

ABSTRACT

Piano Curriculum: What Teachers are Using and How It Aligns with Jerome Bruner's Enactive, Iconic, and Symbolic Learning Theory

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The purpose of this study was to determine what order piano teachers of beginning students ages six to nine introduced musical concepts in the first year of study, what piano method books they were using and if the order the teachers were introducing the concepts aligned with the order the concepts were introduced in the piano method books. In addition, this study also looked at the three most commonly used method books to see if they aligned with Jerome Bruner's learning theory concerning enactive, iconic, and symbolic learning. The subjects of this study were 562 teachers who were members of Music Teachers National Association (MTNA) who each indicated that they taught beginning piano students ages six to nine. The teachers were asked to rank musical concepts in the order they introduced them in the first year of study and what piano method book they were currently using. The results of this study indicated the teachers' rankings of the concepts correlates significantly at the $p < .01$ level with the method books rankings. The analysis of the method books indicated the books use enactive and symbolic learning for all concepts but do not use iconic learning except for hand

positions, steps, and skips. Further research to determine exactly how teachers are using the piano method books in their private lesson studios is recommended.

Piano Curriculum: What Teachers Are Using and How It Aligns with Jerome Bruner's
Enactive, Iconic, and Symbolic Learning Theory

by

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DEDICATION

To my husband, Ed

without whose unconditional love and
support I could never have finished

To my daughter, Michal
and her husband, Nathan

who were my most vocal cheerleaders

To my son, Tres

who quietly showed me that
he never doubted I could finish this process

I love you all!

CHAPTER ONE

Introduction

Mankind has always created music. The lyrics of early songs are recorded in the Bible starting in Exodus 15:1 and instruments of various kinds were invented. One of the first keyboard instruments was the organ credited to Ctesibius in the third century B.C (Encyclopedia Britannica, n.d.). Instruction in how to play instruments of all kinds has evolved over time moving from apprentice models where students learned by watching the master without the use of a symbol system, to not only watching the master but learning how to read the musical symbol systems (Curwen, n.d.; Forkel, 1920; Reich, 1985/2001). The symbol systems used for documenting music have also undergone evolution from neumatic notation dating from the 9th century (Bent et al., 2012), to tablature beginning in the 14th century (Dart, Morehen, & Rastall, 2012), to shape notes in the 19th century to today's standardized system which began to be formalized in the 17th century and continued to evolve until the 19th century when the system stabilized into the form used today (Bent et al., 2012). The standardization of the musical symbol system allowed for the writing and dissemination of piano method books starting in the late 1900's (Curwen, n.d.; Thompspon, 1936; Bastien, 1976). Which method books are actually being used and how these method books are being used in the private piano studio has not been studied. It is essential to study what curriculum is being used in the private piano studio in order to further study its effectiveness and investigate whether private piano teachers are being reflective about the processes of teaching piano and the

processes of learning piano. There is so much that has been learned about how people gain knowledge; thus it is important to consider its application to piano teaching much as it has been applied to other subjects.

Today, many Americans believe that being able to play an instrument, or at least having a basic understanding of how it is done, is essential to being a well-rounded person. This is evident by the national and state government including the arts as part of the core curriculum (Texas Education Code, 2007; U.S. Department of Education, 2009), and the ready availability of private music lessons of many different instruments in most cities and towns. The Music Teachers National Association (MTNA), a national, professional organization which seeks to support the careers and professionalism of music teachers, reports a membership of approximately 24,000 teachers of different instruments at various levels from beginners to college professors (Music Teachers National Association, 2012a). The problem is that there is no standardized way to teach music, and there is no set of standards for private piano teachers to follow. Based on the researcher's online searches and music store searches, there are approximately 70 piano method books in print available for sale. Music lessons, particularly private instrumental lessons, generally follow a master/apprentice model, this model will be explained in more detail later in the chapter, where the teacher is the master and shows the student, the apprentice, what to do and how to do it and the student is expected to follow the model. There is very little research to show if this way of teaching piano is effective, if the method books being used are effective, and if any learning theories have been applied to the teaching of piano. This study will use the lens of Jerome Bruner's enactive, iconic, and symbolic learning theory to examine its application to piano methods books. Jerome

Bruner has been an active learning theorist since the 1960's and has influenced how teachers teach in the public schools. His learning theory encompasses other ideas including teaching with cultural context, meaning is constructed by the student, and teaching holistically. This lens was chosen by the researcher because of the lack of application of Bruner's learning theory to piano study.

Because there appears to be an interest in music education, both in the classroom and in the private studio, and because the research on the materials used in these settings is limited, the remainder of this chapter provides a brief history of piano pedagogy and current approaches to teaching piano. It also briefly introduces Jerome Bruner's learning theory, introduces research in music education, and provides the significance of this study, a statement of the problem, and the purposes of the study.

History of Piano Method Books

Early in the era of printed material, books on how to teach the available keyboard instruments such as the clavichord and the harpsichord began to be published. As the keyboard evolved, so did the teaching techniques. The first books concerned the organ, harpsichord, and clavichord, all forerunners of the modern piano, which was not invented until 1700 (Ripin et al., 2012). Early books emphasized hand position, composition, improvisation, transposition, and accompanying chorales (Uszler et al., 1991/2000).

Beginning in the late 1700s and continuing throughout the 1800s, numerous pedagogical books intended to help teachers teach their students were published in the form of essays and books on what is termed *technique*. Keyboard technique includes how one should sit at the keyboard, how to hold the hands over the keyboard, and how to use the fingers, arms, and body when playing the keyboard. One of the earliest piano

method books written specifically for beginning children was the *Child Pianist* published in 1886 by Annie Jessie Curwen. Following Mrs. Curwen's book was the *Oxford Piano Course* published in 1928, W.S.B. Mathew's *Standard Graded Course of Studies* method in 1892, and John M. Williams' *First Year at the Piano* in 1924. Piano books continued to be published through the 1900's and into the 21st century.

Piano pedagogy has evolved over the last 300 years. Teaching has moved from strictly repeating what the master played, to learning to read music symbols. Music symbols have evolved and become standardized worldwide. Books have evolved from essays and books solely on technique to books on how to teach and books specifically for the student. Nearly all of the method books published in the 1900s are geared to children ages six to nine. These books have settled into two basic approaches: those which start students on-the-staff, on the white keys, and generally in Middle-C Position, and those which start students off-the-staff, on the black keys and in either Middle-C position or C-position. The following section gives more information on the current approaches to teaching piano.

Approaches to Teaching Piano

There is no standardized approach or method to teaching piano to beginning students. A number of books give instruction for private lessons and for group lessons (Bastien, 1973/1988; Coats, 2006; Fisher, 2010; Lyke, Enoch, & Haydon, 1977/1996; Mehr, 1965; Uszler et al., 1991/2000). There are books to help teachers with young beginners, older beginners, and adults (Allen, 1983; Friedman, 1979; Jacobson, 2006; Last, 1972/2002), and there are books on how to teach piano as part of the public school general music classroom (Anderson & Lawrence, 2007; Schelling et al., 1928). Private

lessons usually involve a single student with a teacher having a one-on-one lesson, usually once a week. Group lessons involve more than one student having a lesson with a single teacher, again, usually once a week. Group classes are generally held with fewer than 10 students (Boyce, 2012; Charlotte Academy of Music, 2012). Most students generally take either private or group lessons but there are teachers who require their students do both. This approach allows a teacher to present material to the group and then refine what a student did not understand in the private lesson (Amble Music Academy, 2012)

Within the private studio, there are several approaches to teaching piano. Among these approaches are traditional and nontraditional including Suzuki (Bastien, 1973/1988; Bigler & Lloyd-Watts, 1979; Uszler et al., 1991/2000). The traditional approach involves teaching students how to read music, giving them an understanding of how scales, chords, and harmonies fit together; showing students how to listen and recognize whether what they see on the page is what they are playing, how to use good technique, and how to perform successfully. In this approach, reading music is the most important aspect (Bastien, 1976; Faber & Faber, 1993; Noona & Noona, 1988; Thomspson, 1936). All aspects of the traditional approach are intended to lead to the musical performance of pieces. Teachers using this approach often have yearly recitals, have their students take state theory tests and perform in festivals where their playing is critiqued (Music Teachers' Association of California, 2012; Music Teachers National Association, 2012b; New York Music Teachers Association, 2012; Texas Music Teachers Association, 2011). This approach incorporates most printed methods regardless of whether the method begins the students on or off the staff, and regardless of beginning hand position. Also in

this approach, parental involvement is determined by the individual teachers and parents are not necessarily required to attend lessons or supervise practice sessions outside of the lesson. The researcher is familiar with the traditional method of teaching based on 27 years of teaching private lessons, being the administrator for a Fine Arts Academy and overseeing 16 piano teachers. All the teachers of the Fine Arts Academy were using the traditional method. The researcher also belonged to the Texas Music Teachers Association (TMTA) and the Music Teachers National Association (MTNA), and her students participated in yearly festivals, recitals, and theory tests.

According to Bigler & Lloyd-Watts (1979), the Suzuki method was created by violinist Shin'ichi Suzuki (1898-1998). He began his work in Japan with young students on the violin in the 1930s. The Suzuki method seeks to teach music, regardless of instrument, in the same way children learn their mother tongue. Suzuki believed that if children were surrounded by musical sounds the same way they were surrounded by the speech of their parents, they would develop their musical abilities to the same degree they do their mother tongue. Teachers using this method teach the students to play by ear, copying what the teacher plays. Students are expected to spend as much time listening as playing. Parents are as important as the teacher in this method; attending lessons, being loving and supportive of the student, and making sure the student listens and practices every day. Teachers are also to be loving and supportive of the student, encouraging all efforts. Music reading is taught after the student is fairly proficient in playing the instrument.

The traditional method and Suzuki are just two methods of teaching piano (Bigler & Lloyd-Watts, 1979; Schelling et al., 1928). Several other approaches are available in

the United States through websites such as J. W. Pepper and Pender's Music Company (J W Pepper & Son, 2012; Pender's Music Company, 2012). The Oxford Piano Course calls their method the *Song Method* and has students sing a song before playing and playing by rote before learning note reading (Schelling et al., 1928). This is similar to the method used by Clara Schumann in the middle 1800s (Reich, 1985/2001) as well as the Suzuki method used today (Bigler & Lloyd-Watts, 1979). An additional method is mentioned in Huang's (2007) dissertation *Preschool Piano Methods and Developmentally Appropriate Practice* which is called the whole body approach. This is specifically for preschool students and incorporates movement such as marching and dancing into the piano lessons as well as learning standard notation at a slow pace. This is similar to what is known about the Curwen method from the late 1800s that encourages movement, singing, and learning to read music before learning to play an instrument (Curwen, n.d.). One final method is called the Multikey Approach. In this approach, students are taught to play the 12 five-finger patterns on the keyboard. Robert Pace's (1961) *Music for Piano* was one of the first to use this method. This approach also emphasizes directional music reading and the use of chords from very early in the process of learning to play the piano (Bastien, 1973/1988; Uszler et al., 1991/2000).

The purpose of all piano method books is to teach a student to play the piano. Included in learning how to play the piano is to understand musical concepts and how to read standardized music symbols. The way each method book introduces concepts and guides the student to the necessary knowledge of reading music and playing the piano varies. While the traditional methods seek to teach students to read music, there is much variation on how this is done. Whether a book starts students with the whole of the

musical staff or no staff, on the white keys or the black keys, in C Position or no particular position, the product is intended for the student to be able to read music and play the piano. How the composers who wrote these method books decided what to put in their individual method books is unknown. Did any of these composers use a learning theory or were they simply putting down what they did in their own studios? Perhaps there were other reasons for why the books progress in the order they do. Perhaps there is a need to look at the current piano method books through the lens of a learning theory.

Conceptual Framework

In the above mentioned approaches and books which give instruction on piano pedagogy, there is little information given on learning theories that support them. Bastien (1973/1988) and Agay et al. (1981) make no mention of learning theories in their teaching books. Fisher (2010) has a short chapter that introduces learning styles and constructivism along with a few resources; however, there is no application to the piano studio. Lyke et al. (1977/1996) have a chapter on child development but again no application. Uzler et al. (1991/2000) have a chapter which surveys many learning theories but does not detail how to use the learning theories in teaching piano; it simply introduces them. There is then a need to apply learning theory to the approaches currently used to teach beginning piano.

While there are numerous learning theories available, the researcher has chosen Jerome Bruner's (1966a) learning theory which says people learn enactively, iconically, and symbolically. The researcher chose this learning theory because in learning an instrument, a student always learns through action because it requires action to play an instrument. The student also always learns through symbols because learning to read

music is learning a new symbol system. The researcher is interested in finding out if piano curriculum makes use of iconic learning. Do the method books also incorporate icons in the teaching of piano? Because of the researcher's experience in the elementary classroom and her training in the Orff and Kodály methods of teaching music in the elementary classroom, she knows that in those methods, iconic teaching and learning are incorporated. Thus, the interest in determining if iconic learning is evident in piano method books.

Jerome Bruner (1964) posited that humans process the world around them in three ways; through action, imagery, and language. He termed these ways of learning 1) enactive, 2) iconic, and 3) symbolic. He believed children learned in this order, first by doing, then by pictures, and lastly through symbolic systems. He included the use of language in the symbolic systems category. Each type of learning builds on the one which comes before (Bruner, 1964). Bruner states this quite clearly:

At first the child's world is known to him principally by the habitual actions he uses for coping with it. In time there is added a technique of representation through imagery that is relatively free of action. Gradually there is added a new and powerful method of translating action and image into language, providing still a third system of representation. Each of the three modes of representation – enactive, ikonic (sic), and symbolic – has its unique way of representing events. (Bruner, 1966b, p. 1)

Enactive is not just doing something one time, but learning and then knowing and understanding something through the action which is done over and over. A person can have knowledge of a knot by tying the knot enough times that he does not have to think about it. His muscles, and therefore his mind, understand or *know* the knot because he has tied the knot. Iconic is learning things through pictures. Icons look like the item they represent. A child knows an apple from the picture because before the picture was

presented, the child had experiences with the apple. Symbols are codes to be learned with language being the first code most children learn. Symbols do not look like what they represent. A picture of an apple looks like an apple; however, the word *apple* is not round or red and does not look like an apple, whether it is spoken or written. Children must learn the code in order to use it in learning about the world around them. Symbols allow the child to move beyond what he can see, touch, and hear and learn abstract ideas in ways action and icons cannot (Bruner, 1966a).

Bruner originally believed that each method was a parallel way of learning, was developmental and only overlapped as a child moved from one to the next (Bruner, 1966a); however, this is no longer believed to be true. Bruner's (1996b) more recent writings reveal that he has changed his mind somewhat on these three methods of learning. In his writings, he uses the words *knowing*, *representing*, and *learning* when talking about enactive, iconic, and symbolic learning (Bruner, 1966a; Bruner, 1996b). For the purposes of this paper, the word *learning* will be used instead of *knowing* or *representing*. In Bruner's (1996a, 1996b) later writings, he continues to believe that there are three ways of learning but that these methods are not necessarily developmental. In other words, while children do learn first by action, then picture, then symbol when they are very young, they do not stop learning by action and picture just because they can use and understand a symbol system. Bruner (1996b) now believes enactive learning is a means to an end; there is an end purpose in mind. Iconic learning is important because pictures can capture events and objects and become prototypes or benchmarks for symbolic learning. Symbolic learning continues to be the end of the spectrum but Bruner (1996b) feels students have greater understanding when the three work in concert.

There has been some application of these three modes of learning to music. Schmitt (1971) uses Bruner's ideas to emphasize that children do not think like adults, and teachers must adapt their teaching to the way children think. Eunice Boardman (2001) encouraged music teachers to generate their own, individual music learning theory based on Bruner's writings. She took Bruner's theory and created a four-part template for other music teachers to follow. The four parts of her template are: "construction of musical meaning in musical learning, music must be experienced holistically for musical learning to occur, social-cultural context are where musical learning occurs, and music is a unique mode of representation" (Boardman, 2001, p. 52-53). This is not an exact or parallel application of the enactive, iconic, symbolic part of Bruner's (1966a) theory but more of an application of the whole of his work. There has been little research done on piano curricula, and what little has been done does not look through a learning theory lens. This study looked at the most used piano methods as determined by the participating teachers through the lens of Bruner's (1966a) enactive, iconic, and symbolic learning theory because the researcher has noticed in her 27 years as a piano teacher that enactive and symbolic learning in piano study are already evident in the method books she used. Additionally, iconic learning is present in music education classrooms which use Kodály and/or Orff methods thus the researcher wanted to determine if iconic learning is evident in the current piano method books. Because the researcher also taught public school music and is Orff certified, she used iconic learning in her classroom and also in her private studio even though iconic learning was not evident in the method book she was using. The researcher wanted to determine if the method books used most by the

participating teachers also do not include iconic learning and how other piano teachers teach piano.

Relevant Research

Research in music education has concentrated on the people involved in the music classroom or the private lesson studio; either the teacher or the student, with very little research on piano curriculum. Therefore the researcher has gone outside the piano studio to find research which might be considered relevant. What research is available in the area of piano teaching has concentrated on the teacher and the student. Teacher behavior is the area most researched in the classroom and the private studio. Classroom situations include both general music and groups such as band, orchestra, and choir. This research includes studies by Duke and Henninger (2002) concerning physical behavior as well as verbal instructions and verbal approval or disapproval of student behavior and performance. Within the private lesson studio, Benson and Fung (2004), Costa-Giomi, Flowers, and Sasaki (2005), and Kostka (1984) have all done research reporting the teacher behaviors associated with students continuing lessons or discontinuing lessons. These studies concluded that younger children need more encouragement from teachers (Kostka, 1984), and observers of private lessons perceived the lessons in a positive light regardless of whether verbal correction by the teacher was voiced positively or negatively (Duke & Henninger, 2002). The study also concluded that teacher behavior was consistent between students who were successful and students who were not successful (Benson & Fung, 2004; Costa-Giomi et al., 2005).

Student behavior is another area studied by researchers. Costa-Giomi (2004), Costa-Giomi et al. (2005), and Pitts, Davidson, and McPherson (2000) focused on

intrinsic and extrinsic motivation, and the behaviors that indicated whether a student would drop out or continue lessons. Other studies on student behavior researched parental involvement and motivation as it applied to student behaviors. Rife, Shnek, Lauby, and Lapidus (2001) and Pitts et al. (2000) concluded that students who wanted to take lessons and were supported by their parents tended to continue taking lessons longer than those who did not want to take lessons and were not supported by their parents.

Practice behavior is another aspect which can be categorized as student behavior. In private music lessons, the teacher generally sees the student once a week and then the student is expected to practice independently until the next lesson. The amount of time a student practices is usually determined by age and level of proficiency. Several studies included independent practice as a variable in their research, but did not specify exactly how much time or the specific practice behaviors (Rife et al., 2001; Pitts et al., 2000). Duke, Simmons, and Cash (2009) as well as Lee (2010) conducted studies that reported specific practice behaviors and noted that the practice strategies of the best pianists were not evident in the less-skilled pianists, and the length of practice was not as important as what happened during practice. In both studies, the subjects were college students and not beginning piano students.

One additional area of research concerned student performance. Cash (2009) sought to discover if rest periods helped students remember music more efficiently. Frewen (2010) found that students who were familiar with a melody performed the music better than students who did not previously know the melody. In both cases, while performance was part of the study, actual student achievement was not.

There is limited research in student achievement. Many of the studies on student behavior used student achievement to determine whether a particular behavior was effective or ineffective. Duke (1999-2000) conducted a meta-analysis of the research on instructional effectiveness in music research. He compiled the information from 86 studies and found that only 13 included student achievement as a variable in determining instructional effectiveness. He noted that effectiveness was a difficult term to operationalize, and that it was not defined the same way in all the studies. Effectiveness of method was not included in any of the studies reported in Duke's (1999-2000) meta-analysis.

In the past few years, several dissertations have researched effectiveness of method. Kim (2000) sought to provide a method for comprehensive musicianship for college-level piano classes based on the *Robert Pace* method. The researcher found that peer interaction, additional time on a piece with less redundancy, and problem-solving helped students get a broader foundation of historical knowledge and better cognitive/analytical skills. Huang (2007) sought to determine the effectiveness of preschool methods currently in print and whether they followed developmentally appropriate teaching practices for preschool children. The researcher concluded that preschool piano methods fell into two categories: traditional and whole body. The traditional method emphasized reading music and understanding of symbols which preschool students are not developmentally ready to understand. The whole body method sought to teach music to the child following the child's natural development including singing, body movement, and introducing music symbols and music reading at a slower pace than the introduction of music symbols to older children. The whole body method

also used familiar songs, which supports the research done by Frewen (2010) who found that students played songs more accurately when they were familiar with the tune before they learned to read the music.

Previous research informs teachers about behavior and about methods used for very young beginners but does not address the curriculum or method books being used by the group of students who are most likely to be beginner students ages six to nine. This previous research does not seek to determine how the teachers are using the available method books in their private studios. Most of the previous research investigates the interactions of the teacher with the student and the student with the teacher (Duke & Henninger, 2002; Costa-Gioma, 2004; Henninger, 2002) and not the teacher or the student with the method book. Much of the previous research also targets students who are not members of the age group at which most students begin piano lessons, instead looking at either younger or older students (Duke, Simmons, & Cash, 2009; Huang, 2007). MTNA recommends students begin piano lessons in the first grade (Music Teachers, 2006). The majority of beginning piano students, based on the researcher's experience, are between first and third grade which is ages six to nine. Because this age group has not been the subject of much of the research in music education, this reinforces the need for research to be done on the curriculum, which is being used the most with this age group.

Significance of the Study

Because of the lack of research on piano methods currently available, overarching questions remain unanswered. Are current piano teaching methods effective? Are piano teachers teaching effectively and in the best ways based on what is known about how

children learn? Are the materials themselves effective or could they be better? Is there a better way to teach piano? In addition to this lack of research, the numerous method books and *how to teach* books are at times at odds with each other. Some books such as John Thompson (1936) and Michael Aaron (1946/1974) have students reading music symbols from the very first lesson. Others such as Bastien (1976) and Faber and Faber (1993) do not have students reading on the staff for several months. Should these be reconciled and one method be used or is it acceptable to tailor lessons and methods to the individual student?

Additionally, there is no set of Standards for private piano study like there is for public school music teachers, nor is there a standard curriculum for private piano study. There is no research into whether private piano teachers are being reflective in their teaching and working to improve their teaching and the learning of their students. There is also little research connecting learning theory to private piano study. This raises questions such as who would write a set of Standards for private piano study? How could teachers learn to be reflective in their teaching? How can learning theories be applied to the private piano studio? All these questions and many more could be asked but in order to start to ask these questions the answers to some very basic questions must be determined first.

The significance of this study is that it is a doorway to a beginning look at what is currently printed and what teachers teach in the first year of piano study. The methods in question are the ones used by piano teachers with students, age six to nine, in the first year of piano study. This age was chosen based on the literature available and is

explained in more detail in Chapter 3 (Agay et al., 1981; Bastien, 1973/1988; Music Teachers National Association, 2006; Uszler et al., 1991/2000).

Statement of Problem and Purposes

The big question is: why do piano teachers do what they do in teaching private piano lessons? A second big question is: how effective are the methods being used in the private piano studio? To answer these larger questions, smaller questions of what is currently being done in the private piano studio must be answered. It is unclear if piano teachers of beginning students ages six to nine follow the currently available method books as they are written or do these teachers follow their own curriculum in the introduction of musical concepts. It is unknown if the currently available method books introduce musical concepts in the same order. It is unexplored whether the order in which musical concepts are introduced align with what is currently known about how children learn. Therefore, the purpose of this study was to determine what order piano teachers introduce musical concepts in the first year of study, and whether the teachers' orders align with the most widely used method books. Once it was determined what method books are being used and what concepts are being introduced in the first year of piano study, Jerome Bruner's (1966a) enactive, iconic, and symbolic learning theory was the lens used to determine if these method books align with his theory. This learning theory was chosen because enactive and symbolic learning are always present when a student is learning to play the piano and to read music. It is unknown if iconic learning is present in the private piano studio.

Research Questions

The purpose of this study was to determine what order piano teachers introduce musical concepts in the first year of study to beginning students ages six to nine, and whether these teachers follow the same order of concept introduction used in the most widely used method books. Secondly, this study used Jerome Bruner's (1966a) enactive, iconic, symbolic learning theory as a lens to determine if the concepts as introduced in the method books are introduced using none, one, or all of Bruner's modes of learning.

The research questions guiding this study were:

1. In what order do piano teachers of beginning students ages six to nine introduce musical concepts in the first year of study?
2. What piano method books are used most often by the participating teachers?
3. What order are musical concepts introduced by the method books most used by the participating teachers?
4. Does the teachers' order of concept introduction align with the order of concept introduction in the most used methods?
5. What concepts in the most used methods use any, some, or all three modes of learning, enactive, iconic, and symbolic?

Glossary of Terms

Traditional Method – Piano methods which emphasize learning to play the piano and read music at the same time (Bastien, 1976; Thompspon, 1936; Uszler, Gordon, & Smith, 1991/2000).

Suzuki Method – Piano method where students learn to play the piano before learning to read music (Bigler & Lloyd-Watts, 1979)

Song Method – Piano method where students learn to sight sing and read music before learning to play the piano (Fletcher, 1947).

Piano Method – Piano method refers to the books used by piano teachers and students in the private piano studio. In this dissertation, piano method is considered the curriculum being used by the participants in their private piano studios. *Method* is being used because many of the books listed by the participants use the word method to describe themselves.

Enactive Learning – Learning which occurs through action. The student performs an action until they understand the concept (Bruner, 1964).

Iconic Learning – Learning which occurs through pictures. Pictures look like what they represent and the introduction of pictures leads to learning (Bruner, 1964).

Symbolic Learning – Learning which occurs through symbols. Symbols do not look like the concept or item they represent. Learning through symbols, such as written language, requires the student to understand the symbols being used (Bruner, 1964)

CHAPTER TWO

Literature Review

As a piano teacher, the researcher realized that most piano teachers do not think about why they do what they do. Most of the researcher's associates simply use whatever book works best for them. Some of them attend conferences and seek to implement what they learn but often do not share this information with others. When piano teachers were asked informally why piano teachers tend to introduce the repeat sign in about the fifth lesson most answered because that is when the book they were using introduced it or maybe to make the songs longer. Local music teacher association meetings usually revolve around who is going to be in charge of theory tests and festivals, and when registration forms are due, but not why the teachers use the methods they use.

A search of what has been researched in music education uncovered many different areas which included the music education classroom (Gauthier & Dunn, 2004), the private lesson studio (Speer, 1994), and the university music school (Duke et al., 2009). Music education classroom research includes preschool students (Persellin, 2006), the general music classroom (Orman, 2002), band, choir, and orchestra (Conway, 2008; Pitts et al., 2000). Private lesson studio covers all instruments, not only piano students (Duke, 1999-2000; Duke & Henninger, 2002; Hewitt, 2005; Kennell, 2002). University music school research includes classes for music majors, non-music majors, and any degree which requires an arts or music credit. Research can focus on the student (Costa-Giomi et al., 2005), the teacher (Duke & Henninger, 2002), or the curriculum used

in the class or lesson (Huang, 2007). Research on students can focus on ability, achievement, practice techniques, or motivation (Duke, 1999-2000). Teachers are observed for behaviors which affect student performance, effectiveness, modeling, the kinds of instructions they give the students, and whether or not they fulfill all the national standards (Duke, 1999-2000; Persellin, 2006; Reimer, 2004). Materials can include method books (Thomas-Lee, 2003), if different types of notation help or hinder note reading (Rogers, 1996), the national standards (Orman, 2002), and pedagogy such as whole body for preschoolers (Huang, 2007) or the use of Orff and Kodály in the elementary classroom.

