr>
<td>Trill</td>
<td>Rapid alternation of a given musical tone with the tone a diatonic second above it</td>
</tr>
<tr>
<td>Variation</td>
<td>Repetition of a theme or musical idea with changes or embellishments in harmony, rhythm, key, etc., especially any of a series of such repetitions developing a single theme</td>
</tr>
<tr>
<td>Orff xylophone</td>
<td>Percussion instrument developed by a German composer and educator, Carl Orff. The xylophone consists of a mounted row of removable wooden bars graduated in length to sound a diatonic scale, played with two mallets.</td>
</tr>
</tbody>
</table>

APPENDIX B

TULIP SONG
Tulip
Composed by Takeshi Inoue
APPENDIX C

PARTICIPANTS' INTERVIEW
Q1. Tell me about your song. How did you come up with the idea?
C: Well, I thought if I put *Twinkle, Twinkle* first (plays *Twinkle, Twinkle* on the xylophone).
R: I see. You included *Twinkle, Twinkle Little Star*.
C: (Nods head yes)
Q2: Did you have the idea before you played, or while you were playing?
C: While I was playing.
R: While you were playing you came up with *Twinkle*?
C: Yup.
Q3: How did you find the ending to your song?
C: ‘Cuz I thought it would be easier if it ended on G.
R: So you had to make up. Okay, so you ended up on that bar (points to G).
Q4: Does your song remind you of any other song(s) you have learned, played or heard before?
C: Yea, *Twinkle, Twinkle*.
R: (Nods head yes)
Q5: Did your song come out the way you wanted it to be?
C: (Nods head yes)
R: Okay.
Q6: What makes your song special or different than the original folk tune?
C: ‘Cuz I ended it with a different letter (meaning, key).
R: Because you ended on a different letter.

C: (Nods head yes)
**Q1:** Tell me about your song. How did you come up with the idea?

C: Mine? My song or...

R: Yeah, well the song that you were playing. Your song.

C: Well, I was thinking about like... (Plays the beginning of his song).

R: The beginning?

C: It was kind of beginning. Like match it. Like, like, like. (Plays in thirds, instead of describing)

R: Like playing with two notes, chords.

C: (Continues playing to demonstrate what he was doing. Looks up at S when finished)

R: Okay, like playing parallel.

C: Mm-hmm. (Nods head yes).

R: And you also used two mallets.

**Q2:** Did you have the idea before you played, or while you were playing?

C: I mean I had an idea before, it, it was like this (Plays on xylophone to demonstrate “original” idea, but different)

R: So that was the idea you had before?

C: Mm-hmm (Nods head yes).

R: And then you kept changing, right? While you were doing?

C: (Looks up at S). (Nods head yes).

**Q3:** How did you find the ending to your song? (if appropriate)
C: Mine, um, I just played, um. Watch somethin’. (Played notes on xylophone. Again, not similar to his improvisation) Like this.

R: And you finished showing your idea? Okay.

**Q4: Does your song remind you of any other song(s) you have learned, played, or heard before?**

C: Mine? (Doesn’t make eye contact, but looks at floor, then plays *Shabbat Shalom*)

R: I noticed *Shabbat Shalom*. Was there any other songs in your mind?

C: Yea (nods). Hm, like *Twinkle* did, too.

R: *Twinkle*? Okay.

C: Mm-hmm. It go. (Demonstrates transposing from C to G, but stops and looks frustrated) No, it’s these like- (he plays again). No.

R: Oh, when, mm, okay, when you go from C to G.

C: (Continues playing. Shakes head) No.

**Q5: Did your song come out the way you wanted it to be?**

C: Yes, I know which one I want now. (inaudible)

**Q6: What makes your song special or different than the original folk tune?**

C: Mine? (looks up at S confused)

R: The original one is the one that I taught you yesterday. What makes yours special, like yours?

C: Mine, mine cuz it um… (looks at xylophone) cuz… hmmm (plays). Can you ask me the question again so I don’t forget.

R: The original one is the one that I taught you yesterday. What makes yours special, like yours?

C: Um, mine is special because I put a lot of work into it.

R: You put a lot of work into it, you certainly did. Thank you, Juwan.
R: Okay, I’m going to ask you some questions. Do you know how many songs you played?

C: (Shakes head no).

R: You played a lot. Like nonstop. First you began with that, um, folk tune I taught you yesterday. Right? It went like (sings folk tune). And I think you went to Shari’s Song. Right? And then you played I’m a Little Teapot. And then you played Twinkle, Twinkle Little Star. Then you played Hot Cross Buns. You went back to the I’m a Little Teapot again. And then you improvised the I’m a Little Teapot. And then you played Noah’s Ark (Who Build the Ark?), Twinkle, Twinkle Little Star, then you went to play Shari’s Song, and then you played Twinkle, Twinkle Little Star again, then I’m a Little Teapot one more time. And then you played the Donkey Song. What was that…?

C: Sweetly Sings the Donkey.

R: That’s right.

C: But you don’t know that…. (Plays Busta Rhyme on xylophone).

R: Yeah, and you played that too.

C: It’s called … (pause)

R: How’s it called?

C: Busta Rhyme.

R: Busta Rhyme. And then you played Noah’s Ark (Who Build the Ark?), again.

Q1: Tell me about your song. How did you come up with the idea?

C: Didn’t play them, just came.

R: So you just played – so it just came up in your mind?

C: Mm-hmm.

Q2: Did you have the idea before you played, or while you were playing?
C: Came along.
R: Came along, yeah.

Q3: How did you find the ending to your song?
C: Made up one (shrugs shoulders).
R: You just made up one? Good.

Q4: Does your song remind you of any other song(s) you have learned, played, or heard before? (Not asked)

Q5: Did you song come out the way you wanted it to be?
C: (Nods head yes)
R: Yeah.

