

Foundational Concepts Of Technique For Beginning Piano Students

When I began teaching piano after graduating from college, I was ill-equipped, having taken one pedagogy class and possessing almost no teaching experience. However, I did have a love for children, good teaching instincts and a knack for sequencing concepts, which allowed me to be somewhat successful with my students. But I wondered if I was teaching my students correctly, specifically in the area of technical development.

Therefore, when the time came to choose my dissertation topic for my Ph.D. at the University of Oklahoma, I chose to take a closer look at the topic of technique in elementary-level piano students. In 2006 I completed this qualitative research study¹ in which I interviewed and observed several teachers well known for their pre-college

teaching in order to learn how they taught technique. After my dissertation was completed, I continued observing and interviewing more teachers to collect additional data for a future book on the topic of teaching technique to elementary level students.

The following “Research Teachers” were included in my research study:

- ▶ Marvin Blickenstaff, Collegetown, Pennsylvania
- ▶ Mary Craig Powell, Columbus, Ohio
- ▶ Carolyn Shaak, Denver, Colorado
- ▶ Nancy Breth, Arlington, Virginia
- ▶ Nina Polonsky, Columbus, Ohio
- ▶ Olga Radosavljevich, Cleveland, Ohio
- ▶ Ella Karasik, Cleveland, Ohio
- ▶ Thu Carey, Houston, Texas
- ▶ John Weems, Houston, Texas
- ▶ Suzanne Guy, Norfolk, Virginia

These research teachers represent different schools of thought regarding technical development and piano teaching. For example, Mary Craig Powell uses the Suzuki method, while Carolyn Shaak incorporates the ideas of Orff and Montessori. Nina Polonsky represents the Russian school, while Thu Carey and John Weems use concepts from the Dorothy Taubman approach. I welcomed this variety of teaching philosophies in my research because I wanted to study a range of ideas and teaching styles.

After interviews and observations with the research teachers, all of whom have varying ideas about relating to students, use an assortment of method books and materials and have disparate teaching personalities, I started to see trends related to the teaching of technique that transcended the variations in the research teachers' styles, methods and philosophies. In this article I will describe these trends as they relate to teaching technique to beginning students. Because these concepts are common to all the research teachers, they can form the foundation for a philosophy of teaching technique that can apply to any teacher and student.

Part I discusses the technical concepts common to the research teachers. Part II describes a practical way for any teacher to implement these concepts to beginning piano students.

Part I. Technical Concepts Posture

Proper posture at the piano is imperative for injury-free,

comfortable piano playing. According to the research teachers, aspects of good posture include:

- ▶ **Height of the Bench:** The bench should be at a height that the forearms, when in playing position, are level or slightly higher than the keyboard. Carpet squares are preferable to cushions to boost a student's sitting position because they form a firm base of balance.
- ▶ **Distance from the Keyboard:** The approach described by Faber and Faber² of putting the arms straight so that the fists touch the fallboard is the best way to check for distance from the keyboard (Photo A).



Photo A

- ▶ The student should sit tall on the sitting bones with the head straight and on top of the spine. For more detail in the body structure of the spine in relation to the head and other skeletal details important to piano playing, see *What Every Pianist Needs to Know about the Body*, by Mark, Gary and Miles.³
- ▶ Sitting tall requires that the feet be firmly on the floor. The body should be balanced over the feet, with a secondary balance over the sitting bones. Dangling feet puts all the balance on the sitting bones, which makes playing

the piano more difficult. Students should use a footstool or pedal extender to provide a firm base of support for the feet until they are tall enough to reach the floor.

Piano Hand Shape

Several of the research teachers objected to the term "hand position," because they believed this term denotes a stiff, set hand rather than a hand that is flexible to accommodate the gesture of a particular passage. Although it is true that advanced pianists use different hand shapes to play varying passages, all the research teachers stressed that it is imperative for beginning students to form a correct piano hand shape in the first months of piano playing. Letting a student play with a poor hand shape in the early years leads to many technical and musical problems in later years. The research teachers stressed the following components of a good piano hand shape.

- ▶ The bridge of the hand should be up (Photo B), not collapsed (Photo C).



Photo B



Photo C

- ▶ The thumb plays on the corner tip (Photo D), not flat on its side (Photo E) and is gently curved inward (Photo F), not outward (Photo G).



Photo D



Photo E



Photo F



Photo G

- ▶ Fingers should be gently curved (Photo H) (Photo I). It is easier to move the fingers when they are gently curved, rather than when they are

straight or over curled (Photo J). Teachers should beware of using pictures in method books, which often feature pictures of a hand shape that is too curved.