Research in beginning piano study often focuses on adult students. This may be because many university music schools such as those at Baylor University, University of Southern California, and Northwestern University offer beginning piano classes. This gives the university researcher easy access to a pool of beginning students in a required class to do their research. This may also be because it is easier to deal with adults than get all the permissions necessary to work with minors. It is also easier to control the environment at the university level rather than doing research with local piano teachers who are either teaching out of their homes or in local academies. There are also studies which look at beginning piano through the local school (Goddard, 2002; Koopman, 2002). While these studies may be helpful, they are not looking at the method books being used by local teachers in their studios with young beginning piano students.

The remainder of this chapter takes a brief look at the research currently in print in music education concerning the K-12 classroom, research on teacher behaviors, student behaviors, music reading, and methods of piano teaching. Because the research

on piano method books is scant, the researcher looked at research in music education in the K-12 classroom and in private studios of instruments other than piano. Music education in the public schools seeks to teach students the same concepts as private lessons such as reading music, playing an instrument, and music theory; therefore, research in these areas is included. Researchers have sought to determine why students continue to take lessons or stay in an ensemble or drop out. In this research, only a few learning theories have been applied to music study; however, both Piaget and Bruner have had some application. This chapter looks at the learning theories of Piaget and Bruner as they have been applied to music teaching. Piaget is included because Bruner bases much of his theory on Piaget. Bruner is the lens through which the researcher analyzed the method books used by the teachers. Studies which were done with university students are included but as much as possible, studies using elementary age students are emphasized.

History of Piano Method Books

Early in the era of printed material, books on how to teach the available keyboard instruments such as the clavichord and the harpsichord began to be published. As the keyboard evolved, so did the teaching techniques. The first books concerned the organ, harpsichord, and clavichord, all forerunners of the modern piano which was not invented until 1700 (Ripin et al., 2012). One of the earliest books was written by Girolamo Diruata titled *Il Transilvano* published in two parts in 1593 and 1609. An English edition published in 1984 is still available. This text was written as a conversation between a teacher and a student. It emphasized hand position, composition, improvisation, transposition, and accompanying chorales (Uszler et al., 1991/2000). A century later

other significant works were written by Francois Couperin (1668-1733), and Jean Philippe Rameau (1683-1764). Like the Diruata book, they emphasized technique, composition, and improvisation (Uszler et al., 1991/2000).

According to Uszler et al. (1991/2000), the Couperin and Rameau books discussed in the previous paragraph, were published during the lifetime of Johann Sebastian Bach. Bach not only played the organ for several different churches, but he maintained a private keyboard studio. One of his students was his son, Carl Philipp Emmanuel Bach, who wrote *Essay on the True Art of Playing Keyboard Instruments*. This was a lengthy work published in two parts in 1753 and 1762. The first part covered technique and performance practices while the second covered theory and composition (Uszler et al., 1991/2000). This work gives an insight into J. S. Bach's teaching style which started students with technical exercises, playing by repeating what Bach played without reading music, and creating accompaniments for chorale tunes. As students progressed, Bach added composition, having them create four-part harmony over figured bass and writing counterpoint. Bach was also noted for modeling for his students by standing behind them and playing over them (Forkel, 1920).

Beginning in the late 1700s and continuing throughout the 1800s, numerous pedagogical books intended to help teachers teach their students were published. These took the form of essays and books on what is termed *technique*. Keyboard technique includes how one should sit at the keyboard, how to hold the hands over the keyboard, and how to use the fingers, arms, and body when playing the keyboard. Books of exercises, several of which are still published today, contain scales, arpeggios, and musical patterns which when practiced are intended to help the student be able to play

musical pieces more quickly and more successfully (Czerny, 1893; Hanon, 1939; Herz, 1894/1939). Despite the number of books on how to play keyboard instruments, little was written for the beginner or for the teacher on how to start the beginner. The few books written for the beginner followed the material of the time being written as essays or books with a few exercises or etudes included within the text (Uszler et al., 1991/2000). It was assumed the teacher would know how to start a beginner, would give all the necessary instruction for reading the music, and would find the appropriate materials for his/her students.

One of the earliest piano method books written specifically for beginning children was the *Child Pianist* published in 1886 by Annie Jessie Curwen. These books were based on the piano lessons she was giving her own children. The books were for both teacher and student with music for the student and instructions for the teacher. In her preface to the 16th edition of her book, *The Teachers Guide to Mrs. Curwen's Pianoforte Method*, published around 1913, she wrote that before her publication, there was “nothing of the kind” for the piano teacher (Curwen, n.d., p. iii). Her method encouraged singing and learning note reading before learning the instrument. This way a student could give his/her attention to the symbols without being hindered by the manipulation of the instrument. It is unknown exactly how she started the students on the keyboard since the student books are no longer available, only the teacher's guide.

Around the time of Mrs. Curwen's books and following, piano methods began to fall into categories. Methods that started the students reading musical notation on the music staff, for the purposes of this study, are called *on-the-staff* methods. Methods which start students reading musical notation without putting the notes on the musical

staff are called *off-the-staff* methods. Methods also start students either on the white keys or the black keys. Additionally, methods differ in where on the keyboard students place their hands when they begin to play on the white keys. A *Middle-C Position* indicates the student places both thumbs on Middle C. Therefore, the right hand fingers cover Middle C, D, E, F, and G while the left hand covers Middle C, B, A, G, and F. A *C Position* indicates the right hand covers Middle C, D, E, F, and G as in the Middle C Position but the left hand now covers the same letter name keys an octave lower so the left hand little finger is on C and the rest of the hand covers D, E, F, and G with the thumb on G. Methods can use a combination of these categories but currently available printed materials often fall into two general types. The first includes methods starting students with on-the-staff, white keys, and generally using Middle-C Position (Aaron, 1946/1974; Thompson, 1936). The second includes methods starting students with off-the-staff, black keys, and use either Middle-C Position or C-Position (Bastien, 1976; Marlais, 2010).

Following Mrs. Curwen's book was the *Oxford Piano Course* published in 1928. As with the Curwen method, there was a teacher guide which accompanied the student books. This method also encouraged singing before playing. Music notation in the student books was introduced from the beginning with the grand staff, key signatures, and all notes and rests. Hand position in this method did not concentrate on either Middle-C Position or C Position but moved around the keyboard with each piece beginning with the fingers covering a different set of five notes each time (Schelling, Haake, Haake, & McConathy, 1928). *The Oxford Piano Course* is still in publication under the title *Piano Time* (Hall, 2004).

The above method books were published in England. In the United States, W.S.B. Mathew's *Standard Graded Course of Studies* method was published from 1892 to 1894 and predates Mrs. Curwen's method. According to Uszler et al. (1991/2000), Mathew's method was followed in 1924 by John M. Williams' *First Year at the Piano*. These were actual method books as we know them today. Published between these two methods were several books of simple melodies for use by beginners, including Dorothy Ganor Blakes' 1916 *Melody Book*, and the 1918 *Diller-Quaile First Solo Book*. These books were composed of simple melodies centering on Middle C and using both hands, precursors to the method printed by John Thompson in 1936. This is an on-the-staff, white key, Middle C method and is still in print today (Thompson, 1936). John Thompson's books were followed by those written by Schuam in 1945, Aaron in 1946, and Fletcher in 1947, all on-the-staff, white key, Middle C methods. In 1954 *The Robert Pace Piano Series* was published and was the first to start students on the black keys instead of the white keys (Fried, 1954). Following the Robert Pace series from 1954 to 1971, methods continued to be on-the-staff, white key, Middle C methods including a new John Thompson book (1955), *Step by Step* (Burnam, 1959), Mark Nevin Piano Course (1960), Belwin Piano Course (Weybright, 1964), *Stepping Stones to the Piano* (Richter, 1964), and the John Brimhall Method (1970).

In 1971, Robert Pace published another off-the-staff, black key method which was followed in 1976 by James Bastien's off-the-staff, black key method. The Bastien book was one of the first methods to not only start students on the black keys but also to start them in C position instead of Middle C position when they moved to the white keys. Bastien's book was followed in 1978 by *Music is for Everyone* (Gilbert, 1978) and

Alfred's Basic Piano Lesson books in 1981 (Palmer, Manus, & Lethco, 1981). These books also started students on the black keys but returned to starting them in Middle C position when they moved to the white keys.

Off-the-staff methods began to be published with more frequency in the late 1980s. Noona and Noona's method was published in 1988; Clark and Goss' *Music Tree* in 1993; Faber and Faber in 1993; Finn and Morris' *Beanstalks* method in 1998; Tournquist's method in 2006; and Marlais' method in 2010. While all of these are off-the-staff, black key methods, they are evenly divided between Middle C position and C position when students are moved to the white keys. In all cases, however, by the end of the first year, both positions have been introduced to the students on the keyboard and on the music staff.

There are a few methods which do not introduce hand positions to the students following the lead of the 1928 Oxford course. These include all incarnations of the Robert Pace series (Fried, 1954; Pace, 1971; Pace, 1994), *Key Explorer* (Duckworth, 1963), and all methods by Clark ending with *Music Tree* in 2000 (Clark & Goss, 1993; Clark & Perdew, 1981; Clark, Goss, & Holland, 2000). Another method which does not introduce hand position is the Suzuki method which does not introduce music reading at all until students reach a certain level of playing proficiency. Suzuki is a method of teaching instrument playing to young children which began in Japan with violin students, and has now added piano to the list of instruments using this method (Bigler & Lloyd-Watts, 1979).

This brief review of the history of piano pedagogy shows that the methods used to teach keyboard instruments have evolved over the last 300 years. Teaching has moved

from strictly repeating what the master played, to learning to read music symbols. Music symbols have evolved and become standardized worldwide. Books have evolved from essays and books solely on technique to books on how to teach and books specifically for the student. Nearly all of the books mentioned in earlier paragraphs and published in the 1900s are geared to children ages six to nine. These books have settled into two basic approaches: those which start students on-the-staff, on the white keys, and generally in Middle-C Position, and those which start students off-the-staff, on the black keys and in either Middle-C position or C-position. The following section gives more information on the current approaches to teaching piano.

Music Education K-12 Classroom and the National Standards

National Standards

The music education classroom seeks to teach music reading, instrument playing, singing, and music theory much the same as private piano instruction does. Music education includes every music class offered from kindergarten to 12th grade. This includes general music, band, choir, orchestra, theory, music history, and music appreciation. Unlike private piano instruction, there are standards which are available to guide instruction in the music education classroom. While these classes are not bound by standards set by the United States Department of Education, many states have set up standards based on the national standards introduced in June 1994 by the Music Educators National Conference (MENC) (2010). There are nine standards divided into two categories: active participation and thoughtful participation. The standards are divided as follows:

- Active participation
 - singing alone and with others
 - performing on instruments alone and with others
 - improvising melodies, variations and accompaniments
 - composing and arranging music
 - reading and notating music
- Thoughtful participation
 - listening to, analyzing and describing music
 - evaluating music, and musical performance
 - understanding relationships between music, the other arts, and other disciplines
 - understanding music in relation to history and culture (Music Educators National Conference, 2010)

While the standards are helpful in guiding instruction in music education, research has shown that most teachers do not teach all nine standards (Bell, 2003; Byo, 1999; Reimer, 2004; Tutt, 2007). This is an important finding because there is no national curriculum that follows the national standards.

There is also very little accountability for music teachers because music testing is not included in school ratings or school accountability. While music is considered a core subject, being part of the arts as listed in *Goals 2000* (Educate America Act, 1994) and *No Child Left Behind* (NCLB) (U.S. Department of Education, 2004), many schools do not offer music at all. Some schools offer a little music, often once a week in the elementary grades; other schools offer much more providing general music through high

school (Parsad & Spiegelman, 2012). Reimer (2004), one of the authors of the standards, noted he feels the United States has done a good job with standards concerning singing and playing instruments. He also notes he does not feel the other standards have been given the attention they deserve.

K-12 Classroom

One of the biggest issues in teaching the national standards in music goes beyond the lack of curriculum to the lack of teacher training in the standards. Research done in the area of teaching the standards notes teachers are simply not trained to teach all the standards. A study done by Byo (1999) looked at regular elementary classroom teachers who were responsible for teaching music content and specialized elementary music teachers to discover if the teachers perceived they were teaching to the standards. Byo's (1999) sample consisted of 122 elementary music teachers and 122 fourth-grade generalists. The questionnaire administered contained seven questions for each of the nine standards for a total of 63 questions. The questionnaire used a Likert scale with 1 - *strongly agree* and 5 - *strongly disagree*. The regular classroom teachers felt least able to teach the standards as many had little to no training in music at all and were unaware of the standards. She discovered the music teachers wanted to teach all the standards but felt some of the standards were beyond their comfort level and therefore they could not implement them effectively. An additional finding of this study was that both the music and generalist teachers cited limited resources and equipment as being another reason for not teaching all the standards.

Another study also found teachers felt some standards were difficult to implement because the content required by the standard was an area of weakness for the teacher or

the teacher had received no training in this area (Bell, 2003). This study used a graduate music education class for the sample of 14 certified music teachers. The class was specifically for certified music teachers to explore the national standards, investigate available resources, design teaching strategies and implement them into their classrooms during the course. The questionnaire was administered at the completion of the course and used open-ended questions and was analyzed looking for themes. The standards these teachers mentioned most often as being difficult to teach were the creative ones of arranging and composing. Additional themes which emerged were a lack of awareness of and exposure to the Standards before the course, attempts to make changes in teaching because of a new awareness of the standards, and attempts to incorporate the standards into the ensemble classroom.

Knowing what to teach, the standards, is one thing but how much time should be spent on each one? What are music teachers actually doing in their classrooms? Orman (2002) conducted a study to determine the amount of classroom time elementary music teachers spent on each standard. Thirty elementary music specialists were videotaped and the videos analyzed. The study divided classroom time into teacher time and student time. The teachers spent nearly half of their time talking and 20% of their time modeling for the students. The students spend 57% of their time listening to the teacher and less than 20% of their time singing, playing, or moving. The study did find that the elementary music teachers spent time on all nine standards, but spent much less time on the creative or artistic standards than singing and playing. An additional theme which emerged was that teachers felt their time was limited and created a challenge to teaching the standards (Orman, 2002).

Several studies look at the reasons for not teaching all nine standards (Bell, 2003; Byo, 1999; Tutt, 2007). This was especially true with performance groups. Tutt (2007) devoted an entire article to suggestions for choir, band, and orchestra directors to include non-performance standards into their rehearsal time without detracting from the upcoming performances of the group. The very existence of such an article reiterates the need for more time to teach the standards. The teachers in Bell's (2003) study requested more teaching time as did the teachers in Byo's (1999) study citing lack of time above lack of resources. Clearly, to teach the standards well, adequate time must be provided.

In addition, Henry (2005) determined that music teacher training and certification across the United States is not equal. Each state sets its own standards concerning what is required to become certified as a music teacher. Different content areas receive differing amounts of attention and training, the amount of time required varies, and the number of grades one is certified to teach varies. Most states offer an all-level certificate indicating a music teacher is qualified to teach any and all music classes from first grade through high school. About half the states offer all-level certification. Other states offer tiered certificates where a teacher can specialize in band or choir or elementary music. Thirty-four states issue provisional certificates for beginning teachers and all but five states have certificates which must be renewed. Being required to be competent in such diverse areas of music makes it difficult to be able to do all that is required proficiently.

One last issue in teaching the standards is the lack of resources. Resources include not only space, materials, instruments and time but also an adequate curriculum or a text that follows the curriculum. Bell's (2003) study, as noted earlier, looked at a group of music teachers taking a graduate level general music education class to improve

their teaching. In addition to noting lack of awareness and ability to teach some of the Standards, these teachers' responses showed that 43% did not have their own teaching space, 36% did not have adequate instruments or other supplies, 29% felt they did not have effective curriculum, and 14% lacked a district curriculum that supported the standards. This echoes the secondary findings of Byo (1999) which were explained earlier.

Connections to the Private Studio

While there are National Standards for public school K-12 music classrooms which apply regardless of whether the class is a kindergarten general music class or a high school ensemble, there are no set National Standards for piano studios. MTNA offers all kinds of services to teachers and students including insurance, professional development, competitions, and awards but no set curriculum. Like public schools, should there be or could there be a standard curriculum? Could such a curriculum be based on a learning theory? Would such a curriculum help students learn more effectively and perhaps desire to take lessons longer and become life-long musicians? Would such a curriculum help teachers teach more effectively?

The studies in the following section focus on teacher behaviors including verbalizations, actions, and effectiveness. Some of these studies were done in music education classrooms and others in private lesson settings. Because teachers make up half of the people involved in a private lesson, it would be good to look at what has been determined concerning teacher behavior in the music education classroom and the private studio.

Teacher Behavior

Teacher Verbalizations

Teachers often share their knowledge through verbalizations, what they say to the student during a class or a lesson that imparts new knowledge, explains the written materials, or seeks to help a student improve their musical performance. Several studies focused on how much time was spent in a lesson on different types of verbalizations as well as how much time the student participated in some fashion in the lesson (Benson & Fung, 2004; Duke & Henninger, 2002; Henninger, 2002). Sometimes these variables are combined in a study and sometimes they are looked at separately. Kostka (1984) did a study which counted the number of verbalizations and actions during a lesson. The students ranged in age from preschool to adults. Verbal approvals, reinforcements, and disapprovals were counted for both academic and social behaviors. The study found that teachers generally gave an equal number of approvals and disapprovals but that age was a factor. Younger children received more approvals than older children and adults. Reinforcements were reported as having occurred at a rate of one reinforcement per 33.44 sec of lesson time for elementary students, one per 41.18 sec of lesson time for adults and one per 42.16 sec of lesson time for secondary students. If approvals and reinforcements are added together, teachers are more positive than negative with their students. Disapprovals generally followed an interruption of the student's performance by the teacher to give instruction. In addition this study looked at how much time the teacher was giving instruction, either verbally or with modeling, and student participation. Overall, the time between instruction and participation was evenly divided and it was

noted that the older the student, the more time the student participated and the less time the teacher talked or modeled.

A similar study conducted by Speer (1994) focused on the verbalization by independent piano teachers and the response by the student to the verbalization. The students in this study were divided into two categories, under age 11 and over age 11. Verbalizations were divided into categories which included academic musical task presentation, directions, social task presentation, and comments to off task behaviors. The results indicated that the teachers spent about half of the time in each lesson giving the students a musical task presentation, such as modeling or coaching or giving directions. Less than 3% of the time was spent on off task behavior. The other half of the lesson was filled by student participation. Younger students received more musical instruction than older students. Older students participated, or played more, than younger students. An interesting finding was that all teachers gave more approvals than disapprovals. In addition, teachers with less experience gave more specific approvals and disapprovals than the more experienced teachers.

Another study on teacher verbalizations was conducted by Duke and Henninger (2002). They researched teacher feedback to private lesson students who were music education students and how those verbalizations were perceived by observers. Verbalizations were categorized as directive statements, which were considered positive, and verbal corrections, which were considered negative. The teachers were observed for two lessons, the first of which was a directive statement lesson where the teachers were to give all feedback in the form of a specific way to improve the playing. The second lesson was a verbal correction lesson where all feedback was to be given in the form of a

negative evaluation of the performance. Both the students and the observers felt both lessons were positive; there was no statistical difference between the positive verbalization lesson and the negative verbalization lesson. In addition, the students did not seem to notice the difference in the verbalizations of the teachers. The researchers felt this might be caused by the fact the teachers were all master teachers and other than the way the feedback was given, the lessons were full of opportunities for students to play again and correct errors.

The current study does not look at specific teacher behaviors, only what concepts and method books the teachers are using. What the teacher says to the student and how the teacher says it is important but does not address how the teacher is using the method book or other curriculum in the lesson. While these studies on teacher verbalizations are important, they also emphasize the need for research on the materials being used in the private piano studio.

Teacher Actions

Teachers do not just talk to students; they often model what they want the student to do. In a field where the sound is the goal, it is often easier to model for the student the desired outcome. Therefore, studies have focused on what teachers do during lessons in addition to what teachers say. Some of the studies in this section, while investigating teacher actions, also included teacher verbalizations. Therefore, because these studies were investigating more than just teacher verbalizations, they are included in this section. Henninger, Flowers, and Council (2006) focused on the techniques used by experienced and pre-service wind teachers to determine if experience made a difference in the quality of progress and performance with beginning adult students. The researchers observed 24

teachers, nine considered experienced and 15 pre-service teachers. The pre-service teachers were undergraduates enrolled in an instrumental techniques class. Lessons were given to beginning adult students and videotaped for analysis. A five-point Likert scale with one being a poor performance and five being an excellent performance was used by the analyzers of the videotapes. Teacher behaviors were divided into verbalizations, modeling, rote teaching, teacher performs with the student, and teacher listens to the student perform or talk. There was a statistical difference between the groups for modeling, with the experienced teachers modeling 15% of the time and inexperienced teachers modeling only 5% of the time. Another statistical difference was that the experienced teachers' students talked more than students of inexperienced teachers. In all other areas there were no statistical differences. Other findings of this study were that all the pre-service teachers taught by rote while not all the experienced teachers taught by rote and only half the experienced teachers incorporated note reading into their lesson. The researchers also noticed experienced teachers gave more feedback to their student and there was a higher quality of in-lesson performance for students whose teachers employed modeling as a teaching technique.

Benson and Fung (2004) looked at teacher behaviors prior to a student's success or non-success during piano lessons in the United States and China. Eight teachers from China and eight teachers from the United States participated. Their students were from preschool to middle school and exhibited a wide range of playing levels. Student behavior was placed into two categories: success or non-success. Success meant the student was able to do as the teacher instructed and non-success meant the student failed

to do as the teacher instructed. Teacher verbalizations were placed into eight categories and teacher modeling was placed into eight categories.

- Teacher Verbalizations
 - Directives
 - Information
 - Analogies
 - Positive specific feedback
 - Positive nonspecific feedback
 - Negative specific feedback
 - Negative nonspecific feedback
 - Teacher questions

- Teacher Modeling
 - Teacher play
 - Play with student
 - Gestures
 - Gestures with student play
 - Singing
 - Singing with student play
 - Multiple modeling
 - Multiple modeling with student play

Teachers in both countries used directives, the giving of information and singing with the student most often. It was noticed that teachers in China used gestures, modeling, and playing with the students more often than teachers in the United States. The behaviors

observed the least in both countries were analogies and negative nonspecific feedback. While the rankings for the teacher behavior varied slightly between student success and nonsuccess, ranks did not range widely enough to determine if the teacher behavior helped the student succeed or not (Benson & Fung, 2004).

As with the Teacher Verbalization section, the research into the private lesson studio focused on how the teacher works with and interacts with the student but not how the teacher works with or interacts with the teaching materials. Again this is important but emphasizes the need for research into not just behaviors, but the curriculum and how the curriculum is being used in the private piano studio.

Effective Teaching

Research studies on teacher verbalizations and behaviors often include effectiveness of teaching as part of the study. However, effective teaching is often hard to define. Duke (1999-2000) conducted a meta-analysis of 86 studies in piano study from 1972-1997. The researcher determined that teacher effectiveness was operationalized in different ways for different studies making it difficult to define exactly what teacher effectiveness was. After reviewing all the studies, the researcher was surprised by the lack of evidence that what the teacher did affected what the student accomplished. He also found a lack of research in measuring the relationship between positive feedback and student achievement. It was noted that all the research included in this review used the teacher, the class or rehearsal, or an excerpt of the class or rehearsal, as the unit under study leading to questions about exactly what is the unit of teaching which should be analyzed. Overall, the researcher felt that student achievement should be a large measure of teacher effectiveness.

Mills and Smith in a 2003 study asked teachers what they believed made effective instrumental and vocal teaching and whether this was the same in secondary schools and in higher education. The sample for this study was 134 instrumental teachers in England who were divided into groups by secondary schools or higher education, and whether the teachers had qualified teacher status or not. The questionnaire contained four questions: “What do instrumental teachers believe constitutes effective teaching? How are teacher beliefs influenced by the teaching they received? What are the most challenging aspects of their work? How do their answers vary based on the groupings created by the researchers?” (Mills & Smith, 2003, p. 6). The teachers taught woodwind, brass, strings, keyboard, percussion, voice, and/or general music classes. There were differences between the secondary teachers and the higher education teachers on effective instruction. Secondary teachers believed the ideal teacher is enthusiastic, accomplished, positive, communicates effectively, and organizes lessons to maximize fun and learning. The higher education teachers believed focus on technique, development of individual, and a wide repertoire were more important than a student having fun. In regard to how their own teaching influences their beliefs about teaching, nearly all believe they were greatly influenced by the teaching they received. This previous teaching either caused them to follow the same lines of teaching or to make a conscious choice to teach differently.

A research study from Spain looked at the perceptions of conservatory piano teachers (Bautista, Echeverria, & Pozo, 2009). The researchers were looking to see if younger teachers were using newer, more constructivist practices being taught at the conservatories. Highly experienced teachers, more than 15 years, described learning

outcomes in a technical manner focusing on music reading, technique, accuracy, and outcomes. Teachers were categorized as a *highly experienced teacher*, those with more than 15 years of experience; *experienced teachers*, those with five to 15 years of experience; and *novice teachers*, those with less than five years of experience. Highly experienced teachers described learning outcomes in a technical manner focusing on music reading, technique, accuracy, and outcomes. Experienced teachers described learning outcomes as both technical and analytical focusing on performance, playing with control, voicing, and thinking about the sound, as well as the activities sent home for the student to work on alone. Novice teachers sought artistic and interpretive outcomes. These teachers emphasized exploring the musical score, understanding the piece, constructing knowledge, developing musicality, the ability to have a personal work ethic, and asking questions to guide the student's understanding. The researchers concluded that highly experienced teachers felt students were passive and should reproduce what the teacher was teaching. Experienced teachers felt students were active but should still reproduce what the teacher was teaching. Novice teachers felt students were active and constructive, taking an active role in learning. Bautista et al. (2009) concluded that more experienced teachers needed training in newer learning theories, which these researchers believe are better.

All of the research on teacher behavior, whether it is verbalizations, actions, or effective teaching, investigate what the teacher does with the student and not what the teacher does with the curriculum they are using. While interactions between students and teachers is important; what is being used in the studio or classroom is also important. Does the curriculum affect how the teacher interacts with the student? Would the

interactions be different if the teacher was using a different method book? Would the use of a learning theory in the writing of the method book affect how the teacher interacts with the student? Without research concerning the method books or curriculum being used in the private piano studio, these questions cannot be answered.

Teachers are only part of the equation in a classroom or private lesson studio and research on their behaviors is important. Students are also a part of the equation in a classroom or private lesson and their behaviors have also been the topic of research studies. Research on student behaviors covers two broad areas which include practice behaviors and motivation. The next section looks at these two areas of research.