Q6: What makes your song special or different than the original folk tune?
C: Cuz I kind of mixed 'em up.
R: Ah, you mixed them up.

C: 'Cuz I played the first beginning of Twinkle, Twinkle Little Star and then Shari's Song. I played the first part of Twinkle, first part of Shari's Song, first part Busta Rhyme, and then first part Who Built the Ark, but it kept going. But I changed the notes, like when I was playing F. When I was playin' Who Built the Ark, then I changed it into EEEECCAGAG and then I kept going like that. Changing the notes going up. (Plays on xylophone)

R: Yeah, yeah. Wow. That is great. Thank you Shamia.
Q1: Tell me about your song. How did you come up with the idea?

C: I just played this a lot of times, and I, and I thought that if I added more, more, um… (Looks down)

R: Keys. More bars?

C: Keys, keys. It would sound much better.

R: So you started with these ones (points) and then you went here (points) because it sounded better. And I also noticed you used both mallets on certain parts. You used two mallets, right?

C: Yes I did. (Demonstrates by playing with both mallets, but not hitting two notes)

Q2: Did you have the idea before you played, or while you were playing?

C: While I was playing.

R: While you were playing.

C: I wanted to change it up a little bit.

R: Yeah, that was nice.

Q3: How did you find the ending to your song? I said you can start finishing up and you ended on F. How did you know that was the ending note?

C: Because I was thinking it, of it, while I was playing the whole song.

R: Really? Yeah?

Q4: Does your song remind you of any other song(s) you have learned, played, or heard before?

C: Like Shari's Song.

R: Shari's song.
C: I mixed it up with my song.

R: You mixed it up.

C: (Nods head yes). Yes.

R: That was really nice.

Q5: Did your song come out the way you wanted it to be?

C: (Nods head yes).

Q6: What makes your song special or different than the original folk tune?

C: (Looks around room – unsure).

R: Remember how the original was like (hums notes of original folk tune). And you changed.

C: Like this? (Plays Tulip Song on xylophone).

R: And what makes it special?

C: I don’t know. (Shrugs shoulders)

R: You don’t know.

C: Yeah.
Q1: Tell me about your song. How did you come up with the idea?
C: I just put, I was just using these instead of using the same, um, same letters as Shari’s Song.
R: So you added the rhythm?
C: Mm-hmm.
Q2: Did you have the idea before you played, or while you were playing?
C: Um... while I was playing.
R: While you were playing. So it just came to you while you were playing.
C: (Nods head yes).
R: Oh.
Q3: How did you find the ending to your song?
C: Um, by doing the ending of Shari’s Song, but with different letter, like...
(Demonstrates on xylophone)
R: Can you show, can you play the whole thing?
C: (Plays on xylophone).
R: I see, so you put two together and ended on F.
Q4: So this song reminds you of Shari’s Song. Any other songs besides Shari’s Song?
C: Umm... (Plays on xylophone). I don’t know. (Shakes head no/ looks confused)
R: Just Shari’s Song? That’s fine.
Q5: Did your song come out the way you wanted it to be?
C: Yeah.
R: I thought it was very nice.

Q6: What makes your song special or different than the original folk tune?

C: Like Shari’s.

R: Like Shari’s. So it feels special.

C: Nods head yes.

R: Okay, all right. Thank you very much. You did a great job.
APPENDIX D

CONSENT FORM
Dear Parents,

Your child has been invited to participate in a research project conducted through the University of Northern Iowa. The study was approved by your child’s teacher, Beth Van Meeteren, and by Jeffrey Sales, Freeburg School’s director. The University requires that you give your signed agreement for your child to participate in this project. The following information is provided to help you make an informed decision whether or not to let your child participate.

The primary purpose of this research is to examine the development of children’s spontaneous music improvisations based on constructivist methods of teaching and analysis. I have been conducting music activities in your child’s class for the past two years, and I would like to do a study on your child’s musical activity involving improvisation using a xylophone. Your child is familiar with the procedure, as I regularly implement the improvisation activities during your child’s weekly music class. The result should be an enjoyable learning experience for your child, as children and I will share each individual improvisation as a group. I do not anticipate any discomfort or risks for the study, and all information obtained during the study will be kept strictly confidential. Only your child’s first name, age, and grade in school will be recorded. The summarized findings may be published in an academic journal or presented at a scholarly conference.

I expect that your child will benefit by being engaged in musical tasks designed to enhance individual improvisation and your child’s enjoyment of music. However, your child’s participation is completely voluntary. He or she is free to withdraw from participation at any time or to choose not to participate at all, and by doing so, your child will not be penalized or lose benefits to which he or she is otherwise entitled.

If you have any questions about the study, please feel free to contact Akiko Yoshizawa at (123) 456-7890 or via email at abc@uni.edu. You can also contact the project investigator’s faculty advisor, Dr. Linda Fitzgerald, at the Department of Curriculum and Instruction, University of Northern Iowa at (123) 456-7890. You can also contact the office of the Human Participants Coordinator, University of Northern Iowa, at 123-456-7890, for answers to questions about rights of research participants and the participant review process.
Please return one signed copy to your child's teacher. The second copy is yours to keep.

Thank you very much for your time.

Akiko Yoshizawa  
Graduate Assistant  
Dept. of Curriculum and Instruction  
University of Northern Iowa

Agreement:

I am fully aware of the nature and extent of my child's participation in this project as stated above and the possible risks arising from it. I hereby agree to allow my son/daughter to participate in this project. I have received a copy of this form.

(Signature of parent/legal guardian)  (Date)

(Printed name of parent/legal guardian)

(Printed name of child participant)

(Signature of investigator)  (Date)

(Signature of instructor/advisor)  (Date)