Student Behavior

Practice Behaviors

Research which focuses on students often seeks to discover what practicing techniques work best with the student, what helps them perform best, and what motivates them to continue lessons or to drop out. Duke et al. (2009) focused on the practice strategies of 17 graduate and advanced undergraduate piano majors to discover what strategies were more effective than other strategies. In the study, students were asked to learn a difficult three-measure passage from a concerto and then perform it the next day. The practice time was analyzed looking at practice time, number of practice trials, and number of complete practice trials. Eight practice strategies were noted but the students who played the test passage the following day with the fewest errors employed all or nearly all eight strategies. These included:

- Playing hands together early
- Using inflection early
- Thoughtful practice
- Stopping in anticipation of making an error
- Addressing errors early
- Locating, identifying, rehearsing, and correcting errors
- Playing slowly and then speeding the tempo up
- Targeting difficult passages and repeating until error free

There was no statistical difference between the individual students, based on the time each student practiced, nor the number of times the passage was practiced. The most important strategies appeared to be how the students handled errors. Those students who located, identified, and worked out the errors performed better than those who did not.

Another study with college students was done by Lee (2010). This study compared 26 American piano majors to 20 Korean piano majors' practice techniques based on an anonymous survey. The students from both countries reported the most effective techniques to be:

- slow practice
- isolated sectional practice
- repetition
- practicing hands separately
- tempo variation
- self-evaluation

One difference between the Korean and American students was that the American students reported having a practice routine 68% of the time and the Korean students only reported having a practice routine 14% of the time. As with the Duke et al. (2009) study, the amount of time spent practicing was not as important as what the student did while practicing. Some of the findings are similar such as tempo variation, isolating difficult sections, and slow or thoughtful practice. Self-evaluation is also a similar finding if it is applied to locating and correcting errors.

A three-year study by McPherson (2005) of 157 children ages seven to nine focused on learning to play a wind instrument. The principle question of the study was to clarify the mental strategies students adopted when practicing and performing, and how those strategies affected their development. The researcher noted the importance of mental strategies in educational research with high academic achievers being those who successfully apply appropriate strategies, but this research had not been regularly applied to music education. Students were nearly evenly divided by gender and most had not played any instrument before beginning lessons. All were given tests at the end of each year on performance, sight-reading, playing from memory, playing by ear, and improvising. Interviews were conducted with the students, their mothers, and their teachers to determine what mental strategies they were employing. These four themes emerged: keeping track of what was to be learned, what order to practice items, practicing to improve, and being able to self-correct. Sixty-eight percent of the students who began the study continued for all three years. In interviews, the students were asked about their strategies for keeping track of what they were supposed to learn and practice each week. These questions concentrated on the use or nonuse of a practice diary. They

were asked if they practiced the pieces that needed the most work first or if they played through pieces that needed less work first. The students were asked exactly what they did when working on a piece, which was more difficult, to play it better and they were asked what they did when they made a mistake when playing. Did they just skip over the mistake, did they use trial and error to correct the mistake, or did they slow down and figure out what the mistake was and then correct it? Overall the students demonstrated forward progress on their instrument. However, the amount of progress was uneven with some students attaining well above the standard and others well below. This may be due to their use of strategies. Those who used strategies of thinking how the melody would sound, then using rhythm chants to go through the melody, and then singing the melody while fingering before playing were more successful than those who simply tried to play the melody on the instrument from the beginning.

Performance follows practice and Cash (2009) explored how rest intervals between practice sessions affected performance, particularly how longer and shorter rest periods affected the student's ability to perform. Thirty-six college level non-musicians were used for this study. All were taught and practiced a sequence which was played on the piano. Practice sessions were very short, 30 seconds, followed by 30 second pauses. Each of the 36 participants practiced the sequence 12 times in this fashion. One third of the participants were given a longer 5 minute break between blocks three and four. One third of the participants were given a longer 5 minute break between blocks nine and 10 and one third did not receive a longer break. All participants were then given an overnight break. All participants improved in their accuracy in playing the sequence but those who received the longer break improved more than those who did not receive the

longer break. In addition, those who received the longer break earlier did better than the other two groups even after the overnight rest. The group that did not receive any break lagged behind the other two groups and played fewer correct sequences after the overnight break than they did after the practice sessions. The other two groups played more correct sequences after the overnight break than they did after the practice sessions. Cash (2009) noted that when music students are learning a new piece, they tended to have large gains in speed and accuracy at the beginning of the learning period. The rest period early in the process allowed students to continue to make greater gains than when the rest period was later or did not happen. The rest period allowed for the students to consolidate the skill memory of what was being learned. The researcher suggested performing students take early and frequent breaks in practicing, especially when learning new pieces.

The repertoire students are practicing come from the method books or from repertoire books; in other words, the curriculum. The repertoire is important because this is the material that is sent home with the student to practice each week. If the material is too difficult, the student may not be able to do what the teacher has requested. If the material is too easy, there is a danger the student will become bored. Applying learning theories to the repertoire could enhance student learning and practicing between lessons. In addition, questions about practice skills have not been answered. Can good practice skills be taught? How do students learn good practice skills? Does the curriculum give them practice tips or do these come solely from the teacher? Research into practice skills is helpful but none of these studies investigates the method books to determine if practice skills are included, nor how the choice of repertoire helps or hinders practice skills.

Student Motivation

What motivates students to take lessons and then what motivates them to continue is something teachers have been trying to figure out for a long time. Why does this student, who is talented, quit while that student who struggles continues? Pitts et al. (2000) sought to discover what motivated young brass and woodwind players in the first three years of study, thus causing them to continue or discontinue lessons. Students noted the reasons for taking up an instrument varied and included liking the way the instrument sounded, wanting to be part of the ensemble, and peer pressure. The researchers also noted that practicing an instrument was a task done alone and learning to practice effectively was difficult for the beginning student. While all students in this study had moments of frustration, those who maintained interest and motivation were those students who were personally interested in their instrument from the beginning, an intrinsic motivation, not an extrinsic one. They enjoyed playing their instrument, made the most of their practice time, and their parents were supportive. Those students who lost motivation had started playing their instrument for reasons other than personal satisfaction, such as peer pressure. They did not practice as much or as well, did not enjoy playing their instrument and their parents were less supportive. The study concluded the more intrinsically motivated and the more supportive the home is of instrument study, the more likely the student will remain motivated to work through frustrating times and continue playing their instrument. Conversely, the less intrinsically motivated and less supportive the home is of instrument study, the sooner a student loses motivation to continue playing their instrument (Pitts et al., 2000).

Another study by Rife et al. (2001) focused on students' feelings of satisfaction with their music lesson, citing this as an important motivator for students to either continue or discontinue lessons. The sample was 568 woodwind and string students between the ages of nine to 12. The only findings were that younger children were more satisfied than older children and woodwind players were more satisfied than string players. The students gave reasons which were both intrinsic and extrinsic for satisfaction. Intrinsic reasons included enjoying playing a piece well and extrinsic included having parents or friend compliment the student.

Similar to the Pitts et al. (2000) study, Costa-Giomi (2004) sought to determine if there were any characteristics which could determine which students would persist in taking private lessons and those who would stop taking private lessons. The study was done with 67 fourth grade students evenly divided by gender. These students were offered three years of piano study at no cost. Students took pretests and answered questionnaires before taking lessons, during the time lessons were given, and after they discontinued their lessons. The results showed those who dropped out practiced less, missed more lessons and achieved less than those who persisted. Students who did not progress and did not achieve good scores on tests dropped out while those who did progress and achieve good scores on tests continued. The researcher believed lower test scores were caused by lower motivation on the part of the students and that achievement appeared to be an indicator of dropping out. Another finding was those students who had no siblings all dropped out before the three-year study was over. The researcher also believed parents influenced their children as the parents of those students who continued met with the teachers more often. By meeting with the teacher, the parents were more

involved and took more interest in how their student was progressing, thereby being more supportive of the student.

Costa-Giomi did a second study with Flowers and Sasaki in 2005, again seeking to discover what caused students to drop out of lessons. This study was done with 14 pairs of students. One student of each pair continued lessons for the three years of the study, while the other student in each pair dropped out before the third year. It was discovered that those who dropped out sought teacher approval more often than those who did not drop out but received fewer teacher approvals than those who continued. While overall teachers provided one approval and one correction per minute during the taped portions of the lesson, those who continued lessons received fewer corrections than approvals overall. The researchers found that students who did not progress tended to drop out sooner than those who did and believed that achievement level was a factor in continuing or discontinuing lessons. Costa-Giomi (2004) also found that achievement was a factor in continuing or discontinuing lessons.

Studies on student behavior deal with how the student interacts with teachers, parents, and siblings but not how students interact with the method books being used. Studies into what motivates students to take lessons and practice are helpful, but again, none of these studies included the method books being used as part of the study. Is it possible that the materials used could help or hinder the motivation of a student? If method books were to follow a learning theory about how children learned, would the students find the materials more interesting and therefore be more motivated? Could the way a teacher uses the method book in the lessons affect student motivation? None of these questions can be answered until the materials being used in the private piano studio

are researched. It is critical to look at the materials because this is what goes home with the student each week. If the materials hinder a student's learning, they may not be motivated to continue lessons. If the materials enhance the student's learning, they may be motivated to continue lessons for a longer period of time.

In order for students to practice and perform, they must learn how to read music. In the following section, the researcher looked at music reading as it applied to being able to detect errors, non-music reader's perception of music symbols, and whether the use of colored notation helps in music reading.

Music Reading

Error Detection

From the beginning of piano lessons, except in the Suzuki method, students are taught to read the musical symbol systems. In order for the students to know if they are playing the music correctly, they need to be able to tell if their playing matches the symbols they are reading. In other words, does what they hear themselves play match what their eyes see? This is called error detection and several studies have focused on this concept.

Frewen (2010) conducted a study with 97 students ages five to 10 where none of the students had more than four piano lessons prior to the study. Group One was introduced to the melody, then played a tape with errors in the melody and asked to note the errors. Students were then taught by rote to play the melody on the piano. Following instruction, students played the melody and the number of errors was noted. Then all the students heard a recording of the melody in class as they entered, were asked to listen

quietly to the melody at the end of class for two weeks. After the familiarization process, Group Two was given the same instruction and testing as Group One. The results indicated that older students detected more errors than younger students, regardless of their grouping. Also, those who were familiar with the melody noted fewer mistakes during the listening and made fewer mistakes when playing regardless of age. The researcher applied these results to the private studio because students who engage in problem-solving and self-correcting strategies are more successful in learning an instrument. The use of familiar melodies allows students to engage in these strategies more successfully. She also noted from the video of the students' performances those students who were familiar with the melody were more willing to continue to play pieces correctly even when the music became challenging.

Another study on error detection was done by Gudmundsdottir in 2010 which investigated the ability of 35 students in their second year of piano to determine pitch errors. The students' music reading performances were analyzed to determine the types of errors made and if the age of the student contributed to the errors. The students who participated were from six to 13 years of age. Errors were divided into three groups: erroneous pitches, redundant pitches, and omitted pitches. Erroneous pitches were most frequent and omitted pitches the least frequent. The only type of error with a statistically significant finding was between older and younger students and related to redundant pitches. The younger group made more of these than the older group. While erroneous pitches were the most frequent type of error, students still attempted to maintain the contour of the melody on the page. Redundant errors included repeating a note or correcting an incorrect note. Younger students tended to self-correct while older students

tended to move on. The researchers believe this shows that pitch reading skills develop as the child matures.

Music reading is a key component to the traditional approach to teaching piano. The symbol system used in music is complex using five different symbol systems as a single system. These systems include rhythm symbols, pitch symbols, language, numbers, and expression symbols. Understanding how non-music readers approach music symbols gives insight into how to teach music reading. Work with elementary children on their understanding of music symbols also gives insight into how to teach music reading. Because music reading is the one of the main aims of piano study, it is important to research the method books being used and determine if how music symbols are introduced and reinforced helps or hinders students in learning how to read music.

Music reading uses the method book assigned by the teacher. While it is helpful to understand how students learn to read music and detect errors, none of these studies investigated a method book.

Non-Music Readers Perception of Music Notation

Learning to read music, like learning to read any language, takes time. One researcher was interested in what beginning music students thought about standard musical notation before they began lessons (Tan, 2002). This study interviewed 13 college students with no musical training, including no musical training in school. The interviewers presented these students with a single piece of music taken from an intermediate piano book. All words and other non-music symbols were removed from the page before the interview. Students were asked first what they noticed on the page and then were asked general questions about the notation. It was discovered that these

students thought the more ink on the page, the more there was of either duration or sound. It was discovered that the students thought the order of notes from shortest in duration to longest in duration was whole note, half note, quarter note, eighth note when in fact the actual order of duration from shortest to longest is eighth note, quarter note, half note, whole note. They also thought taller notes were longer or higher than shorter notes. Some music symbols were interpreted correctly such as *crescendo* and *decrescendo*, as well as slurs and quarter rests. The researcher concluded that these students were generally incorrect in their intuitions about standard notation but that their intuitions were logical. She suggests that this study supports the *sound before symbol* approach to teaching music.

This study suggests a Suzuki-like method be used to teach instrument playing and music reading: learn to play the instrument, then learn to read music. This would negate the need for a method book in the first months of piano study. This would also require a different sort of method book, one which acknowledges the student's ability to play the instrument but not yet the ability to read music. The rote-to-note of teaching student's how to play the instrument first and read music second is available but not widely used in piano study in the United States. Without research into the method books, it is unknown if the traditional method is better than the rote to note method or vice versa.

Colored Notation

In the elementary, general music classroom, teachers have sought ways to make music reading easier. Rogers' (1996) study investigated whether using colored rhythm reading helped students read rhythms easier. Eighty-five first graders and 49 second graders in general music classes in two separate elementary schools were used for the

study. The Primary Measure of Music Audiation created by Edwin Gordon (1986) was the instrument used for the study. Both groups received the same instruction but the experimental group's rhythms were notated on the board using colored chalk during rhythm instruction as part of the normal class activities. The control group's rhythms were notated on the board using only white chalk. While colors were used for rhythms each time they were read; the colors were varied so no color came to be associated with any one rhythm. Classes were taught with colored rhythms for six months.

Both groups scored well on the posttest; however, there was a statistical difference between the experimental group and the control group with the experimental group scoring higher. He noted the students who received colored notation did well on both the test with colored notation and the one with non-colored notation where the students who had not received instruction with colored notation only did well with the non-colored notation. The researcher noted the students showed a preference to using colored notation because the students perceived it as being easier and more fun. While this study did not occur in the piano studio, it ties back to the Pitts, et al. (2000) study on motivation where students who thought playing their instrument was fun tended to continue taking lessons longer.

Connections to Private Piano Studio

Reading music is essential in piano lessons and the above studies investigated different ways to learn to read music and perceptions of non-music readers of actual music scores. These studies did not look at method books or how they were used in the studio. The study by Rogers (1996) and the one by Pitts et al. (2000) both determined that fun was a motivational factor for students to learn to read music and continue taking

instrumental lessons. Could the method book being used help determine if the student enjoyed the lessons? Could method books based on a learning theory make lessons more fun and more effective? With all the research on what teachers and students do in the classroom and studio, research into the method books being used could also be useful to help teachers teach more effectively and students desire to take lessons longer.

The majority of research in music education is being done on the people involved in the lesson; however, private piano teachers are using in-print method books to teach piano. As noted in Chapter One, method books for piano study have undergone changes in the last 100 years. In the next section, the researcher discusses several dissertations investigating piano methods.

Methods

Method books abound in the United States. An informal survey by the researcher in a music store found more than 20 method books geared to preschool or early elementary students are currently in print. There has been little study done on these books or piano curriculum in general and much of what has been done is in unpublished dissertations.

In one of the few available dissertations, Huang (2007) sought to discover if currently in print preschool piano methods aligned with guidelines published by the National Association for the Education of Young Children (NAEYC). The researcher chose eight preschool methods recommended in the Uzler et al. (2000) book as being most appropriate. Of the eight, one was out of print and two were only available in Japan leaving five methods to be reviewed. The student and the teacher books were analyzed looking for themes. The following themes emerged and were analyzed: teaching

philosophy of the method, curriculum design logic, musical development of the method, and non-musical aspects of the method design.

Huang (2007) determined that two philosophies emerged; traditional where all learning is centered on the piano and the skills to be learned there, and whole body which encourages learning of musical skills and concepts through various modes of learning, many of which do not include the piano. The traditional concentrated on reading and playing skills while the whole body approach concentrated on experiencing musical concepts before playing the concepts was required. The researcher concluded the whole body approach contained more practices recommended by NAYEC than the traditional approach. The whole body approach encouraged teachers to create a learning environment which was friendly to preschoolers, allowing them to encounter and experience music before requiring skill at the piano. The researcher created a set of principles which a teacher could apply to any method to determine if that method is appropriate for use with preschoolers. These principles included:

- Anchoring new learning in previous learning
- All children have musical potential
- Balancing the physical, intellectual, social and musical maturity of each child
- Define objectives of achievement in every lesson

Another study on preschool methods was conducted by Thomas-Lee (2003) to discover if the available methods included age-appropriate elements for children ages four and five. Nine methods were chosen, surveyed, and the activities categorized as playing piano, singing, moving, creating, listening skills development, repertoire, and parent involvement. The researcher believed all of these elements were necessary for a

method to be appropriate for preschool children. She found all the elements to be evident in all nine methods. However, each method weighted the elements differently. Some method books, such as Bastien's (1987) *Piano for the Young Beginner*, contained more piano playing activities than the other eight methods. *Music for Little Mozarts* by Barden, Kowalchyk, and Lancaster (1999) included more singing and the introduction of hand signs to enhance note reading. *Music for Moppets* (1971) and *Kinder-Keyboard* (1971) by Helen and Robert Pace emphasize exploration and rote playing. The *Music Readiness Series* emphasized movement activities more than the other method books (Steward, Blasscock, & Glover, 1985). The researcher believed more research was needed to discover the right mix of elements for effective preschool piano lessons.

A third study on piano methods books was done by Hayase (2006). However, only the abstract is available. The purpose of this study was to compare a Japanese method, *Miyoshi Piano Method* (Miyoshi, 1998) to the American method, *Piano Adventures* (Faber & Faber, 1993). The researcher compared the methods using the Royal American Conservatory Examinations (RACE) (2004). The examinations test students on technique, ear training, sight-reading, and repertoire from several genres and ethnic music from different cultures. Each grade level from both methods was compared to the same grade level exam and the advantages and disadvantages listed for each category for each grade level. Overall, the researcher believed the early grade levels of Faber and Faber (1993) method books provided better repertoire and theory study than the Miyoshi (1998) method. Overall however, the Miyoshi (1998) method books carried a student farther in piano study than the Faber and Faber (1993) method books. She

suggests starting in Faber and Faber (1993) and once completing those books, moving to the Miyoshi method for continued study (Hayase, 2006).

While these studies look at method books currently in print, only Huang (2007) makes any application of learning theory to the method books. Huang leans heavily on Piaget's stage theory to reinforce Developmentally Appropriate Practice (DAP) in preschool piano lessons, using it as a resource to show which methods follow appropriate DAP and which do not. Lee (2010) includes a study done by Benjamin S. Bloom on how long each week talented young people practiced but did not include his taxonomy, thereby did not include any learning theory application. Hayese (2006) references no learning theories at all. So much has been learned about how people learn in the last 50 years and yet (Bransford, Brown, & Cocking, 2000), there has been very little research to discover how these theories apply to piano teaching and the method books used in the private lesson studio. While there is not a lot of research in piano and learning theories, there is some research with music and learning theories. In the next section, the researcher looks at how Piaget and Bruner have been applied to music education.

Learning Theories and Music Education

Piaget

Theories about how humans learn have changed over the years. Schools and teachers are always seeking the best way to teach a subject. While changes have been made in how reading and mathematics are taught, how piano and other instruments are taught seem to lag behind. Books available in 1936 (Thompson) are still available today in 2013. In addition, there appears to be little application of learning theories to music

education, particularly in the private studio. However, one learning theory which has in the past received some study in music is Piaget's theory as it concerns conservation of time.

Piaget is known for his Stages of Learning (1953) which are sensory motor, preoperational, concrete operations, and formal operations. Children in the sensory motor stage learn through their senses. In the preoperational stage children are egocentric, semi-logical, and need for things to be very concrete to learn them. Concrete operations is where children begin to see other people's views, begin to understand reversibility, inversion, reciprocity, and conservation. They can also begin to make inferences and be inductive if concrete examples are provided. Students who have moved into formal operations are logical, have abstract and hypothetical thought, can use the scientific method, and engage in both deductive and inductive reasoning. Piaget (1953) believed that children moved from one stage to the next as they mature. He also shed light on how children play games (Piaget, 1965), stating that very young children believe the rules are created by God and cannot be changed and yet, do not follow the rules. Further, children between about six and 10 understand that rules can be changed but rarely allow rules to be changed because everything must be fair. It is only when children become more mature that they begin to allow changes in rules.

Another area Piaget (1954) studied was conservation, particularly with weight, mass, liquid, and time, observing that young children are unable to understand that when you pour water from a tall, slender glass into a short, wide glass, the amount of water has not changed. One famous study by Oleron, Piaget, Inhelder, and Greco (1963) was done with children and two balls of clay. The first ball was rolled up in a ball and the child

was asked to create a second ball of clay of the same size. The second ball was then transformed into a sausage, a pancake, several pieces, and other shapes and the child was asked if the second ball still has the same amount of substance as the original ball which is still on the table. Regardless of the child's answer, the researcher asked the child why they gave that answer to determine what the child's reasoning was. Of the 100 children in this study, at age five, none of the children could conserve weight or volume and only 16 could conserve substance. By age nine, 84 could conserve substance, 72 could conserve weight, but only 32 could conserve volume. The studies in substance, weight, and volume led to studies in the conservation of time.

Piaget (1964) believed that a child's surroundings could cause his/her internal clock to speed up and slow down. He placed children's conservation of time into three progressive stages; ordinal, hyperordinal, and metric. Ordinal is when a child can put a series of events in the order they transpired and generally occurs around age seven. Hyperordinal is being able to relate two separate lengths of time, occurring about age nine or 10. Metric is when the child can see the relationship between how long something took and the time elapsed from beginning to end and coincides with formal operations about age 12.

Conservation of time connects to music in the areas of rhythm and tempo. A piece of music is played in time. The tempo of a piece determines how much time each individual note takes to perform. Every melody is dependent not only on the pitches used but the duration of each pitch. Every melody has a unique set of pitches and note durations. Because of the need to be able to play the proper tempo and note duration, the

conservation of time has been applied to music in several studies. The following studies looked at Piaget's conservation of time and music.

Botvin (1974) conducted a study to determine if conservation of melody could be taught. Melodies must be played at a certain tempo with certain rhythms with particular pitches to be identified. One hundred first graders were used in this study. Students were divided into three groups. The first group received successive approximation (SA) training which consists of playing the folk tune the same the first two times, then either in augmentation, played faster than the first two playings, or diminution, played slower than the first two playings. The second group received SA training and verbal rule instruction (VRI). These students were given verbal instructions along with SA training. The last group received no training. In addition to listening to the folk song, all students also took pre- and post-tests and Piaget conservation tests on mass, weight, numbers, and liquids. While none of the control students improved on the melody post-test or the Piaget tests, 30 of the 50 trained students improved on the melody training and the melody transfer. On the Piaget tests, 17 students improved in their conservation of numbers, six on mass transfer, seven on weight transfer, and two on liquid transfer. All these showed as significant except the liquid transfer. The SA group did better than the SA-VRI group which surprised the researcher because he expected the group with more instruction to do better than the group with less training.

A later study by Perney (1976) sought to examine if there was a relationship between conservation of metric time to musical training, verbal ability, gender, and age. Fifty-seven children in second and third grade were presented with five conservation musical tasks, a reading test, and an achievement test. Students were also asked if they

played a musical instrument or not. It was determined that students who played musical instruments did not perform the musical conservation tasks significantly better in this study than those who did not play a musical instrument, girls did better than boys, and the better the child's verbal ability, the better they did on the task. Because there was no significant difference between trained and untrained students, the researcher believes this reinforced Piaget's (1964) belief that training does not influence a child's ability to conserve.

Serafine (1979) sought to apply Piaget's concept of conservation to rhythm and meter. The subjects were 103 children ages four to nine who had never received any private music instruction. Students listened to eight clicks of a metronome and were asked if the clicks got faster, slower, or stayed the same. The second time students listened to the eight clicks simultaneously as a rhythm pattern which got faster or slower and were asked the same question. Students who believed the clicks were getting faster or slower were given a third task, where the clicks were accompanied by a simultaneous blinking light. Pre-training of all students included keeping steady beat to music and was done a week before being given the conservation of meter task and six Piagetian conservation tasks. In this study, younger children misjudged the steady music meter of the metronome. Older children were able to tell more often that the metronome was clicking a steady beat and the accompanying rhythm was changing, thus reinforcing Piaget's (1964) theory of conservation as it applies to music.

Piaget (1964) found children ages four to eight equated velocity with time, that is, the faster something goes, the longer the duration. Bickel (1984) found that older children ages 10-12 were beginning to recognize that speed did not equal duration.

However, he found that the time-velocity ratio principle did not necessarily apply when musical concepts were used as stimuli. When musical concepts were used as stimuli, all the students in this study tended to choose the second musical fragment as being longer than the first musical fragment, regardless of the tempo. Each of the 30 students, 10 each in grades two, four, and six, listened to six pairs of excerpts, each 20 seconds long. The pairs were divided into two groups, duple and triple meter with three examples in each. The duple meter examples were fast-slow, slow-fast, and fast-fast. The triple meter examples were fast-slow, slow-fast, slow-slow. While the study found no significant difference, the sixth grade children did get more correct answers than second or third grade students. The researcher's conclusion was that the Piagetian time-velocity ratio principle does not apply to music (Bickel, 1984).

Hargreaves, Castell, and Crowther (1986) also did a conservation study with music but instead of fragments these researchers used familiar and unfamiliar tunes. Fifteen first grade students and 15 third grade students were the sample for this study. The students were played tunes and asked if the second tune was the same or different from the first. They were also asked what was the same or what was different and how did they know? Older children got the right answer more often than younger children. All children got more answers correct for the familiar tunes than the unfamiliar tunes. The researcher believes the result of older students doing better than younger students was a direct result of the ability to conserve which is more developed with older children.

While children can create and reproduce music at a young age, particularly through song, having the knowledge of how they can conserve time and the stage of development a child is in could help a teacher determine what method book to use with

each individual student. If method books were aligned with a learning theory, perhaps even being written so that there was a beginning book or set of books for each stage of development, perhaps students would be more motivated and teachers could teach more effectively. There is, however, little research which looks at the method books for ages six to nine through the lens of a learning theory, reinforcing the need for the present study.

Bruner

Jerome Bruner's learning theory is the lens through which the researcher has chosen to analyze the method books for this study. Bruner has been an active learning theorist since the early 1960's. His learning theory encompasses teaching holistically, understanding that learning is contextual with culture and is created by the learner. His learning theory has been applied in the public schools. A portion of Jerome Bruner's *cognitive growth theory* has been applied to music. This part of Bruner's theory states children learn first by action, then by picture, and finally by symbol. These ways of learning are called enactive, iconic, and symbolic learning. Bruner's theory has changed somewhat since its beginning and has some interesting applications to music.

In Bruner's (1960a) early work, he advocated for students to have a "mastery of the structure of the subject matter" (p. 18) in order for learning to be transferred. He defined mastery of fundamental ideas as not only understanding the general principles but also an attitude which involves guessing, hunches, and problem solving on one's own. He believed that in order for a subject to be more comprehensible, a student must first understand the fundamentals of the subject. In other words, knowing the foundational ideas makes it easier to learn the more complicated knowledge of a subject. He also

believed humans remember things better when they are connected to prior learning and that understanding the fundamentals of a subject make it easier to transfer knowledge.

In early writings, Bruner (1960a) stated, “any subject can be taught effectively in some intellectually honest form to any child at any stage of development” (p. 33). He cited Piaget’s (1957) stages of learning and intellectual development. Young children learn by experience, by doing. A child enters concrete operations when he comes to understand that actions are reversible and he can internalize problem-solving steps. In other words, the child no longer must depend solely on trial and error. He also stated that children who have reached concrete operations have some ability to manipulate symbols. Formal operations are reached when a child can hypothesize about things he has not experienced. He is clear that while it is necessary to move through concrete operations to formal operations, that every child gets there at their own pace (Piaget, 1954).

Bruner’s (1960a) theory has three steps in the process of learning: acquisition, transformation, and evaluation. Acquisition is when new information is presented and either fits into what the child already knows or replaces what the child already knows. Transformation is the manipulation of the new knowledge into another form. Evaluation is making sure the manipulated information fits the task at hand. He believed if a teacher took the time to make the material fit the logical forms of the stage the child is in, “it is possible to introduce him at an early age to the ideas and styles that in later life make an educated man” (Bruner, 1960a, p. 52).

Bruner (1961) stated the aim of teachers was to help students grasp their subject matter as fully as possible and to help them become independent and motivated thinkers as they move out the doors of formal education. In addition, he advocated that to be a

successful discovery learner, one must practice discovery learning. He listed the benefits of discovery learning under four headings: intellectual potency, intrinsic and extrinsic motives, learning the heuristics of discovery, and conservation of memory (Bruner, 1961).

In the mid-1960s, Bruner (1966) wrote about his enactive, iconic, and symbolic theory of learning through articles and in the book *Studies in Cognitive Growth*. He noted that children begin to learn first enactively, then iconically, and then symbolically but that each remained intact throughout a person's life. He defined enactive as giving the proper motor response. Iconic was defined as a picture or an image of a thing or thought. Symbolic represented a thing or thought without looking like or referring directly to that thing or thought (Bruner, 1964).

In his book *Studies in Cognitive Growth*, Bruner (1966a) stated that "cognitive growth in all its manifestations occurs as much from the outside in as from the inside out" (p. 1-2). He believed that children first represent things in their minds by touching and doing. Then children know things by the item's representation or picture. He noted there are two kinds of representation; in process and final. In process could be the picture of a knot that is half tied where final is the completed knot. Lastly, children represent things in symbols. He said that pictures can be both iconic and symbolic and used a diagram of a battery attached to a light bulb. One picture is obviously the battery, wires, and light bulb; this he calls iconic. Another picture is boxes with arrows and the boxes are labeled. This he calls symbolic.

Bruner (1964) further defined enactive knowing as not just a simple action, but a habit that is formed by action. Simply doing something once does not allow a child to

understand or know that action, but by continuing to do the action it becomes habit and is therefore a representation in the child's mind. Iconic was when the child "represents the world to himself by an image or spatial schema that is relatively independent of action" (Bruner, 1964, p. 12). In other words, an action is not needed for the child to know something. However, the image must be concrete and if it is complex, manipulation is necessary for the child to know the concept. Icons provide the necessary link between what is seen and felt and what the child can know in their mind.

Symbolic is the final way of learning. The use of symbols, of which language is one type, is the moving within a rule-bound system from experience to being able to experiment in the mind without the use of trial and error, without having to speak or move. The use of symbols is a quicker way to know something while enactive and iconic are slower ways of knowing. Bruner (1964) believed that symbols have context and represent not only things but ideas and processes that take up both time and space. In this writing, Bruner (1964) saw a movement from learning enactively to learning iconically to learning symbolically and that moving from one to the next requires less of the earlier way of learning. In other words, once a child understands pictures, they depend less on touching and doing and once children can read language they depend less on pictures.

Bruner (1996a) continued to hone his theory and takes a look at how things instead of words often control what we do and how culture plays a role. What we know is often from the things we do rather than the things we read and the things we do are often dictated by the culture where we live. He noted that humans often do before they order and the ordering or theorizing comes after the doing (Bruner, 1996a). Bruner now looks at his enactive, iconic, and symbolic ways of learning not as a progression, which

he noted is a change in his position, but as three ways or modes of representation. He now sees enactive as a means to an end. Iconic provides a way to classify and categorize things and often leads to symbolic. He also now thinks that humans can and do use all three together to gain knowledge.

Bruner (1996b) not only addressed the student but also the teacher. In an earlier writing, Bruner (1961) believed teachers should help students grasp their subject matter as fully as possible and help them become independent and motivated thinkers. Bruner continued to focus on teachers and believed that all teachers have pedagogies which show how they think children's minds work even if they cannot verbalize those theories. "Watch any mother, any teacher, even any babysitter with a child and you'll be struck by how much of what they do is steered by notions of 'what children's minds are like and how to help them learn'" (Bruner, 1996a, p. 46). All teaching is based on what the teacher thinks about the nature of the student's mind. These thoughts about teaching Bruner (1996a) calls "folk pedagogy" (p. 44).

Bruner (1996a) outlines four folk pedagogies which are present in today's K-12 classrooms. The four folk pedagogies are:

- Children are inactive learners and modeling is the best way to teach.
- Children learn best from didactic exposure and there is a set of facts which they must be taught.
- Children are thinkers and construct a model of their world through their experiences.
- Children are knowledgeable and knowledge is cumulative with each new bit of knowledge building on what the child already knows.

He then says that each model should not be used alone but that “What is needed is that the four perspectives be fused into some congruent unity, recognized as parts of a common continent.” (Bruner, 1996a, p. 65). In other words, he thinks that there is a place and a time for each kind of pedagogy.

While none of Bruner’s writings work with music specifically, a few music educators have applied them to music education. Eunice Boardman was a longtime music educator who wrote several books and taught at both the elementary and university level. In 2001, she set forth that learning is constructed and music teachers should create their own learning theory based on the questions of why, what, who, when, and where. Her basic assumption was that human learning and experience are holistic and “instructional theory can only be valid to the degree to which one’s responses result in a cohesive whole, each facet complementing and influencing all others” (Boardman, 2001, p. 46). She proposed that learning is constructed, happens in a sociocultural context and is generative. In other words, new knowledge emerges out of old knowledge. Her way of looking at this is “learning is the movement from a known through the unknown to a new known” (Boardman, 2001, p. 50). She ascribed to the structure of the disciplines model and includes primary concepts of expression, style, and form. Her generative learning theory has four parts:

- Learning is construction of meaning
- Learning will occur only as part of an experienced whole
- Learning should help students make sense of the musical whole and includes action, cognition and emotion

- Learning occurs within a social-cultural context and is a unique mode of representation.

She hoped teachers would take these four parts and create their own theory to inform their teaching in the classroom. Boardman (2001) did not directly apply the enactive, iconic, or symbolic part of Bruner's theory but she drew on the parts of the theory that concentrate on learning in context and within a culture. This researcher did not look at that part of Bruner's theory. Boardman's (2001) use of Bruner's theory was included here because she was one of the few music educators to use Bruner's theory.

Schmitt (1971) is another music educator who applied both Piaget and Bruner to piano study. Schmitt articulated Piaget's preoperational, concrete operational, and formal operational stages with music education. She noted that traditionally, piano instruction confronted beginning students "with complicated notation in a multi-conceptual approach consisting of many facts and rules. . . ." (Schmitt, 2001, p. 24) long before the students were capable of understanding. She also used Bruner to emphasize the point that children do not think like adults and teachers must adapt their teaching to the way children think. She noted a study done by Pflederer (1964) which found children can conserve musical concepts such as melody, tonal patterns and rhythm before they can conserve in other areas such as volume and number (Schmitt, 1971). This is especially true if they are encouraged to be active with music first. Schmitt (1971) summarized her thoughts with three main points. First, children are not small adults and teachers need to look at things from a child's perspective before trying to teach any subject. Second, children learn by doing, so music education needs to be active and concrete. Lastly, musicians need to get away from what is traditional and use what research and

psychology have learned. This study is included because this researcher stated that music teaching needs to begin to include what is known about how children learn (Schmitt, 1971).

The above studies do connect music and the learning theories of Piaget and Bruner, but they do not apply the studies to the method books being used by teachers in their individual, private studios. Yes, piano teachers need to know about learning theory and piano teachers need to apply them to their teaching, but how do they do that? Should the application of learning theory be taught in their college courses? Should the method books being used be written with a learning theory in mind? Part of the problem is the number of piano teachers who have little or no college training. Part of the problem is there is little research on the method books themselves to determine if learning theories have been applied. Do the method books follow how children learn or are they written based on what has been done in the private studio of the composer? This reinforces the need for studies on the method books being used, whether they are using learning theories, and how they are being used by the teachers and students in the private lesson setting.

Conclusion

Studies have been done on what happens in the classroom and the private lesson studio focusing on teacher behaviors such as modeling and verbalizations, and seeking to discover what are the best practice techniques, what motivates students, and why do they continue or discontinue taking lessons. Standards have been set for the general music classroom in broad strokes about what should be taught, but no standards have been set for the private piano studio. These standards dictate the students should learn to sing and

play, read music and learn about the connections of music with other arts and other subjects, but they do not lay out a specific curriculum to follow. These standards do not instruct the teacher when to introduce musical concepts such as the quarter note, *piano*, and ties. For example, in the private lesson studio, these specifics are laid out in the method books being used with each book introducing musical concepts in their own order.

Theories such as Piaget's stage theory and Bruner's enactive, iconic, and symbolic theory have been put forth to explain how children learn. These theories have been applied to the music classroom and the private lesson studio. There has, however, been little research done on the curriculum used in the piano studio. The few available studies have concentrated on preschool students and the methods available for use with those children, or a comparison of American methods to methods used in other countries. With the many method books available and the more than 20,000 piano teachers in the United States (Music Teachers National Association, 2012a), there needs to be some research on the curricula being used in those studios to determine if what is being done is the most effective way to teach piano. Is there a better, more effective, more enjoyable way to teach piano? Does the order musical concepts are introduced follow what is known about how children learn? Are piano teachers teaching in the most effective way? Are piano teachers applying what is known about how children learn in their teaching? Should piano teachers be doing what has always been done or is there a better way? To answer these questions, study should be done which looks specifically at the methods being used, what order musical concepts are being introduced and whether or not any learning theory has been applied in the presentation of the concepts in the method books.

It is the researcher's experience that piano teachers have their students purchase a particular method book and then teach through the book page by page. A study on these books is a good starting point to beginning to determine exactly how these books are used and if there is a more effective way to teach piano. Through this study, the researcher seeks to rank in order the music concepts piano teachers are teaching in the first year of study, determine if the teachers' rankings are the same as the method books' ranking, what method books these teachers are using, and whether the method books use any, some or all of Bruner's theory as it applies to enactive, iconic, and symbolic learning. Once it is determined what order musical concepts are introduced and whether or not Bruner's learning theory has been applied to the method books, further studies could look at how the teachers are using the books in their studios and if they are enriching the method books with knowledge of learning theories in the individual studios.

CHAPTER THREE

Methodology

This chapter describes a study of piano teachers who teach beginning piano students ages six to nine and the method books that are currently in use by these teachers. Specifically this researcher sought to uncover what order participating teachers introduce musical concepts in the first year of piano study, what method or methods the teachers are using, whether their order of concept introduction aligns with the methods, and whether the methods use any, some, or all of Jerome Bruner's enactive, iconic, and symbolic learning theory. The following sections include the research questions, participant description, sample size, instrumentation, method of data collection, and the data analysis process.

Research Questions

The purpose of this study was to determine what order piano teachers introduce musical concepts in the first year of study to beginning students ages six to nine, and whether these teachers follow the same order of concept introduction used in the most widely used method books. Secondly, this study used Jerome Bruner's enactive, iconic, and symbolic learning theory as a lens to determine if the concepts as introduced in the method books are introduced using none, one, or all of Bruner's modes of learning.

The research questions guiding this study were:

1. In what order do piano teachers of beginning students ages six to nine introduce musical concepts in the first year of study?

2. What piano method books are used most often by the participating teachers?
3. What order are musical concepts introduced by the method books most used by the participating teachers?
4. Does the teachers' order of concept introduction align with the order of concept introduction in the most used methods?
5. What concepts in the most used methods use any, some, or all three modes of learning, enactive, iconic, and symbolic?

Participants

The participants of the study were members of the Music Teachers National Association (MTNA), which is a national, professional organization supporting the careers and professionalism of music teachers. This organization has approximately 24,000 members representing all 50 states and Canada, and includes the local private lesson teacher as well as university professors, and is open to any music teacher regardless of education. While the members of MTNA do work with K-12 students, this organization is primarily for the private lesson teacher. Public school teachers generally belong to the National Association for Music Education (NAfME). There are approximately 500 local chapters of MTNA where members are active. MTNA offers professional development through national and state conventions and clinics for teacher members and offers competitions for student members in composition and performance. Performance contests include piano, organ, voice, strings, and woodwinds starting at the local level with winners advancing to the state and then national level competition. MTNA includes private lesson teachers of all instruments and does not have separate email lists based on instrument. All members of MTNA were invited to participate.

Teachers were asked in the second question of the questionnaire if they teach beginning piano students ages six to nine. Those who answered “yes” were taken on into the survey. Those who answered “no” were taken to the end of the survey.

The researcher chose to survey only those teachers who teach beginning students ages six to nine. Even though piano teachers take beginning piano students who are younger, especially Suzuki teachers, and beginning piano students who are older, this is the age most often recommended by piano teachers. In the researcher’s experience, the majority of her peers do not take piano students until the second grade. When asked informally, they usually replied that by then students could read their mother tongue, were mature enough to sit through a 30-minute lesson, and had the muscle control to learn to play the piano. The researcher herself does not take students younger than the second grade. Additionally, professional sources also recommend starting lessons within this age frame. MTNA (2006) recommends students begin taking piano when they start first grade. Bastien (1988) recommends starting students at age seven. Uzler et al. (2000) recommends starting students when they begin the second grade, and Agay et al. (1981) gives the average age of a beginning piano student as being between ages seven and nine. Books on piano pedagogy also have teachers consider several things such as motor skills, emotional and social maturity, the ability for a child to comfortably put their fingers on five keys simultaneously, and the ability to sit and practice for 15 to 20 minutes at a time. Students who begin later than the fourth grade are considered *older* beginners and there are different method books available for use with these students (Agay et al., 1981; Uzler et al., 1991/2000).

Sample Size

The participants of this study were a criterion, convenience sample; a criterion sample because the group chosen meets the criteria of teaching beginning piano students ages six to nine and a convenience sample because only those who chose to participate were a part of the sample (Gay, Mills, & Airasian, 1976/2009). This type of sample was used because MTNA is the largest professional organization for the private lesson teacher ensuring an adequate sample size. This also allowed the study to incorporate piano teachers from all over the United States and not just a particular region or state, potentially allowing the findings to be more generalizable. Although MTNA does not ask members when they join what instrument(s) they teach or keep separate email lists by instrument, the MTNA did do a survey of their total membership of 24,000 in 2005 and reported that 84% of their members teach piano as their primary instrument. Of those who teach piano, 88% indicated they taught elementary students which is the age group focus of this study, bringing the potential sample for this study down to 17,741 (Music Teachers National Association, 2005). Using a sample size table, for a reported membership of 17,741 with a .05 confidence level and a 5% confidence margin, the sample size should be 376 (Raosoft, 2004; The Research Advisors, 2006). If it were possible to know the actual population size, in quantitative research, a sample of size of 30 is considered the minimum. In large populations, 10-20% is considered adequate which would put the required sample size for this study at 2,106 (Charles & Mertler, 2002). This study used the best number available from MTNA based on the 2005 member survey. A limitation of this study was that the survey was the best estimate of how many piano teachers teach beginning piano students ages six to nine. Because

MTNA does not desegregate their membership by instrument, it is impossible to tell how many of the 24,000 members fell into the criteria. The completion rate based on the estimated population of 17,741 was 3.5%, but because the actual population is unknown, the researcher used all the completed questionnaires in the data analysis.

Description of the Questionnaire

Pilot Study One

The questionnaire for this study was developed over the course of two pilot studies. The researcher went to a local music store and surveyed the available primer method books for piano instruction. There were over 20 books available for the first year of study and these included but were not limited to method books written by Faber and Faber (1993), Alexander et al. (2005), Alfred (2005), Bastien (1976, 1987, 1988, 1993), John Thompson (1936, 1955), Clark and Goss (1993), Clark, Goss, and Holland (2000), Faber and Faber (1993), and Michal Aaron (1946/1974). These books are also available at online music stores (J W Pepper & Son, 2012; Pender's Music Company, 2012). She wrote down all the concepts introduced in the available books and included only those concepts in the questionnaire. The questionnaire was sent to two music education professors and one piano professor to ascertain content validity. One music education professor had six years of experience teaching elementary and middle school music, and eight years of additional time in middle school special education and fifth grade. In addition this professor had 25 years of experience teaching music education courses at the university level. The second music education professor had six years of experience in the public school middle school band teaching music reading. In addition, this professor

had 15 years of experience teaching music education courses at the university level. The piano pedagogy professor had approximately 10 years of experience teaching piano to all levels of students from beginning to advanced and all ages from kindergarten to adults. All three were active in local and state professional organizations for piano teachers or music educators. The researcher asked these professors to determine if they felt the questionnaire answered the question, “What order do piano teachers of beginning students introduce musical concepts in the first year of study?” Based on this question, the professors all believed the questionnaire was valid.

Several local piano teachers, with an average of 20 years of experience teaching beginning students, also examined the questionnaire for readability and grammatical errors. Questions which appeared twice or were unclear in their intent were either reworded or removed. The questionnaire sent out for content validation contained 110 questions. The final questionnaire for the initial pilot study contained 76 questions (see Appendix A).

The initial administration of the questionnaire contained five demographic questions, 71 Likert scale questions, and took approximately 30 minutes to complete (See Table 1). The demographic questions were to determine the gender, race, place of the teacher’s studio, and how long the teacher had been teaching and what method book they were using with their young beginners. The survey was divided into seven sections: Demographic and Teaching Information, Staff Introduction, Note Reading, Interval Reading, Rhythm Reading, Theory Study, and Technique. The Demographic Information section sought information such as gender, race, number of years as a teacher, and location of studio, and “What method do you predominantly teach from for

beginning children ages six to nine?” The Staff Introduction section contained 11 Likert scale items examining whether the teachers preferred to use on-the-staff, white note, middle C position methods or off-the-staff, black note, C position methods. The Likert scale used throughout the questionnaire was 5 – Strongly Disagree, 4 – Disagree, 3 – Neutral, 2 – Agree, and 1 – Strongly Agree. The first question of the Staff section was “Introduction of the staff must be done at the first lesson.” The Note Reading section contained 12 Likert items the first being “Having a student pre-read helps them learn to read standard notation more quickly.” The rest of the Note Reading section covered questions on pre-reading, keyboard exploration before note reading, alternate notations, finger numbers, note names on the staff and on the keyboard, and the use of hand positions in enhancing note reading.

Interval Reading consisted of seven Likert scale items concerning the introduction of skips, steps, and harmonic and melodic interval introduction. A sample item from Interval Reading was “Steps and 2^{nds} should be introduced at the same time.” Rhythm Reading consisted of nine Likert scale items beginning with “Steady beat must be taught before staff reading begins.” The rest of the Rhythm Reading section covered alternate counting, time signature introduction, counting aloud, and introduction of rests with partner notes. Theory Study contained 22 Likert scale items which included when teachers introduced rests, expression marks, tempo marks, accidentals, and whether students should have a separate theory book. A sample item from Theory Study was “*Forte* and *piano* are to be introduced separately.” The last section, Technique, contained 10 Likert scale items one of which was “The damper pedal must be in use by the end of the first year.” The rest of the Technique Section sought information on when to play

hands together, technical exercises, and whether historical information should be included (Table 1).

Table 1
Questionnaire 1 – Data Gathered

Section	Type of Question	Number of Questions	Information Covered
Demographic	Open Ended	5	Gender Race Years of Teaching Method book used Location of Studio
Staff Introduction	Likert	11	on-the-staff or off-the-staff white key or black key Middle-C Position or C Position Pre-reading Keyboard exploration before note reading
Note Reading	Likert	12	Alternate notations Finger Numbers Note names on staff Note names on keyboard Using hand positions to enhance note reading
Interval Reading	Likert	7	Steps Skips Harmonic Intervals Melodic Intervals Alternate Counting
Rhythm Reading	Likert	9	Time Signature introduction Counting aloud Introducing partner notes and rest together Rests
Theory Study	Likert	22	Expression marks Tempo marks Accidentals Use of separate theory books When to play hands together
Technique	Likert	10	Use of pedals Use of technical exercises Use of historical information

The first pilot questionnaire was administered to a music teachers association in the Dallas-Ft. Worth, TX metroplex. This association had 47 members at the time of the survey (A. Arnett, personal communication, January 15, 2009). All teachers were sent

permission forms and 15 returned their forms and were sent questionnaires. Of the 15 teachers who were sent questionnaires, 11 completed the questionnaire. Because the original pilot was to test the reliability of the instrument using test-retest Pearson's correlations, these 11 teachers were sent the same questionnaire a second time two weeks later. Only 10 teachers completed the questionnaire a second time. The overall response rate for data used was 23% which is higher than the recommended percentage of 10-20% (Johnson & Christensen, 2000). The purpose of this pilot study was to determine the reliability of the questionnaire in anticipation of conducting a larger study in the future as recommended by Kirk (1999/2008) and Charles and Mertler (2002).

The reliability of the original questionnaire was uneven. Using test-retest, Pearson's correlations ranged from $-.303$ to 1.00 . Kirk (1999/2008) recommends a correlation of $.80$ for a question to be considered reliable. Because the nature of the initial study was to determine the reliability of the questionnaire, only those individual items whose correlations were $.80$ or higher were considered reliable. Because the results of the initial pilot study indicated many of the items on the questionnaire were unreliable, a second pilot study was conducted. Eight items from the Staff Introduction section which proved reliable in the first pilot study were kept. These items included the necessity of introducing the staff, musical alphabet, bar lines, and measures at the first lesson, whether standard notation should be introduced in the first few lessons and whether Bass and Treble Clefs should be introduced together. The remaining sections were rewritten as ranking questions in three sections, Interval Reading, Rhythm Reading, and Theory Study. The questions were rewritten as ranking questions because the researcher was seeking to determine the order the piano teachers were introducing the

musical concepts. Likert scale items did not allow the researcher to put the concepts in any particular order. Various questions were added and others removed from the demographic section. Where the teacher's studio was located, i.e., rural, urban, or suburban, was removed because the question was not relevant for the research question. What types of piano pedagogy training a teacher had participated in, college, clinics, or apprentice model, was added to the demographic section to give a more complete picture of the teachers who participated. The revised questionnaire contained 21 questions, including demographic questions, staff reading, hand positions, rhythm reading concepts, interval reading concepts, and theory study concepts (see Appendix B). As noted above, the demographic section contained many of the same questions but "Do you have any of the following training in piano pedagogy?" was added. The staff reading section contained the eight reliable Likert questions from questionnaire one including "It is not essential for students to understand standard notation in the first few lessons." Hand positions, rhythm reading concepts, interval reading concepts, and theory study concepts each contain a single question asking teachers to rank the listed concepts in the order they introduce them to their students. At the end of the questionnaire, teachers were asked to place the first concept they teach in rhythm with the complementary concept in both interval and theory. They were asked to do the same for both interval reading and theory reading. These questions were included because this study did not ask the teachers to place every concept in the order it is introduced because this would be too many concepts in one section. Therefore, the concepts were divided into smaller sections to help the teachers answer the questions. For details of the results of the pilot study see Nelson, Wilkerson, and Conaway (In press).

Pilot Study Two

The second 21-item questionnaire was sent to four university professors for content validity. Three professors were music education professors and the fourth was a piano pedagogy professor. Two music education professors were the same as the ones included in the initial study. The third music education professor has seven years of experience teaching general music, including music reading, to elementary students in the public schools, is Orff certified, and serves as Coordinator of the Music Education students at his university. He also has several books in print to help children learn to read rhythms. The fourth, a piano pedagogy professor, is head of the piano pedagogy department at the university where she teaches. She teaches both undergraduate and graduate piano classes and maintains a private piano studio for children in the community where she lives. She is also an active clinician for the Music Teachers National Association (MTNA) and for the state conventions which fall under MTNA. The researcher asked these professors to determine if they felt the questionnaire answered the question “What order do piano teachers of beginning students introduce musical concepts in the first year of study?” Based on this question, the professors all believed the questionnaire was valid. One asked how it was decided what concepts to include, one suggested the demographic information section be moved to the end, and all four found grammatical errors which were edited. The question concerning what concepts were included was answered by the researcher explaining the process of looking through the available method books and writing down the concepts as noted earlier in this chapter (See page 74). Three experienced piano teachers with between 15 and 30 years of

experience teaching beginning students, who did not participate in the study, also reviewed the questionnaire for readability and to find any remaining grammatical errors.

The researcher contacted the leadership of a piano teachers association in North Central Texas and received permission to conduct the survey (See Appendix C). The researcher then attended a meeting of the Association, gave an overview of the purposes of the study and the questionnaire, and answered questions from the membership. Because this Association was a small one, the researcher was concerned that fewer than 10 members would participate, therefore an additional 12 independent piano teachers who were not members of this Association were asked to participate to ensure at least 10 participants as recommended by Johnson and Christensen (2000). The survey was conducted using the survey software titled *Qualtrics* and a link was created for teachers to follow. Emails were sent to the membership as well as the 12 additional independent teachers. Several of the teachers then shared the survey link with other independent piano teachers who also participated in this pilot. While the exact number of teachers who were sent the link is unknown, it is known that the link was sent to the 37 members of the piano teachers association (S. Moore, personal communication, March 6, 2012) plus 12 additional teachers for a total of 49 invitations to participate in the study. Nineteen surveys were completed giving a potential completion rate of 39% which is well above the recommended completion rate of 10-20% (Johnson & Christensen, 2000). Once the survey was populated, the survey link was disabled and the data were analyzed using the *Statistical Package of the Social Sciences* (SPSS). For details of the results of the pilot study see Nelson, Wilkerson, and Conaway (In press).

Study

For this study, the researcher contacted the Music Teachers National Association (MTNA) and asked for and received permission to conduct the survey with the total membership of MTNA (B. Bengal, personal communication, May 17, 2012) (see Appendix D). The final questionnaire was the 21-item questionnaire from the second pilot study with a few modifications. Two additional demographic questions were added. The first additional question asked whether the teacher teaches beginning piano students ages six to nine. This was necessary because MTNA does not desegregate their membership information by instrument taught nor by age of student taught. Because the survey sought information from only piano teachers of beginning students ages six to nine, it was necessary for those teachers who did not meet the criteria to be taken out of the survey. The second additional question asked what state the teacher teaches in because the survey was sent to all members of MTNA nationally. This allowed for the desegregation of the data by state. In addition, the final three questions concerning the alignment of the first ranked concept in rhythm reading, interval reading, and theory study were deleted as these questions fall outside the research questions of this study. The complete questionnaire can be found in Appendix E.

Methodology

The questionnaire was administered through *Qualtrics* and a web link was sent to the leadership of MTNA who then included the web link in an email to the membership asking them to participate in this study. A one-month time frame was given for the MTNA membership to respond to the questionnaire which is more than the three-week time frame, as recommended by Gay et al. (1976/2009). At the end of the second week,

MTNA was asked to send out a reminder email to the membership. At the end of the one month time frame, the questionnaire was closed. Once the questionnaires were completed, the researcher collected the data and exported it from *Qualtrics* to SPSS for analysis.

Once the data were analyzed and the method books used most often by the participating teachers were determined, based on the questionnaire, the most used method books were surveyed noting the order musical concepts were introduced in each book. The survey was done by three analyzers, the researcher, a university piano professor, and an independent piano teacher. The university piano teacher holds a Doctor of Musical Arts (DMA) in piano and teaches undergraduate and graduate piano, piano literature, and piano pedagogy. The independent piano teacher has a Master of Music (MM) in piano pedagogy, owns a small academy, oversees the teaching of six piano teachers, and is actively teaching beginners ages six to nine. The matrix in Appendix F was used to rank the musical concepts in the order they appear in the most used method books. The matrix included the concepts the teachers were asked to rank with space for any additional concepts the analyzers should find. The concepts were divided into Hand Position, Rhythm Reading, Interval Reading, and Theory Study as they were in the questionnaire. The rankings of the analyzers were placed in SPSS, and a Kendall's coefficient of concordance was run as suggested by Huck (2000/2008). The Kendall's test shows the amount of disagreement between the analyzers. If they agree on every concept the coefficient will be a +1.0 (the smaller the number, the greater the disagreement). The desired result was a score of +1.0. If the Kendall's test is lower than the desired +1.0, the researcher went through each concept to see where the disagreement occurred. If two of

the three analyzers agreed on the rank of a concept, it was input into SPSS as that rank. Where there was no agreement on the rank of a concept, the analyzers were notified by email. Discrepancies were noted and method book and page number given by the other analyzers was sent to the analyzer who was not in agreement. The analyzer was asked to look at the method book again and decide if they agreed with the others or continued to disagree with the others. This method was used for all discrepancies and the analyzers were able to come to a consensus as to the placement of each concept in question. Once the concepts of the method books were ranked and placed in SPSS, a Spearman's Rho rank correlation was run with the ranks of the participating teachers (Charles & Mertler, 2002; Upton & Cook, 2006). The Spearman's Rho correlated how closely the teachers' rankings align with the methods' rankings.

The researcher, the university professor, and the independent piano teacher also placed each concept within Jerome Bruner's (1966) enactive, iconic, and symbolic learning theory using the matrix which provided specific instructions as to what qualified as enactive, iconic, and symbolic (see Appendix F). If a concept was simply introduced on the page, this was a symbolic teaching of the concept. If the concept was accompanied by a picture that represented the concept, then it was considered an iconic teaching of the concept. If the student was instructed to play, clap, sing, or move to learn the concept, then that was considered an enactive teaching of the concept. If the symbol was accompanied by a picture, the concept was placed in both the iconic and the symbolic categories. Some concepts were presented in multiple ways and were therefore placed in all categories that applied. The Bruner categories of the analyzers were placed in SPSS, and a Kendall's coefficient of concordance was run as suggested by Huck

(2000/2008). The Kendall's test shows the amount of disagreement between the analyzers. If they agree on every concept the coefficient will be a +1.0 (the smaller the number, the greater the disagreement). The desired result was a score of +1.0. Where the Kendall's test was lower than the desired +1.0, the researcher went through each concept to see where the disagreement occurred. When two of the three analyzers agreed on the category placement of a concept, it was input into SPSS as that category. Where there was no agreement on the category placement of a concept, the analyzers exchanged emails and came to a consensus as to the category placement of the concept in question. Examples of the emails can be found in Appendix G. Once concepts were categorized, the researcher determined, based on the findings from the researcher, the piano teacher, and the piano professor, if the most used method books use none, some, or all of Bruner's enactive, iconic, and symbolic learning theory. Because the concepts were ranked based on their order of introduction, the researcher was able to determine if the earliest concepts were introduced enactively and the later ones symbolically. If earlier concepts were introduced enactively, this followed Bruner's theory. If they were introduced symbolically, this did not follow Bruner's theory. If early concepts were introduced enactively and symbolically but not iconically, one of the steps of Bruner's concept was skipped. The researcher was able to determine how often enactive was used as opposed to iconic as opposed to symbolic and whether concept introduction was done more often in one mode or another.

Data Analysis

The 21-item questionnaire was analyzed using SPSS. The results of the questionnaire were used to answer the research questions concerning what method book

or books the participating teachers used with their first year students and what order they introduced the music concepts during the first year of study. It was determined which methods were used most by the participating teachers by taking a simple tally. For the Likert scale questions in the Staff Reading portion of the questionnaire modes were used to analyze the results as recommended by Klemens (2009). For the four ranking questions, means were used to determine the ranks of the musical concepts with the smallest mean being the first ranked concept and the highest mean being the last ranked concept. Using means allowed the researcher to take into account that concepts could be introduced in different orders by different teachers and in different method books. Using the mode did not allow for as great a differentiation between concepts because it simply counted how many times the concept was ranked and not whether it was ranked first or second, or eighth. Therefore, using the mean gave a more complete picture of where each concept was ranked.

The Method Book Matrix (see Appendix F) was used to answer the research questions concerning the order the most used method books introduced musical concepts and whether the introduction of these concepts used none, any, or all of Bruner's categories of learning. The most often used books, as determined by the teachers' answers to the method book question, were surveyed and the concepts entered into SPSS and the means used to determine rank as was used for the teachers' rankings. As noted in the previous chapter with the teachers' rankings, using the means gave a more complete picture of each concept's actual rank than using the mode. To determine if the teachers' rankings correlated with the most used method books rankings, a Spearman Rho rank

correlation was used as recommend by Charles and Mertler (2002) and Upton and Cook (2006).

The researcher used the method book matrix to determine how often a concept was introduced using enactive, iconic, and symbolic, using none of these categories, or a combination of two or all three ways of learning. Modes were used as recommended by Klemens (2009). By using modes, the researcher was able to determine how often each category, enactive, iconic, and symbolic was used and whether the method books favored one category over another. Table 2 states the research question, how the data were collected for each question, and how each question was analyzed.

Table 2

Data Source and Analysis

Question	Data Source	Analysis
In what order do piano teachers of beginning students ages six to nine introduce musical concepts in the first year of study?	Questionnaire	Quantitative comparison of means
What methods are used most often by the participating teachers?	Questionnaire	Quantitative comparison of modes
What order are musical concepts introduced by the method books most used by the participating teachers?	Method Book Matrix	Kendall's coefficient of concordance for interrater reliability Quantitative comparison of means
In what ways do the teachers' order of concept introduction align with the order of concept introduction in the most used methods?	Questionnaire + Method Book Matrix	Quantitative analysis using Spearman's Rho Rank Correlation
What concepts in the most used methods use any, some, or all three modes of learning, enactive, iconic, and symbolic?	Method Book Matrix	Kendall's coefficient of concordance for interrater reliability Quantitative comparison of modes

In the following chapter, the researcher describes the participants then reports the participants' rankings of the musical concepts listed in the questionnaire and the method books that were specifically listed. The researcher also includes the analysis of the most used method books, the rankings of the musical concepts and the correlation between the participants' rankings and the method books' ranking of the musical concepts. Finally, the results of the analysis of the most used books using the lens of Jerome Bruner's enactive, iconic and symbolic learning theory will be reported.

CHAPTER FOUR

Results

The purpose of this study was to determine what order piano teachers introduce musical concepts in the first year of study to beginning students ages six to nine, and whether these teachers follow the same order of concept introduction used in the most widely used method books. Secondly, this study used the lens of Jerome Bruner's enactive, iconic, and symbolic learning theory to determine if the concepts as introduced in the method books are introduced using any, some, or all of Bruner's modes of learning.

The research questions guiding this study are:

1. In what order do piano teachers of beginning students ages six to nine introduce musical concepts in the first year of study?
2. What piano method books are used most often by the participating teachers?
3. What order are musical concepts introduced by the method books most used by the participating teachers?
4. Does the teachers' order of concept introduction align with the order of concept introduction in the most used methods?
5. What concepts in the most used methods use any, some, or all three modes of learning, enactive, iconic, and symbolic?

The remainder of this chapter reveals the results of the questionnaire, detailing each section individually and how the rankings of the teacher's correlate with the rankings in

the three most used method books. Lastly, this chapter shows the results of the analysis of the three most used method books according to Bruner's learning theory.

Participants

The email with the questionnaire link was sent to the approximately 24,000 members of the Music Teachers National Association (MTNA) with 642 participants started the survey. Of those, 20 answered no to the IRB consent form for a total of 622 participants for an overall completion rate of 2.6%. Those who agreed to participate were then asked if they taught beginning piano students ages six to nine. Sixty-one participants replied no and were then taken to the end of the survey. This left 562 teachers, 2.3% of 24,000 possible participants, who answered some or all of the questions. According to the 2005 Music Teachers National Association survey, the population which fit the criteria was approximately 17,741. Using this sample size, the needed percentage for an adequate sample was 2.0% and the actual completion rate was 3.5%. The completion rate for both population sizes is above the 2.0% needed for an adequate sample with a .05 confidence level and a 5% confidence margin (Raosoft, 2004; The Research Advisors, 2006).

In looking at the number of answers for each question, approximately 70 of these participants did not answer all the questions. Some of the reasons are that they thought the survey was too long and simply gave up and others looked ahead to see how many questions were left and the instrument would not allow them to go back. The researcher received some emails concerning these two reasons. Another reason could be these participants did not teach those concepts and therefore did not mark them. The data indicated at least 20 participants used the Suzuki method, many of whom contacted the

researcher by email to say they introduced very little reading in the first year and therefore did not mark many concepts. Other researchers have noted that online surveys are subject to fatigue and break off questions where participants do not finish (Mardsden & Wright, 1983/2010; van Belle, 2008). The researcher used all the data gathered from the 562 participants for a final 3.5% completion rate. Only 376 participants were needed for the study to have an adequate sample margin (Raosoft, 2004; The Research Advisors, 2006) and all questions had more than 376 answers. Therefore, even though not all the participants answered all the questions, there were enough answers for every question.

Three participants' answers were removed from the results. One participant put the number "2345" for many of the answers. It is unclear what the meaning of this answer was and caused the results to be skewed. Two other participants answered *10* to all questions. Again the meaning of these answers was unclear. It is unknown if the first participant meant that she taught those concepts second, third, fourth, and fifth depending on the situation, or if she had computer problems. The other two participants may also have experienced issues with the device they were using. It is possible, if they were answering questions on their smart phones, the answers were auto-corrected. Therefore, these three participants' answers were not included in the results reported in this chapter.

Based on the data, the participants were 92% female and 90% Caucasian. More than 60% of the participants had been teaching 20 years or more and approximately 80% had been teaching for more than 10 years. Forty-eight states and the District of Columbia were represented. Delaware and New Hampshire were the only two states not represented. Additionally, two teachers from Canada also participated. Ninety-five percent of the participants indicated they had received at least one type of training in

piano pedagogy including college level pedagogy classes, clinics and conferences about piano pedagogy, and an apprentice model where they were trained by another piano teacher; only 5% of the participants indicated they had receive no piano pedagogy training at all. The percentages in Table 3 add up to more than 100% because participants were allowed to choose all the types of training which applied.

Table 3
Demographic Information

Demographics	<i>n</i>	%
Gender		
Female	493	92.1
Male	42	7.9
Ethnicity		
Caucasian	487	90.5
Asian-American	30	5.6
Hispanic-Latino	7	1.3
African-American	3	0.5
Other	11	2.0
Training		
College Class	392	59.5
Clinic	392	59.5
Apprentice/Master	185	28.1
None	33	5.0
Year of Teaching		
Less than 5	20	3.7
5-10	78	14.5
10-20	111	20.6
20-30	120	22.2
More than 30	210	39.0

MTNA conducted a survey of their membership in 2005 and gathered some demographic data. This data indicated that 87% of the members were women and 13% were men. This study had a slightly higher percentage of women. MTNA members

indicated that 89% were Caucasian, 5% were Asian, 1% each were African-American and Latino/Hispanic and 1% were Other. This study's participants had approximately the same ethnic backgrounds. The teachers in MTNA indicated that 38% had been teaching for more than 30 years, 22% had been teaching between 20 and 30 years, 26% had been teaching between 10 and 20 years, and 15% had been teaching less than 10 years.

Table 4

MTNA 2005 Survey vs. Participating Teachers

Demographics	MTNA %	Study Participants %
Gender		
Female	13.00	7.90
Male	87.00	92.10
Ethnicity		
Caucasian	89.00	90.50
Asian-American	5.00	5.60
Hispanic-Latino	1.00	1.30
African-American	1.00	0.50
Other	1.00	2.00
Years of Teaching		
1-10	15.00	18.50
11-20	18.00	20.60
21-30	26.00	22.20
More than 30	38.00	39.00

Three percent of the teachers in the MTNA survey did not report their years of teaching and are not included in Table 4. These percentages are close to the ones reported by the participants in this study indicating that the teachers who participated in this study are representative of the teachers of MTNA as described in their 2005 survey (Music Teachers National Association, 2005). Table 4 shows a comparison of the MTNA 2005

survey and the study participants. The rest of this chapter will give the data for each of the research questions individually.

Research Question 1

Research Question 1 was “In what order do piano teachers of beginning students ages six to nine introduce musical concepts in the first year of study?” Because the questionnaire was divided up into sections, the data for each section were reported individually including Staff Reading, Hand Position, Rhythm Reading, Interval Reading, and Theory Study.

Staff Reading

The first section of the questionnaire asked the participants to respond to items concerning reading the musical staff. The first six items included whether the musical staff, bar lines and measures, standard notation, lines, and spaces should be introduced at the first lesson. The final item sought to determine if participants believed the treble and bass clefs must be introduced at the same time. While not defined in the questionnaire, standard notation included musical symbols for notes, rests, expression, and anything else included in reading music. The seven questions of this section were asked as Likert scale items using Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, and Strongly Agree. The majority of the teachers did not believe that the staff, bar lines, standard notation, lines and spaces, or measures needed to be introduced at the first lesson.

The seventh question of this division did not ask if the Treble and Bass Clefs needed to be introduced at the first lesson but rather if they should be introduced together.

The majority of the teachers did not think they had to be introduced at the same time.

Table 5 contains all the results from the Staff Introduction section of the questionnaire.

Table 5

Results from Staff Introduction

Questions	<i>n</i>	1	2	3	4	5
Staff must be introduced at first lesson	574	225 (39%)	225 (39%)	42 (7%)	17 (3%)	15 (3%)
Bar lines must be introduced at first lesson	521	219 (42%)	221 (42%)	57 (11%)	17 (3%)	7 (1%)
It is not essential for students to understand standard notation in the first few lessons	524	32 (6%)	63 (12%)	66 (13%)	224 (43%)	139 (27%)
Lines and spaces must be introduced at first lesson	522	214 (41%)	238 (46%)	46 (9%)	14 (3%)	10 (2%)
Measures must be defined at first lesson	525	215 (41%)	234 (45%)	44 (8%)	27 (5%)	5 (1%)
Clefs must be introduced together	524	110 (21%)	205 (39%)	102 (19%)	86 (16%)	21 (4%)

Note. 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 – Strongly Agree

The other sections of the questionnaire were set up as ranking questions. Participants were asked to put specific musical concepts in the order they introduced them in the first year of piano study. Once the data were gathered, the mean for each concept was determined. The concepts were then put into a ranking order based on their mean; the lower the mean, the higher the rank. In other words, the concept with the

lowest mean was ranked number one. The means were used instead of the mode because the means took into consideration all the ranks a concept received and not just the number of times the concept was ranked. As an example, the quarter note received the most number one rankings, but it also received rankings which included two, three, and four. Each number one rank was input as a one, each number two rank was put in as a two and so on and then the total was divided by the number of times the quarter note was ranked giving a mean of 1.1276. The quarter note is ranked number one in the Rhythm Reading section but was not ranked number one by all the teachers as is indicated by the mean.

Hand Position

The first ranking section concerned hand position. As mentioned in the *Approaches to Piano Teaching* section of Chapter One, many of the method books start the students, once they are playing on the white keys, in a particular position, either C position or Middle C position (Bastien & Bastien, 1993; Clark, Goss, & Holland (2000), Faber & Faber, 1993; Thompson, 1936). Middle C position is where the student's thumbs share the key Middle C and the fingers sit on the keys moving out from Middle C. Therefore, the right hand covers Middle C, D, E, F, and the little finger is on G. The left hand covers Middle C, B, A, G, and the little finger is on F. The participants were asked what order the hand positions should be introduced. The results indicated that Middle C position was first, C position was second, and G position was third. All result means are given in Table 6. The means of Middle C position and C position are so close they are virtually tied. Looking at the frequency of the answers, Middle C position was ranked first by 69% of the participants who ranked Middle C position and C position was

ranked first by 55% of the participants who ranked C position. The total percentage of hand positions ranked number one is 140% indicating that some teachers introduce hand positions simultaneously. The standard deviations also indicate that Middle C and C Position are introduced first almost equally by the participants. The standard deviation for G Position still placed it ranked third. Participants were allowed to give concepts they taught at the same time the same rank.

Table 6

Hand Position Means, Standard Deviations, and Ranks

Hand Positions	<i>n</i>	<i>M</i>	<i>SD</i>	Rank 1 <i>n</i> (%)	Rank 2 <i>n</i> (%)	Rank 3 <i>n</i> (%)
Middle C Position	443	1.3599	.73673	306 (69)	91 (21)	46 (10)
C Position	483	1.4442	.59421	270 (56)	202 (42)	11 (2)
G Position	473	2.3561	.81065	75 (16)	135 (28)	263 (56)

Interval Reading

Interval Reading was the second group of concepts participants were asked to rank. The rankings in order according to their means were steps, skips, 2nds, 3rds, melodic intervals, harmonic intervals, 4ths, and 5ths (Table 7). The standard deviations indicated that there was a wide variance in the order the participants introduced the Interval Reading concepts. Looking specifically at the interval of 5ths, subtracting the standard deviation from the mean moves its rank from 8th to 4th. The same is true for all the concepts, adding or subtracting the standard deviation would give them different ranks. Part of the reason for this is that not every participant ranked every concept. The questionnaire did not ask the participants why they did not rank all the concepts but one

possible reason could be that not every participant introduced all of these concepts in the first year of study and therefore only ranked those concepts which they introduced. As is reported later in this chapter with the results for Research Question 3, none of the three most used method books introduced all the concepts listed in the questionnaire. Of the 44 concepts presented in the questionnaire, the Clark et al. (1993) used only 16, the Faber and Faber (1993) used only 17 and the Alfred (2005) used only 20. Again these results are discussed later in this chapter. In addition, the participants were asked specifically to rank only those concepts which they introduced in the first year of study (see Questionnaire in Appendix E). Table 7 gives the means and standard deviation of the Interval Reading question.

Table 7
Interval Reading

Interval Reading Concepts	<i>n</i>	<i>M</i>	<i>SD</i>
Steps	496	1.1127	.70381
Skips	493	2.0000	.94281
2nds	497	2.4529	2.69226
3rd	500	3.1040	1.28549
Melodic Intervals	457	3.8109	1.98609
Harmonic Intervals	450	4.2061	1.91022
4ths	483	4.5860	1.52946
5ths	487	4.7342	1.7990

Rhythm Reading

The third ranking question concerned Rhythm Reading. The ranks in order according to their means are quarter note, half note, whole note, dotted half note, quarter rest, 4/4, time signature, half rest, 3/4, whole rest, 2/4, beamed eighth note, single eighth note, eighth rest, and 6/8 (Table 8). Again, not every participant ranked every concept.

Table 8

Rhythm Reading

Rhythm Reading Concepts	<i>n</i>	<i>M</i>	<i>SD</i>
Quarter Note	486	1.1276	.75994
Half Note	484	1.8864	.944436
Whole Note	484	2.8533	1.43354
Dotted Half Note	476	3.9811	2.10204
Quarter Rest	474	4.3544	2.37074
4/4	479	4.6409	2.35021
Time Signature	473	4.7526	5.89217
Half Rest	460	5.4187	3.77238
3/4	476	5.6387	2.65562
Whole Rest	457	6.0699	6.41861
2/4	432	6.4642	11.3328
Beamed Eighth Notes	379	6.8553	3.27823
Eighth Notes	321	7.3447	3.36869
Eighth Rest	305	7.9477	3.67498
6/8	249	9.0558	5.07434

As the rank of a concept increases, the number of participants who ranked the concept decreases slightly. The standard deviations for this section also indicate a variance in the order the participants introduce the concepts. Some of these are significant. The time signature 2/4 has a standard deviation of 11.3328 perhaps indicating that it is introduced much earlier and much later than its rank of 11/15. Other concepts with wide standard deviations are Time Signature, Whole Rest, and 6/8. Each of these may often be introduced later in the first year of study or simultaneously with concepts which are introduced earlier. Some books may introduce the note with its corresponding rest, or time signatures may be introduced together. These results also do not reflect what, if any, concepts were introduced simultaneously.

Theory Study

The final ranking question concerned theory study. The rankings according to their means were *forte*, *piano*, repeat sign, ties, slurs, *crescendo*, sharps, *decrescendo*, flats, 8va sign, *ritard*, chords, fermata, tempo marks, *a tempo*, first and second endings, *D*, *C*, *al fine*, and key signatures (Table 9). Some of the means of opposite concepts are very close together such as *piano* and *forte*, and *crescendo* and *decrescendo*. Often opposite concepts are introduced either together at the same lesson or at consecutive lessons. Examples of this are found in Alfred *Premier* (2010), Faber *Piano Adventures* (1993/2011), and *Succeeding at the Piano* (Marlais, 2010). It is interesting that the standard deviations in this section, with the exception of 1st and 2nd endings and *D*, *C*, *al fine*, increase as the rank increases. This may indicate that while the order of the participants varies, they do not vary as much as in the previous sections as well as the previously noted reason that opposite concepts are often introduced simultaneously. It

may also be because of the great drop off of participants that ranked the last concepts. More than 200 fewer participants ranked the last concept as ranked the first. As with the Rhythm Reading concepts, the higher the rank of a concept, the fewer teachers who ranked the concept.

Table 9

Theory Study

Theory Study Concepts	<i>n</i>	<i>M</i>	<i>SD</i>
<i>forte</i>	451	1.6763	1.56825
<i>piano</i>	451	1.6984	1.49740
Repeat Sign	440	2.7091	1.84030
Ties	434	3.9828	2.23870
Slurs	421	4.0983	2.61194
<i>crescendo</i>	377	5.3704	3.03129
Sharps	399	5.4511	3.10972
<i>decrescendo</i>	363	5.5187	3.17470
Flats	396	5.6843	3.12667
8va Sign	370	6.1078	3.76243
<i>ritard</i>	381	6.3979	3.27622
Chords	333	6.8548	4.15185
Fermata	348	7.1143	5.52240
Tempo Marks	309	7.6097	4.12341
<i>a tempo</i>	276	7.6931	4.12790
1 st and 2 nd Endings	302	8.0590	6.11161
<i>D. C. al fine</i>	308	8.1903	8.54832
Key Signatures	245	8.4690	4.76377

Appendix H contains all the individual ranking results for each concept in Hand Position, Interval Reading, Rhythm Reading, and Theory Study.

The overall results of the questionnaire do not give a complete picture of what order the participants introduce musical concepts in the first year of piano study because the questionnaire did not list all 44 concepts as one, single ranking question. This would have been too many concepts to rank at one time. It does however give a picture of what order musical concepts are introduced in specific areas. More than 70% of participants do not believe that the musical staff, bar lines, measures, lines, spaces or other notation which is considered standard must be introduced at the first lesson. Participants are almost evenly divided on whether students should begin playing the white keys in C Position or Middle C Position. Steps and skips are introduced first and second more often than other intervals but standard deviations make it clear that the participants vary widely on what intervals are introduced first. The quarter note is introduced first most often in the Rhythm Reading section and even with the standard deviation, is ranked first. Other concepts in the Rhythm Reading section, such as 2/4 and whole rests, have large standard deviations indicating that the participants do not agree on when these concepts should be introduced. In the Theory Study section, *forte* and *piano* have almost identical means indicating that participants often introduce them simultaneously. This study allowed participants to rank concepts which were introduced together with the same rank but did not look specifically at how often this happened. Overall, lower ranking concepts in each section had fewer participants rank those concepts.

Research Question 2

The second research question was “What methods are used most often by the participating teachers?” Participants were asked to identify which book or books they used in the first year of piano study with their students ages six to nine. Seventy-eight different method books were noted by the participants. Some of the participants did not list any method in particular but mentioned “nothing special” or they worked with the individual student first before choosing a method. Eight participants used their own method of teaching piano. Some of these participants sent emails to the researcher outlining exactly what they were doing in their studios and others sent the URLs for websites where their materials were available for sale. Some of those using their own way of teaching were also using published methods. Of the 529 participants who answered the method book question, 59% listed only one method book, 19% listed two method books, and 17% listed three or more method books, with one participant listing 11 method books. Four percent of the participants indicated they did not use any particular method at all.

Many of the 78 books were listed only once. These included the *Chopin Method*, Gillock, *Method Rose*, and the *Russian School of Piano* (see Appendix I). Some of the older method books, published before 1970, had between two and 30 users such as *Hal Leonard Piano Lessons*, *Schaum*, and *John Thompson Teaching Little Fingers to Play*. The method book listed the most was Faber and Faber’s *Piano Adventures* which was listed by 59% of the participants. Twenty-four percent of the participants mentioned Alfred by name but not all the participants specified which series of Alfred they were using. There are four Alfred series’ including *All-In-One*, *Basic*, *Premier*, and *Prep*.

These four method books introduce the musical concepts in almost the exact order. The differences between the four books include that the *All-In-One* book is longer and introduces more than twice the number of concepts of the other three and the *Premier* series introduces rests earlier. Of the Alfred books the *Premier* series was listed specifically 66 times. It is unknown exactly how many participants use each of these series as 36 participants listed only “Alfred” and did not specify which series they were using. Clark’s *Music Tree* was the third most listed method with 55 teachers, followed by Bastien with 48 teachers, and Marlais’ *Succeeding at the Piano* with 44. Bastien, like Alfred, has more than one series. Bastien *Basics* and Bastien *For the Young Beginner*. One teacher also noted that she used the “original” Bastien. Therefore, while Bastien had more teachers using it than the Marlais, the Marlais was named specifically more often than any one Bastien book. Table 10 gives top 16 method books. A complete list of the books and how many times a participant listed each book is given in Appendix I.

The overall results of Research Question 2 indicated that there is no specific method book or curriculum being used by the participants. More than half of the participants (58.4%) use one book, the Faber and Faber *Piano Adventures*, but a third of the participants indicated they used more than one method book with their students. Of the participants who listed the Faber and Faber book, 136 of the 290 or 47% also listed at least one other method book that they used.

Table 10

Top 16 Books as Identified by Participants (n = 529)

Book Name	Number Using Book	Percentage
Faber Piano Adventures	290	54.8
Alfred Premier	66	12.5
Alfred Basic or no name	62	11.7
Clark Music Tree: Time to Begin	55	10.4
Bastien Basics or no name	48	9.1
Marlais Succeeding at the Piano	44	8.3
Hal Leonard Piano Lessons/Library	27	5.1
Nothing Particular	22	4.2
Harris Celebrate Piano!	20	3.8
Suzuki	20	3.8
Faber My First Piano Adventures	19	3.6
Alfred Prep	17	3.2
Snell Piano Town	14	2.6
Alfred Music for Little Mozarts	12	2.3
John Thompson Teaching Little Fingers to Play	12	2.3
Music Pathways	11	2.1

Research Question 3

The results of Research Question 2 were used to determine which method books would be analyzed to answer Research Question 3. The books were chosen because they were identified by at least 53 participants. Fifty-three is 10% of the 529 participants who responded as recommended by Charles and Mertler (2002). The method books chosen were Faber and Faber's *Piano Adventures*, Alfred's *Premier*, and Clark, Goss, and Holland's *Music Tree: Time to Begin*. The books were analyzed to determine what order musical concepts were introduced.

The third research question was “What order are musical concepts introduced by the method books most used by the participating teachers?” The three books listed specifically as being used most often by the participating teachers were Alfred’s *Premiere* series, Clark, Goss, and Holland’s *The Music Tree: Time To Begin*, and Faber and Faber’s *Piano Adventures*. The method books were mailed to analyzers and the Method Book Matrix was emailed (see Appendix F). The first part of the matrix asked the analyzers to rank the concepts as they appeared in these three books. If two concepts were introduced on the same page, they were to be given the same rank. The analyzers returned the matrices to the researcher and she put them into a chart to look for discrepancies. Emails were sent to the individual analyzers with discrepancies noting the book and page number where these occurred asking for clarification. The analyzer then agreed to make changes to the rankings or not and those results were added to the chart. One example of these discrepancies was that two of the analyzers had missed the introduction of the dotted half note, the tempo marks, and 2/4 in the Alfred *Premier* and the introduction of the dotted half note and 2/4 in the Clark, Goss, and Holland’s *The Music Tree: Time To Begin*. One analyzer missed the tempo marks in the Faber and another missed the ties in the Faber (M. Manwarren, personal communication, February 6, 2013; S. Boyce, personal communication, February 11, 2013). Examples of the emails exchanged by the researcher and the other analyzers are in Appendix G. Once two of the three analyzers agreed on the rank of a concept, it was entered into SPSS as that rank.

There were two concepts where the researchers were not in complete agreement. In the Alfred book, *crescendo* and *decrescendo* were introduced by having the student play two pieces getting louder in each measure and then getting softer in each measure

respectively. Two of the analyzers believed the concepts were being introduced. The third analyzer felt that because it was not mentioned in language on the page and the corresponding symbols were not present, that the concepts were not being introduced. As mentioned in the Method chapter, if two analyzers agree on a concept, the ranking they agree on were used. This was the case in the Alfred book for *crescendo* and *decrescendo* and they were ranked numbers three and four for Alfred.

Because the analyzers agreed on all the rankings except the *crescendo* and the *decrescendo* in the Alfred book, the SPSS would not ascertain the Kendall's coefficient of concordance for interrater reliability because there was not enough variance. Therefore, if the SPSS had run the test, the Kendall's coefficient would have been near +1.00 because the analyzers agreed on the ranks for all but two concepts in all three books (Kirk, 1999/2008). Table 11 shows complete method book rankings results.

Even though the analyzers agreed on almost all the concepts, several concepts do have standard deviations. The standard deviation between Middle C Position and C Position are because the Clark et al. does not use hand position, the Alfred introduces Middle C Position first, and Faber and Faber books introduce C Position first. Other concepts have standard deviations for the same reasons. Not all these concepts are introduced in all three books and they are not introduced in the same order.

Table 11

Rankings of Concepts in Alfred, Clark et al., and Faber Primers

Variables	<i>n</i>	<i>M</i>	<i>SD</i>
Hand Positions in Rank Order			
Middle C Position	3	1.5000	.54772
C Position	3	1.5000	.54772
Interval Study Concepts in Rank Order			
Steps	3	1.0000	.0000
2nds	3	1.0000	.0000
Skips	3	2.0000	.0000
3rds	3	2.0000	.0000
4ths	3	3.0000	.0000
5ths	3	4.0000	.0000
Rhythm Study Concepts in Rank Order			
Quarter Note	3	1.0000	.0000
Half Note	3	2.0000	.86603
2/4	3	4.0000	.0000
Whole Note	3	4.0000	.86603
Time Signature	3	4.3333	1.0000
4/4	3	4.3333	1.0000
Dotted Half Note	3	4.3333	2.17945
Quarter Rest	3	4.5000	2.73861
$\frac{3}{4}$	3	5.3333	1.80278
Whole Rest	3	6.0000	.0000
Half Rest	3	8.0000	.0000
Theory Study Concepts in Rank Order			
Repeat Sign	3	1.0000	.0000
<i>Piano</i>	3	1.6667	.50000
<i>Forte</i>	3	2.0000	.0000
Slurs	3	3.0000	.0000
<i>Decrescendo</i>	3	3.0000	.0000
Tempo marks	3	3.6667	1.03280
<i>Crescendo</i>	3	4.0000	.0000
Ties	3	4.0000	.0000
8va Sign	3	4.0000	.0000

Although 78 different method books were listed by the participants, the researcher chose to analyze only those which were identified specifically as being used by the participants. Of the three books identified by 10% of the participants, their order of introduction of the musical concepts was similar but not exact, resulting in rankings which also had standard deviations. None of the three method books introduced all 44 concepts listed in the questionnaire. Of the 28 concepts identified collectively by the method books, only 10 were introduced in all three method books. Like the participants, no two books introduce the musical concepts in exactly the same order during the first year of study. Using the means to determine the rank order of the concepts allows for a correlation between the method book's ranks and the participant's ranks but it needs to be understood that almost every book and every participant has a unique order to introduce musical concepts.

Research Question 4

Research Question 4 asked "Does the teachers' order of concept introduction align with the order of concept introduction in the most used methods?" The results from Research Question 1 and Research Question 3 were used to generate the data for this question. The researcher decided to use only those books which had been listed specifically by 10% of the teachers as suggested by Charles and Mertler (2002) which suggest that 10% of a population makes a sufficient sample. Only three books meet this criteria, Faber and Faber's *Piano Adventures*, Alfred's *Premiere*, and Clark et al.'s *Music Tree*. The rankings for each concept were based on the means of each concept. The rank was entered into SPSS and a Spearman Rho rank correlation was calculated on each category. A positive correlation indicates that as one rank increases, the other also

increases. A negative correlation indicates that as one rank increases, the other rank decreases. When the Spearman Rho rank correlation was calculated in SPSS, the results were positive and significant at the $p < .01$ level for the overall teacher rankings as compared to the overall book rankings of the musical concepts. There was a positive, significant correlation at the $p < .05$ level for Rhythm Reading and Interval reading. The results were not significant for Theory Reading. These non-significant results for Theory Reading may be because of the small number of concepts actually introduced in the most used books. Only six of the 18 concepts were introduced and of those six only two, *forte* and *piano*, were introduced in all three books. Of the participants, 245 ranked all 18 concepts. This large number of missing concepts in the books is probably the reason for the non-significant finding in Theory Study.

For the Hand Position section, SPSS could not calculate the Spearman Rho rank correlation because there was not enough variance in the data. Because the Faber and Faber ranked C position first, Alfred ranked Middle C position first, and Clark et al. did not introduce any hand position, the rank of C position and Middle C position was 1.5. This meant there was no variance in the book ranks for Hand position. Table 12 gives the correlations between the teachers' rankings of the concepts and the method books' rankings.

The Spearman Rho rank correlation for all the concepts between the participants and the books was $r_s(15, 40) = .767, p < .01$ (Table 12). This is a strong correlation as noted by Kirk (2008) and Huck (2008). The closer to +1 or -1 the correlation, the stronger the correlation is. This indicates that overall, the participants and the books

agree on what order the musical concepts should be introduced in the first year of piano study.

Table 12

Teachers' Ranks vs. Methods' Ranks

Correlations		teachrank	allrank
Overall Correlation			
Spearman's Rho	Correlation Coefficient	1.000	.767**
	Teachrank Sig. (2-tailed)	.	.000
	N	42	27
	Allrank Correlation Coefficient	.767**	1.000
	Allrank Sig. (2-tailed)	.000	.
	N	27	27
Rhythm			
Spearman's Rho	Correlation Coefficient	1.000	.696*
	Teachrank Sig. (2-tailed)	.	.017
	N	15	11
	Allrank Correlation Coefficient	.696*	1.000
	Allrank Sig. (2-tailed)	.017	.
	N	11	11
Interval			
Spearman's Rho	Correlation Coefficient	1.000	.853*
	Teachrank Sig. (2-tailed)	.	.031
	N	8	6
	Allrank Correlation Coefficient	.853*	1.000
	Allrank Sig. (2-tailed)	.031	.
	N	6	6

(table continues)

Correlations		teachrank	allrank	
Theory				
Spearman's Rho		Correlation Coefficient	1.000	.659
	Teachrank	Sig. (2-tailed)	.	.076
		N	18	8
		Correlation Coefficient	.659	1.000
	Allrank	Sig. (2-tailed)	.076	.
		N	8	8
Hand				
Spearman's Rho		Correlation Coefficient	1.000	.
	Teachrank	Sig. (2-tailed)	.	.
		N	3	2
		Correlation Coefficient	.	.
	Allrank	Sig. (2-tailed)	.	.
		N	2	2

Note. ** Correlation is significant at the 0.01 level (2-tailed).

The correlation between the Alfred book and the overall participant rankings was $r_s(17,40) = .839, p < .01$. The correlation between the Clark book and the overall participant rankings was $r_s(15,40) = .787, p < .01$. The correlation between the Faber and Faber book and the overall participant rankings was $r_s(14, 40) = .735, p < .01$. With each method book, overall their order of concept introduction correlates strongly with the participants' overall order of concept introduction. This indicates that while there are individual variances, there is a general order to how musical concepts are introduced in the first year of piano study. Table 13 shows the correlations between the overall teacher rankings and the individual books.

Table 13

Teacher Ranks vs. the Individual Ranks

Correlations		teachrank	rank
<i>Alfred: Premier</i>			alfredrank
Spearman's Rho	Correlation Coefficient	1.000	.820**
	Teachrank Sig. (2-tailed)	.	.000
	N	44	20
Alfredrank	Correlation Coefficient	.820**	1.000
	Sig. (2-tailed)	.000	.
	N	20	20
<i>Clark, Goss, and Holland: Music Tree</i>			clarkrank
Spearman's Rho	Correlation Coefficient	1.000	.787**
	Teachrank Sig. (2-tailed)	.	.000
	N	44	17
Alfredrank	Correlation Coefficient	.787**	1.000
	Sig. (2-tailed)	.000	.
	N	17	17
<i>Faber and Faber: Piano Adventures</i>			faberrank
Spearman's Rho	Correlation Coefficient	1.000	.735**
	Teachrank Sig. (2-tailed)	.	.001
	N	44	16
Alfredrank	Correlation Coefficient	.735**	1.000
	Sig. (2-tailed)	.001	.
	N	16	16

Note. ** Correlation is significant at the 0.01 level (2-tailed).

Because so many of the participants identified more than one method book which they used, the researcher calculated the correlations between the individual method books and the participants who identified using those books. The correlation between the Alfred book and the Alfred teachers was $r_s(40, 7) = .853, p < .01$. The correlation between the Clark book and the Clark teachers was $r_s(40, 15) = .821, p < .01$. Finally, the

correlation between the Faber book and the Faber teachers was $r_s(42, 14) = .730, p < .01$. According to Kirk (1999/2008) and Huck (2008), the correlations are strong for all three of the most used method books and the participants who identified them indicating that these participants were using the books written. Table 14 gives the correlations between the teachers who listed a method book and the method book.

Table 14

Individual Method Books vs. the Teachers Who Listed Them

Correlations			rank	teach
Alfred			alfredrank	alfredteach
Spearman's Rho	alfredrank	Correlation Coefficient	1.000	.842**
		Sig. (2-tailed)	.	.000
		N	20	20
	alfredteach	Correlation Coefficient	.842**	1.000
		Sig. (2-tailed)	.000	.
		N	20	44
Clark, Goss, and Holland			clarkrank	clarkteach
Spearman's Rho	clarkrank	Correlation Coefficient	1.000	.821**
		Sig. (2-tailed)	.	.000
		N	17	17
	clarkteach	Correlation Coefficient	.821**	1.000
		Sig. (2-tailed)	.000	.
		N	17	44
Faber and Faber			faberrank	faberteach
Spearman's Rho	faberrank	Correlation Coefficient	1.000	.730**
		Sig. (2-tailed)	.	.001
		N	16	16
	faberteach	Correlation Coefficient	.730**	1.000
		Sig. (2-tailed)	.001	.
		N	16	44

Note. **. Correlation is significant at the 0.01 level (2-tailed).

With the exception of Theory Study, all the correlations between the participant's rankings of concept introduction and the method book's rankings of concept introduction were at the $p < .05$ or higher. Theory Study may not be significantly correlated because very few of the musical concepts identified on the questionnaire were introduced in the method books analyzed. This may have skewed the data somewhat. In addition, the number of participants who ranked all 18 of the theory concepts was half of those who ranked the first few concepts in this section. These overall correlations in the other sections of the questionnaire were strong whether it was within each section of the questionnaire or with the individual method books. This indicated that the participants generally follow the order of concept introduction as presented in the method books which they are using.

Research Question 5

Research Question 5 was "What concepts in the most used methods use any, some, or all three modes of learning, enactive, iconic, and symbolic?" Charles and Mertler (2002) suggest that 10% of a population is a sufficient sample. Therefore, the researcher chose to use only those books which were listed specifically by 10% of the participants to use as the sample method books to be analyzed. The three books analyzed were: Alfred's *Premier*, Faber and Faber's *Piano Adventures*, and Clark, Goss and Holland's *Music Tree*. The same matrix, used by the analyzers to gather data for Research Question 3, was used to gather data for this question. The Matrix, given in Appendix F, contained the same concepts as the ranking questions of the questionnaire. The analyzers were asked not only to rank the concepts found in the books, but also to determine if the concepts were introduced using Bruner's learning theory concerning

learning enactively, iconically, and symbolically. The analyzers were asked to mark all ways of learning that applied to the concepts as they were introduced in the books. Once the analyzers had filled out the matrices, any variances were noted. One analyzer marked *iconic* instead of *enactive* for the Clark book. The researcher sent an email for clarification and the analyzer noted his mistake and made the appropriate changes. One analyzer also did not note the icons in the Faber book. The researcher pointed out the page number and asked if the analyzer wanted to make any changes. The analyzer agreed and made the appropriate changes (M. Manwarren, personal communication, February 6, 2013; S. Boyce, personal communication, February 11, 2013). Once all the changes were made, a Kendall's Coefficient of Concordance for Interrater Reliability was calculated. SPSS could not run the test because there was no variance in the data. The analyzers agreed on every concept in every book concerning whether the concepts were introduced enactively, iconically, and symbolically, or a combination of several. The only variance with the analyzers was with the Alfred book and the concepts of *crescendo* and *decrescendo* where one analyzer felt the concepts were not introduced and two analyzers felt the concepts were introduced. The two analyzers believed the concepts were introduced enactively but not iconically or symbolically. The rest of this section covers how the concepts were introduced.

The Clark et al. book only introduced 16 of the 44 concepts contained on the matrix. All 16 concepts were introduced enactively and symbolically. Once each concept was introduced symbolically, both with the musical symbol and with language, the student was asked to demonstrate that musical concept by playing it on the piano. By asking the student to play the concept on the piano, the analyzers believed the concept

was introduced enactively. The only concepts introduced using icons were the intervals of 2nd, 3rd, 4th, and 5th. In each case, a picture of the keyboard was printed on the page with dots on the keys to indicate how far apart a 2nd was on the keyboard. The interval concepts were also introduced both enactively and symbolically in concordance with all the other concepts. The concepts introduced in the Clark and how they were introduced are shown in Table 15.

Table 15

Clark et al. Book Concepts with Bruner Learning Styles

Concepts	Enactive	Iconic	Symbolic
2/4	Yes	<i>No</i>	Yes
3/4	Yes	<i>No</i>	Yes
4/4	Yes	<i>No</i>	Yes
Dotted Half Note	Yes	<i>No</i>	Yes
Half Note	Yes	<i>No</i>	Yes
Quarter Note	Yes	<i>No</i>	Yes
Time Signature	Yes	<i>No</i>	Yes
Whole Note	Yes	<i>No</i>	Yes
2nds	Yes	Yes	Yes
3rds	Yes	Yes	Yes
4ths	Yes	Yes	Yes
5ths	Yes	Yes	Yes
<i>forte</i>	Yes	<i>No</i>	Yes
Octave Sign	Yes	<i>No</i>	Yes
<i>piano</i>	Yes	<i>No</i>	Yes
Slurs	Yes	<i>No</i>	Yes

The Alfred *Premier* book introduced 20 of the 44 concepts included in the ranking portion of the questionnaire. Like the Clark, all but two of the concepts were introduced using the musical symbol and language and by asking the student to play the concept in the piece included on the page where the concept was introduced. This covers the enactive and symbolic learning in Bruner's theory. Two concepts were introduced only enactively, *crescendo* and *decrescendo*. Students were instructed to play each measure of a song louder on one page and then play each measure of a song softer on the next page. No mention is made of the name of these concepts and no symbols were introduced. Four concepts were introduced with icons in addition to action and symbols. These concepts were the Middle C and C hand positions and Steps and Skips. The icons for the hand positions were pictures of the keyboard with the letter names of the notes written on the keys. Steps and Skips were introduced with a picture of a keyboard with arrows pointing to notes which were Steps or Skips apart. The Alfred also included pictures of the hand showing students how many fingers apart Steps and Skips were. Table 16 gives the concepts and how they were introduced according to Bruner's learning theory.

The Faber book introduced 17 of the 44 concepts from the ranking questions on the questionnaire. As with the other books, the concepts were introduced using enactive and symbolic learning. The concepts were introduced using the appropriate musical symbol, with language and the student was then instructed to play the concept in a piece of music on the same page. The same four concepts which used iconic introduction in the Alfred were introduced with icons in the Faber, C and Middle position and Steps and Skips.

Table 16

Alfred Book Concepts with Bruner Learning Styles

Concepts	Enactive	Iconic	Symbolic
C Position	Yes	Yes	Yes
Middle C Position	Yes	Yes	Yes
3/4	Yes	No	Yes
4/4	Yes	No	Yes
Dotted Half Note	Yes	No	Yes
Half Note	Yes	No	Yes
Half Rest	Yes	No	Yes
Quarter Note	Yes	No	Yes
Quarter Rest	Yes	No	Yes
Time Signature	Yes	No	Yes
Whole Note	Yes	No	Yes
Whole Rest	Yes	No	Yes
Skips	Yes	Yes	Yes
Steps	Yes	Yes	Yes
<i>crescendo</i>	Yes	No	No
<i>decrescendo</i>	Yes	No	No
<i>forte</i>	Yes	No	Yes
Repeat Sign	Yes	No	Yes
<i>piano</i>	Yes	No	Yes
Tempo Marks	Yes	No	Yes

The Faber used a picture of the keyboard with the letter names on the keys and a picture of a staircase with the letter names on the steps to indicate up and down. For steps and skips, the Faber used the keyboard with an “x” and arrows to indicate Steps and Skips as well as a hand with finger numbers and arrows to indicate how many fingers

apart Steps and Skips were. Table 17 gives the concepts and how they were introduced in the Faber book.

Table 17

Faber Book Concepts with Bruner Learning Styles

Concepts	Enactive	Iconic	Symbolic
C Position	Yes	Yes	Yes
Middle C Position	Yes	Yes	Yes
3/4	Yes	No	Yes
4/4	Yes	No	Yes
Dotted Half Note	Yes	No	Yes
Half Note	Yes	No	Yes
Quarter Note	Yes	No	Yes
Quarter Rest	Yes	No	Yes
Time Signature	Yes	No	Yes
Whole Note	Yes	No	Yes
Skips	Yes	Yes	Yes
Steps	Yes	Yes	Yes
<i>forte</i>	Yes	No	Yes
<i>piano</i>	Yes	No	Yes
Repeat Sign	Yes	No	Yes
Tempo Marks	Yes	No	Yes
Ties	Yes	No	Yes

The absence of iconic learning for most musical concepts and the simultaneous use of symbolic and enactive learning in these method books indicated there is a lack of application of Jerome Bruner's learning theory of enactive, iconic, and symbolic learning. In most cases, the method books appeared to introduce concepts symbolically before introducing them enactively which is the exact opposite of what Jerome Bruner proposed.

All the concepts in these three books were introduced enactively and all but two concepts, *crescendo* and *decrescendo*, were introduced symbolically. However, only hand positions and intervals were introduced iconically. This may be because hand positions and intervals are easy to picture and most other musical concepts are difficult to put into a picture because they happen only when sounds are produced as a person plays the piano.

Conclusion

The results of this study indicate that there is no particular, set curriculum or order to introducing musical concepts in the first year of piano study. While most participants agree that introduction of the musical staff and other standard notation is not necessary in the first lesson, approximately 6% of the participants do believe it is essential. Where to have students place their hands once they start playing the white keys is almost evenly divided between those participants who start students in Middle C Position and those who start students in C Position. Steps and skips are generally introduced first as intervals, but when looking at the standard deviations, 2nds and 3rds are also introduced first by many participants. The quarter note is introduced first by 457 of the 486 who ranked it, but none of the other concepts in the Rhythm Reading section had as much consensus. In addition, only half of the responding participants ranked all 15 concepts in this section.

Forte and *piano* were ranked one and two in the Theory Study but also had a large consensus. Of the 451 participants who ranked these concepts 317 ranked *forte* first and 300 ranked *piano* first. This indicates that these two concepts are often introduced simultaneously. Other opposite concepts in this section such as *crescendo* and *decrescendo*, or similar concepts such as *D. C. al fine* and the Repeat Sign may also be

introduced together. This study did not look at how often this happened. As with Rhythm Study, approximately half of the participants only ranked all the concepts.

Seventy-eight different method books were identified but one in particular stood out, Faber and Faber's *Piano Adventures* which was named by 55% of the participants. Other books with 10% of the participants identifying them were Alfred's *Premier*, and Clark et al. *Music Tree*. Four percent of the participants did not list a particular book but said "nothing special" further reinforcing the fact that there is no set curriculum or method book used by the participants to teach beginning piano students ages six to nine.

The rankings indicated by the participants did correlate significantly with the rankings in the three most used books at the $p < .01$ level. This indicated that the teachers are generally following the order of concept introduction used in the books. This study did not ask the participants if they followed their stated book page by page or skipped around in the book but the strong correlation would suggest they follow their stated book page by page.

The results of the last question indicate Jerome Bruner's learning theory, that people learn enactively, iconically, and symbolically, was not used in the three most used books. All three books used symbols and actions for learning to play the piano but there were very few icons used. The only concepts where icons were used to introduce concepts were hand positions and intervals. In each case a picture of a keyboard and/or a hand with arrows or "x" were used to show a picture of what the student was to learn.

In the last chapter, the researcher discusses the results of this study and gives implications and suggestions for the private lesson studio. Suggestions for further research and study limitations are also discussed.

CHAPTER FIVE

Summary, Implications, and Conclusion

This study sought to determine what method books piano teachers were using in their private lesson studios, what order they introduced musical concepts in the first year of piano study to students ages six to nine, if the teachers were following the order used in the method books, and whether the method books being used aligned with Jerome Bruner's learning theory. The results of this study determined that the participants introduced the musical concepts in approximately the same order as the method books resulting in a significant correlation at the $p < .01$ level. The study also determined that method books introduced musical concepts enactively and symbolically but rarely iconically, therefore not fully following Bruner's learning theory. In the remainder of the chapter, the researcher provides a summary of the study, and discusses findings, implications for the private piano studio, limitations of the study, and recommendations for future research.

Summary of Study

The research questions guiding this study were:

1. In what order do piano teachers of beginning students ages six to nine introduce musical concepts in the first year of study?
2. What piano method books are used most often by the participating teachers?
3. What order are musical concepts introduced by the method books most used by the participating teachers?

4. Does the teachers' order of concept introduction align with the order of concept introduction in the most used methods?
5. What concepts in the most used methods use any, some, or all three modes of learning, enactive, iconic, and symbolic?

The questionnaire was emailed to the full membership of MTNA (approx.. 24,000) with 562 teachers responding. Based on a 2005 survey of the MTNA membership, approximately 17, 441 of the teachers indicated they taught elementary students (Music Teachers National Association, 2005). The MTNA survey did not specify what grades or ages constituted elementary students but generally this includes Grades 1 to 5 and includes ages six to nine which was the target age of this study. This gives a completion rate of 3.2% which is higher than the 2.0% rate recommended by Charles and Mertler (2002). Participants were asked to rank musical concepts in the order they introduced them in the first year of piano study and to indicate which method(s) they used with their beginning students ages six to nine. Once it was determined which books were used by 10% of the teachers (Charles & Mertler, 2002), these books were analyzed by three knowledgeable piano teachers. The first was the researcher, the second the owner of a private lesson academy who has a Master's in Piano Pedagogy, and the third a professor of Piano and Piano Pedagogy at a private, liberal arts university. The results of the first four questions of the study determined a ranking of the concepts by the teachers which correlated significantly with the concept rankings of the three most often used method books. The results of the fifth question of the study were that the three most often used method books incorporated the enactive and symbolic learning of Bruner's theory for almost all concepts but only used iconic learning for a few

concepts. In the remainder of this chapter, the researcher discusses the findings for each research question, the implications for teaching in the private studio, suggestions for further research, and limitations of this study.

Research Question 1

For Research Question 1, “In what order do piano teachers of beginning students ages six to nine introduce musical concepts in the first year of study?” there was very little consensus between the teachers on the order musical concepts were introduced in the first year of piano study. In looking at hand position alone, teachers were evenly divided on whether to introduce Middle C position or C position first. As with music in the public schools, there is no one curriculum for piano teachers. The only curriculum available is the national standards which have been set by National Association for Music Education. These nine standards are:

- singing alone and with others
- performing on instruments alone and with others
- improvising melodies, variations, and accompaniments
- composing and arranging music
- reading and notating music
- listening to, analyzing, and describing music
- evaluating music, and musical performance
- understanding relationships between music, the other arts, and other disciplines
- understanding music in relation to history and culture (Music Educators National Conference, 2010)

None of the standards address the musical concepts which are to be taught by general music teachers or by private piano teachers. There is also no set certification for public or private music teachers. Henry (2005) found that every state sets standards for public music teacher certification. Some states certify all-level teachers, others certify for a specific age group; some states certify teachers for life while others have time limits on certification. MTNA does offer a certification program but it is not required for membership (Music Teachers National Association, 2013). The MTNA certification process does not list musical concepts to be taught nor the order musical concepts should be taught.

Most studies related to teaching music deal with how the teachers teach and the behavior of students (Cash, 2009; Duke & Henninger, 2002; Duke et al., 2009; Henninger, 2002; Henninger et al., 2006). Those studies, which researched method books, either investigated how the material was to be taught (Huang, 2007; Thomas-Lee, 2003) or were comparisons of methods (Hayase, 2006). None of the studies investigated what concepts were being taught or what order the concepts should be introduced to beginning students of any age.

The lack of consensus on the order to introduce musical concepts to beginning piano students raises a number of questions. If there were standards for piano curriculum, would teaching be more effective? Would students learn more quickly if the order of musical concept introduction followed a learning theory? Could there be standard training to certify piano teachers? If a standard curriculum were formulated, should it apply to both the private studio and the public school? If there were a standard curriculum, would the teachers follow it or continue to teach as they already do? Could a

consensus be achieved to set a curriculum for piano study? As things are now, there is a lack of a standard curriculum in either the public school music classroom or in the private piano classroom. Without a standard curriculum, teachers must decide for themselves what is best for their own studio and their own students.

Research Question 2

As with the order of introduction of musical concepts in the first year of piano study, similarly there was very little consensus between the participants concerning which method to use. Research Question 2 asked, “What piano methods books are used most often by the participating teachers?” Participant listed using 78 different methods. Five or fewer of the participants identified 56 of the method books, or 71%. Only three of the books were identified by 10% of the participants. One method book does stand out from the others. Faber and Faber’s *Piano Adventures* were identified by 55% of the participants making it the most used book of the 78 identified. Of the 94% participants who listed a method book, 41% were using more than one method book. The participants who listed more than one method book gave several reasons listed with their answers for using different method books including interviews with the student and parents before lessons began and the gender of the student. Others sent emails to the researcher such as this one:

every student comes as a different package and the pace must really be individualized. I gave a general sequence of how I would introduce concepts - heavily influenced by the teaching method I use as well as the theory material I use. (KITS) I have an ordered sequence but I do not have a “by the end of the first year” deadline at all. (E. Hasbrouck, personal communication, December 1, 2012).

Twenty participants identified themselves as using the Suzuki method. Many of these participants indicated they do not use any method book at the beginning of study.

Several Suzuki participants emailed the researcher informing her that they often do not introduce music reading in the first year at all. Others noted they do introduce music reading in the first year and which methods they use. This is an example of an email from one Suzuki participant:

While my students would be reading during that first year (though some Suzuki teachers do delay it beyond that--in my opinion to the detriment of the student) they most likely would have heard and played all these concepts before actually seeing them on paper (J. Gorka, personal communication, November 30, 2012).

While many of the method books introduce concepts in approximately the same order, even within the most used method books there are differences. Most method books including Thompson (1936), Aaron (1946/1974), Pace (1971), Bastien (1987), Clark and Goss (1993), Faber and Faber (1993), Alexander et al. (2005), and Marlais (2010) introduce the quarter note first followed by half notes and whole notes. However, some of them introduce the half note with the quarter note and others introduce the whole note before the half note. The introduction of rests has no set place. Thompson (1936) introduces the quarter rest about half way through the primer book. Aaron (1946/1974) introduces the quarter rest at the first lesson with the quarter note. Finn and Morris (1998) introduce the half rest four songs before the end of the book. Marlais (2010), Alfred (2005), Faber and Faber (1993), and Clark et al. (1993) do not introduce rests at all in the first book of each series. Within the most used method books, Alfred (2005) and Faber and Faber (1993) introduce only Steps and Skips but the Clark, et al. (1993) does not introduce Steps and Skips but instead introduces 2nds, 3rds, 4ths, and 5ths. The

Faber book introduced C position first, the Alfred Middle C position first, and the Clark et al. does not introduce any hand position at all.

As mentioned with the discussion of Research Question 1, the research done on method books concentrates on the appropriateness of preschool method books for preschool children (Huang, 2007; Thomas-Lee, 2003), or compares methods to each other (Ballard, 2007; Hayase, 2006). None of these studies looks at musical concepts or the order the concepts should be taught. The lack of research on the method books being used in the private piano studio, the number of books available and the number of books being used by the participants raises a number of questions. Should there be a standard method book for all piano study? How would one go about deciding what musical concepts to put in a standard method book? How would one go about deciding what order to put the musical concepts in a standard method book? Who would be the governing body for a standard curriculum? Would piano teachers use a standard curriculum? Should learning theory be applied to piano curriculum and if so whose theories should be considered?

The number of method books listed by the participants would be one reason there is little consensus on what order the musical concepts should be introduced to beginning students. The large number of choices available to the private piano could make it difficult to decide which one is best, leading teachers to rely on their own past experience to decide what to use and how to teach piano.

Research Question 3

The third research question was “What order are musical concepts introduced by the method books most used by the participating teachers?” There was more consensus

between the three most used books, Alfred, Faber, and Clark et al., than there was among the participants. This may be because the books did not use all the concepts included in the questionnaire. The Faber and Faber only introduced 17 of the 44 concepts, the Alfred introduced 19 of the 44 concepts, and the Clark et al. introduced 16 of the 44 concepts. Approximately half of the participants ranked all the concepts. If all 78 books had been analyzed, there would have potentially been much less consensus. Even though there was more consensus within the three method books, the only concept all three books agreed on was that the quarter note was introduced first. On all other concepts, there was no consensus. While most concepts had small or no standard deviations, there were several concepts that had large standard deviations, particularly in the Rhythm Reading section. These included the dotted half note, quarter rest, 3/4 and 4/4 time signatures, and the whole rest. If the standard deviation were subtracted from the mean, these concepts would move up in the rankings significantly. This indicates that some books introduce these concepts much earlier than other books. There were also two concepts in Theory Study with standard deviations, *piano* and Tempo marks. This was due to the fact that they were not introduced in all three books.

The only research found on concepts presented in method books was conducted by Ballard (2007), but the concepts which were investigated were not musical concepts but rather content. Ballard determined how much repertoire was author composed, how many pieces were solos and how many were duets, how many different keys and meters were experienced, how much improvising and composing was included, and how much technology was incorporated.

Again, the lack of any standard curriculum and the number of books listed by the participants seems to indicate that the individual teacher chooses what method and what order to introduce musical concepts to their students when teaching beginning piano. The questions asked about standard curriculum, having a standard book, and the use of a learning theory apply here as well as Research Questions 1 and 2. Other questions are: What is the best order of musical concept introduction? Is there a best order of musical concept introduction? Who would decide the best order of concept introduction?

Research Question 4

Research Question 4 asked “Does the teachers’ order of concept introduction align with the order of concept introduction in the most used methods?” There was a significant correlation, $r_s(15, 40) = .767, p < .01$, between the teacher rankings of the concepts and the method books’ rankings. A reason for this statistically significant finding might be the participants are using the method books as written. It is the experience of the researcher that she and her peers would provide a particular piano method book to the student and then go through it page by page. While many of the participants, 94%, indicated they had received some type of piano pedagogy training, either university level pedagogy classes, clinics on piano pedagogy, or were trained by another piano teacher, the study did not ask if they were using a method book based on their training or because they had been taught from that method book. In the researcher’s 27 years as a private piano teacher, she found many of her peers often taught their own students from the same method books they themselves were taught from as beginning piano students. This was the experience of the researcher for the first 15 years she taught private piano. If the teachers were not using the same books they learned out of as

beginners, they were often using the books recommended by their college professor or one recommended at a clinic on piano pedagogy. What is clear is that the participants generally follow the books they are currently using.

The significant findings for Research Question 4 at the $p < .01$ level, reinforces the thought that piano instruction is strongly curriculum driven. Even though no prior research supports this statement that piano instruction is curriculum driven, almost all of the participants indicated they were using method books. Additionally, the participants' order of concept introduction correlates with the method books' order of concept introduction, making it seem that most participants are following the method book they have chosen to use in their own studio. Because the use of piano method books appears to be so prevalent, greater thought should be put into why the concepts are introduced in the order they are and does the order of concept introduction of the method books being used align with what is known about how children learn. These results bring up several questions. Why are some method books used more often than others? Are some method books used more often than others because of the order the musical concepts are introduced? Are some method books used more often because the students respond to them better? Should other learning theories be applied to the method books other than Jerome Bruner's theory? Should the less used method books be analyzed as well? Why do the teachers use the method book(s) they use? If piano teachers were to teach piano based on learning theories, would students take lessons longer, enjoy them more, and be more likely to become life-long musicians as has been investigated by several researchers (Costa-Gioma, 2004; Costa-Gioma et al., 2005; Henninger et al., 2006)? These and many

other questions could be researched to explore what if anything should change in the private piano studio.

Research Question 5

The final study question asked “What concepts in the most used methods use any, some, or all three modes of learning, enactive, iconic, and symbolic?” This question sought to determine if piano method books had incorporated a learning theory into the teaching method. The researcher chose Bruner’s learning theory as the lens with which to look at the method books because in the Orff and Kodály training she received, icons were used (Choksy, 1998; Warner, 1991). The top three method books listed by the teachers were analyzed by three knowledgeable piano teachers using the lens of Bruner’s theory as it applies to learning enactively, iconically, and symbolically. By using this lens, it was determined that the books used enactive learning for every concept because whenever a concept was introduced, the student was asked to play that concept within a piece of music on the piano. Some of the concepts, particularly in the rhythm reading, were also introduced using additional enactive ways of learning such as clapping and/or singing.

All but two concepts, *crescendo* and *decrescendo* in the Alfred book, which were only introduced enactively, were also introduced symbolically. Musical concepts were introduced both with the musical symbol associated with the concept and also with language. Reading music requires a student to learn the totality of the music symbol system which includes rhythm reading, melodic reading, numbers, language, and expression reading. In total, five different symbol systems make up music reading.

Some concepts such as *crescendo* and *decrescendo* have several symbols including language and expression symbols.

Very few symbols were introduced iconically and these included intervals and hand placements. The reason for this may be that an interval is the distance between two notes or keys so it is easy to picture a keyboard and place an “x” on the keys to indicate distance or to picture a hand and use arrows to indicate how many fingers apart an interval is. A second or step is two adjoining keys or fingers. A third or skip skips a key or a finger. Hand positions are also easy to picture as they incorporate a set of keys which are adjacent to each other usually using all five fingers of the hand. C position requires a student to cover C, D, E, F, and G with all the fingers of each hand and this can easily be pictured. Other concepts, such as quarter note, are more difficult to picture. A quarter note is an amount of time based on the steady beat chosen by the composer and ultimately the performer. The amount of time a quarter note takes up is not set like minutes and seconds of time are set so how does one picture a quarter note? *Piano* is an indication of how softly to play, but like the quarter note, is set by the performer and is not a set decibel level and can be different for every piece of music. These are difficult concepts to put into pictures.

Not only do these books use enactive and symbolic learning the most, they are not progressive as Bruner’s (1966) theory indicates. Enactive and symbolic learning are done simultaneously throughout the three analyzed books. The lack of icons in these books seem to represent a skip in the process. Students are not moved from enactive, through iconic to symbolic learning, they are given the symbols and then asked to then reproduce the symbols enactively. Moving from symbols to action is the opposite of

Bruner's (1966) learning theory which states that children move from action through pictures to symbols. Bruner (1961/1996) has written that adults need to think like children when introducing concepts to children. By introducing a concept symbolically first, the method books are thinking like adults and not children. Schmitt (1971), who applied Bruner's learning theory to piano study, indicates that traditional piano study confronts beginning piano students with a highly complicated notation using multiple approaches with many facts and rules often simultaneously. This makes learning to play the piano and learning to read music very complicated and difficult.

Because these three books introduce concepts using symbolic and enactive learning simultaneously, and use very few icons, this indicates that the Alfred (2005), Faber (1993), and the Clark et al. (1993) do not take into account Bruner's learning theory and perhaps no learning theory at all. While the books analyzed were all published after 1990 and follow the black key, off-the-staff method, they still introduce the musical concepts in much the same order as the methods published before 1970 and follow the white key, on-the-staff methods. The only difference is that rhythm reading is introduced first and staff reading second in the newer method books instead of being introduced all together as in the older method books. However, in the older books such as John Thompson (1936), quarter notes, beamed eighth notes, and half notes are introduced first just like the Alfred (2005), Faber and Faber (1993), and Clark et al. (1993). Also in Thompson (1936), the first melodic notes are introduced in Middle C position just like the Alfred. While piano teaching has undergone a change where the rhythm system and the melodic system are taught separately and more slowly, there has

really been little change in how piano is taught since at least the 1930s when John Thompson's *Teaching Little Fingers to Play* was published.

Summary of Findings

The results of this study indicate that there is no set curriculum or order to introducing musical concepts in the first year of piano study. Most participants agree that introduction of the musical staff and other standard notation are not necessary in the first lesson, and are evenly divided on whether to start students in the Middle C Position or in C Position. Steps and skips are generally introduced first in Interval Study and the quarter note is introduced first in Rhythm Study. *Forte* and *piano* were ranked one and two in the Theory Study. Seventy-eight different method books were identified by the participants with Faber and Faber's *Piano Adventures* being named most often.

There was a statistically significant finding at the $p < .01$ level for the correlation between the participants' rankings and the method books' rankings. This indicates that participants generally follow the order of concept introduction used in the methods books. Lastly, Jerome Bruner's learning theory where people learn enactively, iconically, and symbolically, was not used in the three most used books.

More questions are raised by the lack of change in how piano is taught. Why do piano teachers teach the way they do? Do they learn to teach this way in a class or are they teaching the way they themselves were taught as beginning piano students? If research created new piano method books, would the teachers use them? Could learning theory be applied in the studio without changing the current books? Is what is being done in the studio the best way to teach piano? Why have learning theories not been applied to

piano method books? The results of this study raised many more questions than the study answered.

Implications for the Private Studio

Based on the results of this study, if piano teachers are going to take advantage of what has been learned about how people learn, they may have to work outside the curriculum they are using. Bruner's lens shows that if teachers are using just the books, they are not including iconic learning for their students. Music can be a difficult subject because instruments, tempo, and expressions are dependent on the composer, genre, time of composition and the performer. The instruments in use today are not exactly the same as the ones used 200 years ago. *Forte* is not a set decibel level but is determined by the performer based on the composer, genre of the piece, time of composition, and what other dynamics are called for in the playing of the piece. *Andante* means a walking speed, but how fast is a walking speed? A walking speed will be different for a six-year old than for a 20-year old or an 80-year old. A quarter note is not a set amount of time but is determined by the tempo mark. So what can teachers do in their studio?

Private piano teachers could take a cue from the public school general music classes. In general music education in the public schools, many teachers are using either the Kodály or Orff methods (Abilene ISD, 2013; Cambridge Public Schools, 2013; Plano ISD, 2013; Quaker Valley School District, 2013; The Key School, 2013). Both of these methods include all three types of learning: enactive, iconic, and symbolic. It should be noted that often, general music students take four or five years of classes to cover the same number of concepts often introduced in the first year of piano study. Both methods have students sing, move to music, and play instruments, all of which are enactive. Both

Kodály and Orff also use icons in teaching music reading. Kodály uses pictures of whatever the song is about such as raindrops for *Rain, Rain* (Beall & Nipp, 1977/2007) (Figure 1).



Figure 1. Kodály – icons in teaching music reading (McLatchey & McLatchey, 2011)

This song uses quarter notes and beamed eighth notes. The clouds indicate one beat, the quarter note raindrops take up a whole beat and the beamed eighth note rain drops also take up one beat indicating to the students that it takes two eighth notes to make one beat but only one quarter note to make up one beat. This may not be the best picture of quarter notes and beamed eighth notes but they are icons (Choksy, 1998). Orff uses houses. Each house is a whole measure (Figure 2).

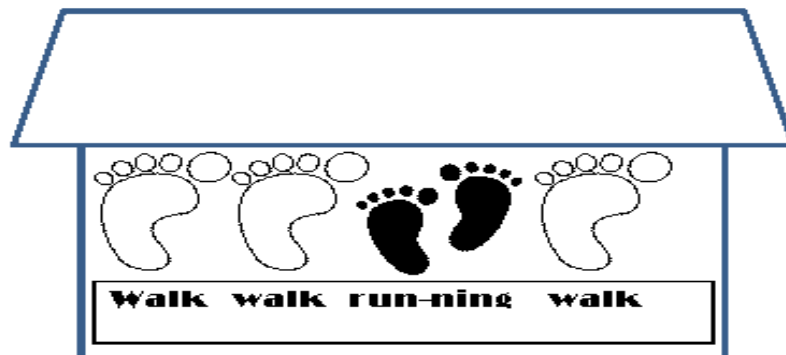


Figure 2. Orff – icons in teaching music reading (Researcher created)

Orff also uses common words for rhythms. Beamed eighth notes are often *running*, quarter notes are often *walk*, and half notes are often *slide*. While these are words, they give a visual to the student of the duration of each note. Therefore, *Rain, Rain* (Beall & Nipp, 1977/2007) would be *walk walk running walk* in the first house. Pictures are also often used of walking and running and sliding within the houses to reinforce the iconic learning (Warner, 1991). Both Kodály and Orff make use of hand signs to help with melodic reading - moving the hand up and down to indicate pitch. Technically, hand signs are not icons but they do give the student a visual of the melodic line. Lastly, both Kodály and Orff use the enactive and iconic learning to lead to symbolic learning. This often moves much slower than the private piano studio but the result is the same, students who can read music and play instruments.

Private piano teachers could continue to use the method books they are using and incorporate their own iconic learning into the lessons. Icons, by definition, are pictures of the concept they represent. In music, this can be difficult as the concepts are somewhat nebulous, existing only when sounds are produced. However, language, while symbolic, and movement away from the piano, while enactive, could be used to create pictures, icons, in the minds of the student which would help in the understanding of the concept being introduced or refined. Actual pictures could also be used. As an example, *Largo* is an expression term usually associated with music which is very slow and often ponderous. Using a picture of an elephant or a large weight could help the student understand *largo* as slow and heavy. Using colors to depict dynamics could help students who are visual. *Piano* could be blue and *forte* could be red and the differing shades of

dynamics could then be the differing shades of color between blue and red. The ways a teacher could incorporate icons is limited only by the teacher's imagination.

As the researcher noted in Chapter Two, teachers are concerned about how quickly students often drop out of piano study. There are many factors involved in whether a student continues lessons or drops out including parental involvement, peer pressure, and success (Costa-Gioma, 2004; Costa-Gioma et al., 2005; Pitts et al., 2000). Perhaps another reason is that how teachers are teaching does not align with how students learn. Some students learn well with just the enactive and symbolic learning as is attested by the thousands of people who play the piano. But others may need the iconic to make the bridge between the enactive and the symbolic. Perhaps other learning theories could also be applied viewing students through Piaget's lens of stages or working with Vygotsky's Zone of Proximal Development creating lessons which are too hard for the student to do alone but can attain with scaffolding. There are many things a teacher could add to the current curriculum which would aid learning and perhaps encourage students to study piano longer but would not require a new curriculum.

What is obvious from the results of this study is that teachers do not teach alike. Maybe that is a good thing and maybe not, but without a standard curriculum, how is effectiveness and quality of teaching determined? Who decides and how is it determined if a teacher is an effective one or not? Who decides if what each teacher is teaching is what should be taught in the private piano studio? How are parents supposed to decide which teacher to teach piano to their children? How should the results of this study be used in the piano studio now that it has been determined that at least Bruner's learning

theory has not been applied to the most used method books? Should piano teachers even be concerned about learning theory?

Further Research

This study sought to determine what order piano teachers and piano method books introduced musical concepts in the first year of piano study as well as whether the piano method books aligned with Jerome Bruner's learning theory. This study did not look at how the piano teachers used the method books, nor what, if any supplemental materials were being used in the private piano studio. This study is an initial look at the materials used by piano teachers. Further research is suggested to look at exactly how the teachers are using the method books. Do they use only the method book or do they use supplemental materials? Do they use icons in their teaching, either actual pictures or do they use movement and language to create pictures which help the students learn? Do books not analyzed in this study use a learning theory? Are learning theories other than Jerome Bruner's evident in the method books and/or in the actual teaching in the private piano studio? Further research could ask teachers to put all the concepts in the order they are introduced as this study divided the concepts into categories. It is therefore unknown where *forte* is introduced in relation to quarter notes or where the repeat sign is introduced in relation to a whole note.

Further analysis of the method books could be done. This study did not look at the pictures on the pages of the method books to determine if they could be considered icons. As an example, when *forte* is introduced, is there a picture of something that is loud on the page? Another analysis of the method books could be done to determine if the off-the-staff methods move the notes up and down on the page to indicate if the pitch moves

up and down and whether this could or should be considered to be iconic learning. This study did not analyze the number of concepts that the participants indicated they introduced simultaneously, such as *piano* and *forte*. This could also be the focus of further study.

In addition to the above questions, below is a list of other questions which are brought to mind by the results of this study in the areas of standard curriculum, teacher training and fidelity of use, teaching effectiveness and fidelity of use:

Standard Curriculum Questions

- If there were *standards* for piano curriculum, would teaching be more effective?
- If a standard curriculum were designed, should it apply to both the private studio and the public school?
- If there was a standard curriculum, would the teachers follow it or continue to teach as they already do?
- Should there be a standard method book for all piano study?
- Could a consensus be achieved to set a curriculum for piano study?
- How would one go about deciding what musical concepts to put in a standard method book?
- How would one go about deciding what order to put the musical concepts in a standard method book?
- If research contributed to the design of new piano method books, would the teachers use them?
- Who would be the governing body for a standard curriculum?
- Would piano teachers use a standard curriculum?

- Would students learn more effectively if the order of musical concept introduction followed a learning theory?

Teacher Training and Fidelity of Use

- Should there be standard training to certify piano teachers?
- Is there fidelity in the use of method books in the private piano studio?
- Why do the teachers use the method book(s) they use?
- Why do piano teachers teach the way they do?
- Do piano teachers learn to teach this way in a class or are they teaching the way they themselves were taught as beginning piano students?

Learning Theory and Teaching Effectiveness

- Should learning theory be applied to piano curriculum and if so whose theories should be considered?
- Why are some method books used more often than others?
- Are some method books used more often than others because of the order the musical concepts are introduced?
- What, if any enrichment materials are used in the private piano studio?
- Are some method books used more often because the students respond to them better?
- Should the less used method books be analyzed as well?
- Could learning theory be applied in the studio without changing the current books?

- Is what is being done in the studio the best way to teach piano?
- Why has learning theory not been applied to piano method books?

This list of questions is limited but further research is not needed to determine what is being done with the piano method books within the private lesson studio.

Limitations

This study had several limitations. The sample was not a random sample. The participants self-selected to answer the email with the questionnaire. This excluded any piano teachers without email access. The participants were all members of a professional music teacher organization, therefore, piano teachers who have chosen not to belong to MTNA were not invited to participate. The participants were not asked how they were using the identified method books in their studios nor were they asked if they were using icons in their studios. Participants were allowed to give concepts the same rank if they introduced the concepts simultaneously, however, this study did not note or analyze the simultaneous introduction of concepts. This limits the information reported in this study. Another limitation was this study looked specifically at the method books through the lens of Jerome Bruner's learning theory. There are other learning theories and none of these were applied. Other limitations of this study included that only three method books were analyzed using the Bruner lens and not all 78 which were mentioned by the participants. An additional limitation of this study was that the musical concepts were divided up into categories so the study did not allow for teachers to put the concepts in the true order they are introduced.

Conclusion

Based on the number of teachers who listed a piano method in use in their studios, and the number of method books, it appears that private piano teaching is a very book driven subject. Because the correlation between the participants' rankings and the method books rankings was significant at the $p < .01$ level, it appears that these participants are following the order of concept introduction as presented in the method books they are using. The study also indicated that the method books analyzed are not using the iconic learning with most of the musical concepts. Piano method books concentrate on enactive and symbolic learning but not iconic learning.

Previous studies have concentrated on the actions and interactions of students and teachers, whether methods were appropriate for preschool students, compared method books to each other, and determined what kind of repertoire was being used in the method books. These studies did not concentrate on what concepts they are teaching nor how they are presenting these concepts. This study concentrated on the musical concepts being introduced and the method books being used in the private piano studio. This study adds to the body of knowledge by looking at the musical concepts being introduced by the individual teachers and by the method books they are currently using. This gives a foundation on which to build in determining not just what interactions are present in the private piano studio, but what musical concepts are being taught in the private piano studio. Now that what musical concepts are being taught has begun to be answered, the next step would be to determine how these musical concepts are being taught. In order to determine how these concepts are introduced and how the piano teachers are using the method books, further research is needed.

APPENDICES

APPENDIX A

Pilot One Questionnaire

Demographic Questions:

What method do you predominantly teach from for beginning children ages 4 to 10

How long have you been teaching beginning piano?

What is your gender?

What is your ethnicity?

Where do you teach: rural area, urban area, suburban area, other?

Staff Introduction

1. Introduction of the staff must be done at the first lesson.
SD D N A SA
2. The first lesson needs to introduce the staff.
SD D N A SA
3. The first lesson must introduce bar lines and double bar lines.
SD D N A SA
4. It is essential for students to understand line and space notes at the first lesson.
SD D N A SA
5. It is imperative that the Treble and Bass clefs be introduced at the same time.
SD D N A SA
6. A definition of “measure” is necessary at the first lesson.
SD D N A SA
7. The grand staff and brace need to be introduced together.
SD D N A SA

8. The first lesson needs to include the pattern of black notes on the keyboard.
SD D N A SA

9. Students need to know the musical alphabet by the end of the first lesson.
SD D N A SA

10. Students must be given ample time to play non-staff piece.
SD D N A SA

11. It is not essential for students to understand standard notation in the first few lessons.
SD D N A SA

Note Reading

12. Having a student pre-read helps learn to read standard notation more quickly.
SD D N A SA

13. Several weeks of keyboard exploration gives a student confidence when approaching standard notation.
SD D N A SA

14. It is acceptable to give students alternate notation such as colored stars as a pre-reading technique.
SD D N A SA

15. The use of finger numbers inhibits standard note reading.
SD D N A SA

16. Finger numbers must be on all notes on the staff during the first year.
SD D N A SA

17. Learning the names of the white notes on the keyboard is essential before placing the notes on the staff.
SD D N A SA

18. The use of hand positions such as C position is essential to note reading.
SD D N A SA

19. Notes on the staff should be introduced one or two notes each week.
SD D N A SA

20. Using Middle C position broadens the notes students can read on the staff.
SD D N A SA

21. Using C position broadens the scope of the notes a student can read on the staff.

SD D N A SA

22. Using middle C position first, then C and G positions broadens the scope of the notes a student can read on the staff

SD D N A SA

23. The best way to teach note reading is C position, the Middle C position then G position.

SD D N A SA

Interval Reading

24. Students must understand steps and skips on the keyboard before seeing them on the staff.

SD D N A SA

25. Teaching the difference between harmonic and melodic intervals is essential to reading standard notation.

SD D N A SA

26. Steps and 2^{nds} should be introduced at the same time.

SD D N A SA

27. Skips and 3^{rds} should be introduced separately.

SD D N A SA

28. Intervals of 2nds, 3rds, 4ths, and 5ths need to be introduced simultaneously.

SD D N A SA

29. Students should be able to understand what a triad is by the end of the first year.

SD D N A SA

30. Students should understand that triads are made of two skips.

SD D N A SA

Rhythm Reading

31. Steady beat must be taught before staff reading begins.

SD D N A SA

32. The use of alternate counting methods, ta, ti-ti, should be encouraged.

SD D N A SA

33. Counting beats out loud while playing is essential to rhythm reading.
SD D N A SA
34. The first time signature to be introduced should be 4/4.
SD D N A SA
35. Eighth notes need to be introduced as a beamed pair.
SD D N A SA
36. The dotted quarter-eighth note pattern should be introduced during the first year.
SD D N A SA
37. The dotted half note must be introduced before the $\frac{3}{4}$ time signature.
SD D N A SA
38. It is important that rests be used in all blank measures from the first lesson.
SD D N A SA
39. Rests should be introduced at the same time as their partner notes.
SD D N A SA

Theory Study

40. The whole rest must be introduced before the half rest.
SD D N A SA
41. Introducing expression symbols and meanings within the first year is necessary.
SD D N A SA
42. *Crescendo* and *decrescendo* should be introduced in separate lessons.
SD D N A SA
43. *Forte* and *piano* are to be introduced separately.
SD D N A SA
44. Sharps and flats need to be introduced in separate lessons with several weeks in between.
SD D N A SA
45. Introducing chords in the first year helps with theory learning.
SD D N A SA
46. Introduction of key signatures must be a second year concept.
SD D N A SA

47. The 8va sign should be introduced at the end of the first year.
SD D N A SA
48. The repeat sign is to be introduced within the first five weeks of study.
SD D N A SA
49. *Ritard* should be introduced in the second half of the first year of study.
SD D N A SA
50. *D.C. al fine* must be introduced at the same time as the repeat sign.
SD D N A SA
51. Introducing the *fermata* before the end of the first year of study is essential.
SD D N A SA
52. Ties and slurs are to be introduced at the same lesson.
SD D N A SA
53. Tempo marks should be taught in the first lesson.
SD D N A SA
54. I, IV, V chords must be introduced by the end of the first year.
SD D N A SA
55. 1st and 2nd endings should be introduced after the repeat sign.
SD D N A SA
56. The slur must be introduced at the same time as legato.
SD D N A SA
57. 1st and 2nd endings should be introduced in the second half of the first year.
SD D N A SA
58. Sharps, flats and naturals must be taught in the same lesson.
SD D N A SA
59. All dynamic signs should be introduced at the same time.
SD D N A SA
60. *Ritard* and *a tempo* must be presented together.
SD D N A SA
61. All students need to work from a separate theory book.
SD D N A SA

Technique

62. It is essential to start playing hands together in the first lesson.
SD D N A SA
63. The damper pedal must be in use by the end of the first year.
SD D N A SA
64. Technical exercise must begin in the first lesson.
SD D N A SA
65. A good curriculum gives historical information on the composers.
SD D N A SA
66. The soft pedal must be in use by the end of the first year.
SD D N A SA
67. Students need to have three or more books which include a lesson book,
theory book, and scale book.
SD D N A SA
68. The first lesson needs to include how to sit at the piano.
SD D N A SA
69. How to hold one's hands must be learned before playing the piano.
SD D N A SA
70. Starting students on the black notes ensures proper hand position.
SD D N A SA
71. Playing hands together must be introduced slowly.
SD D N A SA

APPENDIX B

Pilot Two Questionnaire

Demographic Information

What is your gender?

- Male
- Female

What is your race?

- Asian-American
- African-American
- Hispanic-Latino
- Caucasian
- Native American
- Other

How many years have you been teaching beginning piano students?

- Less than 5
- 5 - 10
- 10 - 20
- 20 - 30
- 30+

Which Primer Method do you currently use?

Please be very specific listing Title, and Publisher.

Do you have any of the following training in piano pedagogy? You may choose more than one answer.

- College level classes in pedagogy
- Attend clinics in pedagogy
- Apprentice model, trained by another piano teacher
- None of the above

Staff Reading:

For this section, please choose from the following choices:

Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree.

Students need to know the musical alphabet by the end of the first lesson.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Introduction of the staff must be done at the first lesson.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

It is not essential for students to understand standard notation in the first few lessons.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

The first lesson must introduce bar lines and double bar lines.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

It is essential for students to understand line and space notes at the first lesson.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

It is imperative that the Treble and Bass clefs be introduced at the same time.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

A definition of "measure" is necessary at the first lesson.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Hands and Hand Positions

Please rank the following Hand Positions in the order that you believe they should be introduced in the first year of piano study. If you introduce two or more hand positions simultaneously, please give them the same number.

_____ G Position

_____ C Position

_____ Middle C Position

Interval Reading Concepts

Please rank the following concepts in the order you believe they should be introduced in the first year of piano study. If you believe concepts should be taught simultaneously, please give them the same number. If you believe a concept should not be taught in the first year of piano, please do not give it a number

_____ Steps

_____ Harmonic Intervals

_____ 2nds

_____ 5ths

_____ Melodic Intervals

_____ Skips

_____ 4ths

_____ 3rds

Rhythm Reading Concepts

Rhythm Reading Please rank the following concepts in the order you believe they should be introduced in the first year of piano study. If you believe concepts should be taught simultaneously, please give them the same number. If you believe a concept should not be taught in the first year of piano, please do not give it a number.

_____ 4/4

_____ Dotted Half Note

_____ Whole Rest

_____ Time Signature

_____ 3/4

_____ Single Eighth Note

_____ Half Note

_____ Eighth Rest

_____ Beamed Eighth Notes

_____ 6/8

_____ Quarter Rest

_____ Quarter Note

_____ Half Rest

_____ 2/4

_____ Whole Note

Theory Reading Concepts

Please rank the following concepts in the order you believe they should be introduced in the first year of piano study. If you believe concepts should be taught simultaneously, please give them the same number. If you believe a concept should not be taught in the first year of piano, please do not give it a number.

_____ a tempo

_____ decrescendo

_____ Chords

_____ forte

_____ 1st and 2nd endings

_____ Flats

_____ Key Signatures

_____ piano

_____ 8va Sign

_____ Ties

_____ D.C. al fine

_____ Fermata

_____ Repeat Sign

_____ Slurs

_____ Tempo Marks (ex. allegro, lento)

_____ Sharps

_____ ritard

_____ crescendo

Alignment of Concepts

(In this section, the Qualtrics software pulls forward the concept(s) marked #1 from the appropriate question so the participant does not have to scroll back to find it. Each of the questions in this section follows the example listed in Q20)

You noted the item below as the first concept you introduce in Interval Reading. Which of the Rhythm Reading Concepts do you introduce at the same time you introduce this Interval Reading Concept? You may choose more than one answer.

Example: Steps

Rhythm Reading Concepts

<input type="radio"/> 4/4	<input type="radio"/> Dotted Half Note	<input type="radio"/> Whole Rest	<input type="radio"/> Time Signature	<input type="radio"/> 3/4	<input type="radio"/> Single Eighth Note
<input type="radio"/> Half Note	<input type="radio"/> Eighth Rest	<input type="radio"/> Beamed Eighth Notes	<input type="radio"/> 6/8	<input type="radio"/> Quarter Rest	<input type="radio"/> Quarter Note
<input type="radio"/> Half Rest	<input type="radio"/> 2/4	<input type="radio"/> Whole Note			

You noted the below item as the first concept you introduce in Interval Reading. Which of the following Theory Study Concepts do you introduce at the same time you introduce this Interval Reading Concept? You may choose more than one answer.

You noted the below item as the first concept you introduce in Rhythm Reading. Which of the following Interval Reading Concepts do you introduce at the same time you introduce this Rhythm Reading Concept? You may choose more than one answer.

You noted the below item as the first concept you introduce in Rhythm Reading. Which of the following Theory Study Concepts do you introduce at the same time you introduce this Rhythm Reading Concept? You may choose more than one answer.

You noted the below item as the first concept you introduce in Theory Study. Which of the following Rhythm Reading Concepts do you introduce at the same time you introduce this Theory Study Concept? You may choose more than one answer.

APPENDIX C

Permission from Waco Music Teacher to Conduct Study

Permission

sara moore [sara_gwen@hotmail.com]

"WMTA has sought and received permission from the membership to participate in the Pilot Study being done by Patty Nelson.

Officers of Waco Music Teachers Association are: Sara Moore, President; Carla Gibbs, 1st Vice President; Marsha Green, 2nd Vice President (Membership); Becky Ward, 3rd Vice President (Student Affiliate chair); Lisa Robinson, Recording Secretary; Lydia Bratcher, Treasurer; Mary Bashara, Immediate Past President.

Sent: Tuesday, March 06, 2012 5:49 PM

To: Nelson, Patty

APPENDIX D

Permission from MTNA to Conduct Study

Dear Patty,

Marge Bengel forwarded me your inquiry and I must apologize for the delay in getting back to you. MTNA would be willing to e-mail a survey to our members. However, we cannot provide the e-mail addresses to you because of privacy reasons. If this is ok with you, please let me know and send the link to the final survey with the additional questions and we can make sure it is sent out.

Don't hesitate to let me know if you have any questions.

Thanks,

Brian Shepard
Chief Operating Officer
Deputy Executive Director for Resource Development
Music Teachers National Association
441 Vine St., Ste. 3100
Cincinnati, OH 45202
(513) 421-1420, ext. 241
(888) 512-5278, ext. 241
Fax: (513) 421-2503
bshepard@mtna.org

APPENDIX E

Study Questionnaire

Piano Teachers' Beliefs

Q1 Thank you so much for logging on to complete this online questionnaire. You will provide responses to sets of questions organized as sections, then click on NEXT to proceed to the next section until complete. When you select the final submit at the end of the questionnaire, your responses will be recorded and this signifies your agreement to participate in this study. I am a doctoral student attempting to learn more about the order piano teachers of beginning piano students ages six to nine believe musical concepts should be introduced in the first year of piano study. This questionnaire will only take about 20-30 minutes to complete and your participation is completely voluntary and all information will be kept confidential. The researcher will not have any access to identifiable information. There are a few items included that will allow the researcher to organize demographic information that is important to the study. You may discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled.

Your valuable input will provide the foundation for further research and development of innovative curriculum for piano study. The data collected from this online questionnaire will be organized as a complete set, not individual data, so your specific responses cannot be identified. Once data is collected via the internet, it is encrypted and saved into a file on a server at Baylor University and only accessible to the assigned IT representative and the below named researcher. After the entire data set is collected it will be removed from the server and saved in an electronic format for analysis. The overall group results will be analyzed quantitatively and qualitatively and could be reported in conference presentations or published articles.

Disclaimer: As you may be aware, electronic communication may be subject to interception while the information is in transit, although we have attempted to implement security measures. Therefore, it is possible that your information might be seen by another party and this would be out of our control whether that happens. Although none of the information requested includes your name as identification, if you are concerned about your data security, you have the option to print this survey, fill out the answers by hand, and mail the completed survey to the following address: Patty Nelson, Baylor University, School of Education, One Bear Place #97314, Waco, Texas 76798. My dissertation chair is Dr. Trena Wilkerson and can be contacted at 254-710-6162 or School of Education, Baylor University, One Bear Place #97314 Waco TX 76798-7314. The chairman of the IRB is Dr. David W. Schlueter, Ph.D., Chair Baylor IRB, Baylor University, One Bear Place #97368 Waco, TX 76798-7368. Dr. Schlueter may also be reached at (254) 710-6920 or (254) 710-3708. By clicking "yes" you are consenting to take the survey and allowing your data to be used by the researcher. Clicking "no" will take you out of the survey.

Yes (1)

No (2)

If No Is Selected, Then Skip To End of Survey

Q2 Do you currently teach beginning piano students ages six to nine?

- Yes (1)
- No (2)

If No Is Selected, Then Skip To End of Survey

Q3 What is your gender?

- Male (1)
- Female (2)

Q4 What is your race?

- Asian-American (1)
- African-American (2)
- Hispanic-Latino (3)
- Caucasian (4)
- Native American (5)
- Other (6)

Q5 How many years have you been teaching beginning piano students?

- Less than 5 years (1)
- 5-10 years (2)
- 10-20 years (3)
- 20-30 years (4)
- More than 30 years (5)

Q6 Please note the state where you currently teach.

Q7 Which Primer Method do you currently use? Please be very specific listing Title, and Publisher.

Q8 Do you have any of the following training in piano pedagogy? You may choose more than one answer.

- College level classes in pedagogy (1)
- Attend clinics in pedagogy (2)
- Apprentice model, trained by another piano teacher (3)
- None of the above (4)

Q9 For this section, please choose from the following choices: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree.

Students need to know the musical alphabet by the end of the first lesson.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q10 Introduction of the staff must be done at the first lesson.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q11 It is not essential for students to understand standard notation in the first few lessons.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q12 The first lesson must introduce bar lines and double bar lines.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q13 It is essential for students to understand line and space notes at the first lesson.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q14 It is imperative that the Treble and Bass clefs be introduced at the same time.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q15 A definition of "measure" is necessary at the first lesson.

- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q16 Please rank the following Hand Positions in the order that you believe they should be introduced in the first year of piano study. If you introduce two or more hand positions simultaneously, please give them the same number.

_____ G Position (1)

_____ C Position (2)

_____ Middle C Position (3)

Q17 Interval Reading

Please rank the following concepts in the order you believe they should be introduced in the first year of piano study. If you believe concepts should be taught simultaneously, please give them the same number. If you believe a concept should not be taught in the first year of piano, please do not give it a number

_____ Steps (1)

_____ Harmonic Intervals (2)

_____ 2nds (3)

_____ 5ths (4)

_____ Melodic Intervals (5)

_____ Skips (6)

_____ 4ths (7)

_____ 3rds (8)

Q18 Rhythm Reading

Please rank the following concepts in the order you believe they should be introduced in the first year of piano study. If you believe concepts should be taught simultaneously, please give them the same number. If you believe a concept should not be taught in the first year of piano, please do not give it a number.

_____ 4/4 (1)

_____ Dotted Half Note (2)

_____ Whole Rest (3)

_____ Time Signature (4)

_____ 3/4 (5)

_____ Single Eighth Note (6)

_____ Half Note (7)

_____ Eighth Rest (8)

_____ Beamed Eighth Notes (9)

_____ 6/8 (10)

_____ Quarter Rest (11)

_____ Quarter Note (12)

_____ Half Rest (13)

_____ 2/4 (14)

_____ Whole Note (15)

Q19 Theory Study

Please rank the following concepts in the order you believe they should be introduced in the first year of piano study. If you believe concepts should be taught simultaneously, please give them the same number. If you believe a concept should not be taught in the first year of piano, please do not give it a number.

- _____ a tempo (1)
- _____ decrescendo (2)
- _____ Chords (3)
- _____ forte (4)
- _____ 1st and 2nd endings (5)
- _____ Flats (6)
- _____ Key Signatures (7)
- _____ piano (8)
- _____ 8va Sign (9)
- _____ Ties (10)
- _____ D.C. al fine (11)
- _____ Fermata (12)
- _____ Repeat Sign (13)
- _____ Slurs (14)
- _____ Tempo Marks (ex. allegro, lento) (15)
- _____ Sharps (16)
- _____ ritard (17)
- _____ crescendo (18)

APPENDIX F

Method Matrix

Please find musical concepts already placed in the first column and note its rank as it occurs in the method book by placing the appropriate number in the second column. The first concept receives a one, the second concept receives a two, and so on. If several concepts are introduced on the same page, give them the same number. Therefore, if a quarter note, half note, and whole note are all introduced on the first page of the method, they would all receive a one. If additional concepts are introduced, please place them in the appropriate category and give them the appropriate rank. Please note, the staff, treble clef, bass clef, brace, bar lines, measures and double bar lines are not listed in any category. The teachers were not asked to rank these and therefore they are not included in the ranking matrix.

Once you have given each concept the appropriate rank number, please note how the concept was introduced. If the concept introduction instructed the student to move, sing, or play, please mark the concept as “enactive”. Enactive also include if the concept is used in the practice piece printed on the same page the where the concept is introduced. If there is a picture which explains the concept, please mark the concept as “iconic”. Pictures could include hearts to represent steady beat or quarter notes or clouds to introduce soft. If only the symbol and/or a written explanation of the concept is given, please mark the concept as “symbolic”. If a concept is introduced with more than one type of instruction, mark all columns which apply. An example would be if a method

introduces the quarter note with the symbol but also instructs the student to clap the rhythm, quarter note would be marked as being “enactive” and “symbolic”. If steady beat is introduced with hearts or stars or some other picture, it would marked as “iconic”.

Musical Concept	Rank	Enactive	Iconic	Symbolic
G Position				
C Position				
Middle-C Position				

BOOK TITLE _____

Hand Position

Rhythm Reading

Musical Concept	Rank	Enactive	Iconic	Symbolic
2/4				
3/4				
4/4				
6/8				
Beamed Eighth Notes				
Dotted Half Note				
Eighth Rest				
Half Note				
Half Rest				
Quarter Note				
Quarter Rest				
Single Eighth Note				
Time Signature				
Whole Note				
Whole Rest				

Interval Reading

Musical Concept	Rank	Enactive	Iconic	Symbolic
2nds				
3rds				
4ths				
5ths				
Harmonic Intervals				
Melodic Intervals				
Skips				
Steps				

Theory Study

Musical Concept	Rank	Enactive	Iconic	Symbolic
<i>a tempo</i>				
Chords				
<i>crescendo</i>				
D.C. al fine				
<i>decrescendo</i>				
Fermata				
1 st and 2 nd endings				
Flats				
<i>forte</i>				
Key Signatures				
8va sign				
<i>piano</i>				
Repeat Sign				
<i>ritard</i>				
Slurs				
Sharps				
Tempo Marks (ex. Allegro, lento)				
Ties				

APPENDIX G

Sample Email to Analyzers

Email to University Piano Professor

Here's the fun part. On the places where we don't all agree, we look at the books again to come to a consensus. This email is only about the Clark. If you want to make any changes on your matrix and resend it, you can. You are not required to change anything if you don't believe you should. So, here goes.

You marked 3/4 as being 3rd but it is introduced on the same page as 4/4, P. 46. Would you consider it to have the same rank?

You did not rank the dotted half note on P. 32.

You also did not rank 2/4 which appears on P. 53. If it makes you feel better, I completely missed 3/4 and 2/4 the first time.

You also ranked *forte* and *piano* as #1 but they are introduced on 2 separate pages. P. 14-15. Would you consider the piano if 1st and forte is 2nd or not?

Now for the Bruner. This is where the 3 of us did not all agree, but that's ok.

You did not mark Enactive for any concept. I considered a concept to be introduced with Enactive if the students were required to play it in the piece on the page. So if they used quarter notes in the piece, that was Enactive or if they played the piece in 3/4, that was Enactive. You do not have to agree, but this was how I approached it in addition to if the student was asked to clap or sing.

It would be great if I could have any changes by early next week. My dissertation chair is VERY slow is turning around my stuff and I'm really pushing to get her to agree to an April defense.

Reply:
Patty,

Regarding the Clark, go ahead and make the necessary changes. I had several distractions while I was working on it, which could have been the reason for the oversights.

Regarding the Bruner, I see now what you mean by enactive--I didn't interpret this from your directions, but of course, now that you have explained that, it makes sense, so go ahead and mark enactive in those categories.

Email to Piano Teacher

You were the one that caught the 2/4 in the Clark but it appears the first time on P. 53, BEFORE the Whole Note is introduced.

Want me to change it for you?

Let me know.

Reply

Yes, please change for me.

Email to Piano Teacher

One question on the Alfred. On the introduction of the hand positions, both Matt and I felt that since the letters were placed on a picture of the keyboard, that counted as Iconic. You can agree or disagree.

Reply

Agree.

Email to Piano Professor

Two other things. You missed the Half Rest on P. 35 and the Tempo Mark on P. 37. Would you like me to make those changes.

Also, You marked Iconic for the Half Note on P. 12, Quarter note on P. 6, Quarter rest on P. 8 and Whole note on P. 15 and I don't understand.

All I see are symbols. Could you explain what you are counting as an Icon?

Reply

Re p. 35, Alfred, yes go ahead and make the change. That was an oversight.

Re p. 12, I meant symbols, not icons. Make that change. Same for p. 8 and p. 15

APPENDIX H

Ranking Results for Hand Position, Interval Reading, Rhythm Reading, and Interval Study

Table H.1

Ranking Results for Hand Position

Hand Position	n	M	SD	1	2	3
Middle C	443	1.3599	0.73613	306	91	46
C	483	1.4442	0.59421	270	202	11
G	473	2.3561	0.81065	75	135	263

Table H.2

Ranking Results for Interval Reading

Interval Reading	n	M	SD	1	2	3	4	5	6	7
Steps	495	1.1127	0.70381	474	14	2	1	1	3	0
Skips	493	2	0.94281	105	334	30	16	4	3	1
2nds	497	2.4529	2.69226	162	97	179	35	19	5	0
3rds	500	3.104	1.28549	23	182	101	145	27	21	1
Melodic Int.	437	3.8109	1.98609	62	50	134	48	80	24	39
Harmonic Int.	426	4.2031	1.91022	30	45	118	74	76	39	44
4ths	475	4.586	1.52946	8	22	96	119	109	65	56
5ths	445	4.7342	1.799	13	33	96	77	105	88	33

Table H.3

Ranking Results for Rhythm Reading

Rhythm Reading	N	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Quarter Note	486	1.1276	0.75994	457	17	7	1	2	0	0	0	0	1	0	1	0	0	0
Half Note	484	1.8864	0.94436	145	289	34	9	0	3	1	1	1	1	0	0	0	0	0
Whole Note	484	2.8533	1.43354	112	52	196	79	25	13	3	1	1	2	0	0	0	0	0
Dotted Half Note	476	3.9811	2.10204	49	47	111	140	45	32	20	9	9	10	1	2	0	1	0
Quarter Rest	474	4.3544	2.37074	69	63	57	55	74	63	43	27	18	4	1	0	0	0	0
4/4 Time	479	4.6409	2.35021	50	56	42	74	106	66	19	33	21	7	3	2	0	0	0
Signature	473	4.7526	5.89217	48	52	50	83	122	35	26	36	11	4	2	3	1	0	0
Half Rest	460	5.4187	3.77238	18	67	47	49	57	69	56	52	21	19	3	2	0	0	0
3/4 Whole	476	5.6387	2.65562	26	39	41	58	72	71	61	35	27	27	11	6	2	0	0
Rest	457	6.0699	6.41861	20	36	58	37	45	67	78	49	28	16	19	3	1	0	0
2/4 Beamed	432	6.4642	11.3328	27	35	43	47	66	36	38	45	31	28	25	4	2	3	2
Eighth	379	6.8553	3.27823	20	17	28	33	41	39	40	34	41	26	22	28	5	3	2
Eighth Note	321	7.3447	3.36869	15	8	25	23	32	31	28	32	36	26	18	24	23	0	0
Eighth Rest	305	7.9477	3.67498	9	6	26	22	23	24	31	32	25	33	11	14	20	26	3
6/8	249	9.0558	5.07434	3	6	13	19	13	16	20	23	26	25	24	11	9	16	25

Table H.4

Ranking Results for Theory Study

Theory Study	N	m	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
forte	451	1.6763	1.56825	317	73	25	11	7	9	2	3	1	1	0	0	1	0	1	0	0	0
piano	451	1.6984	1.4974	300	91	24	12	8	7	3	2	0	1	2	0	1	0	0	0	0	0
Repeat Sign	440	2.7091	1.8403	108	154	76	43	26	15	7	5	1	2	1	0	1	1	0	0	0	0
Ties	434	3.9828	2.2387	44	65	100	85	55	30	24	12	8	3	4	1	2	1	0	0	0	0
Slurs	421	4.0983	2.61194	45	77	77	88	46	29	17	11	10	10	2	5	0	1	1	1	0	1
crescendo	377	5.3704	3.03129	31	31	55	54	51	34	31	25	18	22	12	4	8	1	0	0	0	0
Sharps	399	5.4511	3.10972	37	40	44	42	50	57	33	34	23	14	9	6	4	2	1	2	0	1
decrescendo	363	5.5187	3.1747	27	32	57	51	47	33	20	28	16	21	14	5	9	1	1	0	1	0
Flats	396	5.6843	3.12667	29	41	45	34	48	50	45	35	29	12	8	8	6	2	2	1	1	0
8va Sign	370	6.1078	3.76243	24	35	47	42	45	32	31	26	18	19	14	13	5	7	4	3	2	3
ritard	381	6.3979	3.27622	24	17	30	45	52	40	37	37	33	26	14	8	6	7	2	3	0	0
Chords	333	6.8548	4.15185	41	13	28	33	18	31	27	35	25	12	18	16	9	11	7	5	3	1
Fermata	348	7.1143	5.5224	16	17	20	36	43	42	28	34	29	28	24	13	10	4	2	0	1	1
Tempo Marks	309	7.6097	4.12341	14	16	23	25	37	23	24	24	23	18	24	15	14	8	9	3	9	0
a tempo	276	7.6931	4.1279	14	11	22	17	29	31	19	20	22	25	13	13	10	10	8	6	4	2
Endings	302	8.059	6.11161	14	11	18	28	21	30	26	29	27	23	20	16	16	10	3	2	5	3
D. C. al fine	308	8.1903	8.54832	12	14	19	28	25	26	36	22	29	19	12	27	10	8	8	10	3	0
Key Signatures	245	8.439	4.75377	16	15	16	13	15	17	17	18	14	18	17	12	13	15	12	6	0	11

APPENDIX I

Method Book Numbers - 529 Teachers Reporting

Table I.1

Method Books Used

Book Name	Number Using This Book
Faber Piano Adventures	290
Alfred Premier	66
Alfred Basic or no name	62
Clark Music Tree: Time to Begin	55
Bastien Basics or no name	48
Marlais Succeeding at the Piano	44
Hal Leonard Piano Lessons/Library	27
Nothing Particular	22
Harris Celebrate Piano!	20
Suzuki	20
Faber My First Piano Adventures	19
Alfred Prep	17
Snell Piano Town	14
Alfred Music for Little Mozarts	12
John Thompson Teaching Little Fingers to Play	12
Music Pathways	11

(table continues)

Book Name	Number Using This Book
Own Method	8
Vogt Piano Discoveries	7
Alexander Premier	6
Bastien The Very Young Pianist	6
Pace No Name	6
Schaum	5
Waxman Introductory Pageant	5
Burnam Step by Step	4
FJH The Perfect Start	4
Glover	4
Alfred All-In-One	3
John Thompson Easiest Piano Course	3
John Thompson Modern Piano Course	3
Palmer, Lethco Creating Music	3
Tan Fingers, Pitch and Pulse	3
Alfred Mozart Mouse	2
Bastien Piano Literature	2
Celebrations	2
Dillard Quaile	2
Lowe Music Moves for the Piano	2
Michael Aaron	2

Table I.2

Book Name - Norm

Book Name	<i>n</i>
Monell Piano for Small Fry	2
Olson The Perfect Start	2
Pace Kinderkeyboard	2
Schaum Fingerpower	2
Alfred Graded Lessons	1
Alfred Making Little Mozarts	1
Alfred Music Road	1
Alfred Piano Library	1
Bastien Music Through the Piano	1
Bastien Original	1
Beanstalks	1
Beyer Elementary Method	1
Chopin Method	1
D'Aiberge	1
Duckworth	1
Dynes The Piano Language	1
Fischer and Knerr Piano Safari	1
FJH Pre-Reading Made Fun	1
Gillock	1
Hoffman	1

(table continues)

Book Name	<i>n</i>
Keyser Harmony Road	1
Liela Fletcher	1
Louise Robyn	1
Mayron Cole	1
Methode Rose	1
Music Experience	1
Neue Anleitung fuer das Klavierspiel	1
Noona Basic Piano	1
Noona Clavier for Gifted Students	1
Noona Music Magic	1
Oxford Piano Time	1
Pianimals	1
Reading Keyboard Music	1
Rogers Music for Jacks and Jills	1
Russian School of Piano	1
Scale Skills	1
Simply Music	1
Stephen Covello	1
Stewart Piano	1
Trinity London College	1
Wing A Sound Beginning	1
Word Music in Me	1

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