Photo H



Photo I



Photo J

- ▶ The nail joint of each finger should be strong (Photo K) rather than collapsed (Photo L), because collapsing nail joints do not allow the student to kinesthetically perceive and control the key. The research teachers agreed that collapsing nail joints is a common problem that needs to be addressed

through persistence and patience. Curving the fingers more is *not* the solution to this problem (Photo M). This puts the bones of the fingers in a position where they cannot collapse, but at the expense of mobility, since fingers that are very curved cannot move quickly



Photo K



Photo L



Photo M



Video 1

(Video 1). Instead of curving the fingers more, students should learn the feeling of “strong finger nail joints” by: Pressing on the teacher’s joints, and then having the teacher press on the student’s joints (Photo N).

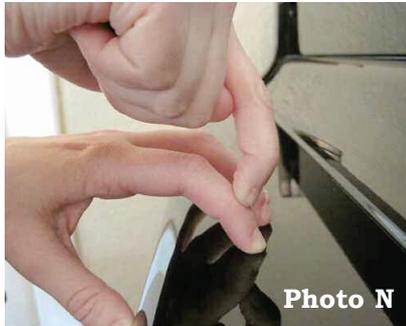


Photo N

- ▶ Playing repeated rhythm patterns such as with each finger on a table or on the piano, and (Video 2).



Video 2

- ▶ Making finger circles between the thumb and each finger (Photo O) (Photo P) (Photo Q) (Photo R).



Photo O



Photo P



Photo Q



Photo R

Alignment

The arm should stay aligned behind the finger playing so the hand is not injured through ulnar deviation (Photo S) or twisting in the wrists.



Photo S

Extreme ranges of motion in the wrist, whether up (Photo T), down (Photo U) or laterally, should be avoided, as this can cause injury.



Photo T



Photo U

In the case of harmonic intervals or chords, proper alignment of the arm depends on two criteria. First, the arm should align with the hand in the most comfortable and straight position between the extremes of the notes within the interval or chord, like this (Photo V), not like this (Photo W), where the extreme fingers are lined up on the keys. The arm and hand are not aligned, causing ulnar deviation and putting stress on the wrist.



Photo V



Photo W

Second, the position of the arm depends on the register of the keys in relation to the body. For example, if the right hand is playing a chord close to middle C (Photo X), the alignment will be different from the same chord played in the high register of the piano



Photo X



Photo Y

(Photo Y) in relation to how the arm is angled to the body.

When playing an accompaniment pattern such as Alberti bass, the student should play the pattern as a blocked chord first to find the proper alignment and angle between the body, arm and hand (Video 3).



Video 3

Often, the correct alignment means that the thumb is closer to the edge of the white key while the 5th finger is further in towards the fallboard (Photo Z). This prevents the hand from being ulnar deviated (Photo AA). However, depending on the register of the pas-



Photo Z



Photo AA

sage, the opposite might be true, such as this interval at the highest register of the piano (Photo BB). The key is to plan the most comfortable alignment *before* playing a passage, taking into consideration the position of the body and arm in relation to the register of the chord and the



Photo BB

shape of the chord in terms of black and white keys.

Powell provided a powerful illustration of exactly where the student should play on the length of the key by placing pieces of removable tape on the correct places on each key. In this way, the student could visually see the shape of a pattern and begin to think about not just which key to play, but where on the key to play (Video 4). Carey, Weems, Guy



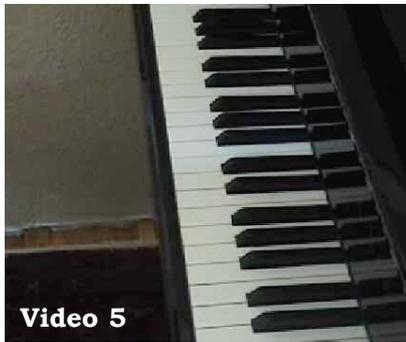
Video 4

and Breth all coached their students regularly throughout the lessons about where to play on the key in order to stay aligned.

Keeping a Small Hand

Nearly all the research teachers believed that unnecessarily stretching the hands of children was dangerous. Legato was often sacrificed to prevent stretching of the hand. Instead of reaching for notes with the fingers in a leaping

passage, the arm should move the hand to a new note. In the event that a stretch is unavoidable, the hand should return to a small and relaxed position as soon as possible after the stretch. Weems noted that when rotation is used, a leap can sound legato even if the keys are not being physically connected (Video 5).



Relaxed Non-Playing Fingers

In key depression, the arm aligns behind the playing finger to support it in key depression (Video 6). The finger



balances the weight of the arm on the bottom of the key. The non-playing fingers should be relaxed (Photo CC), which means that the fingers are not necessarily on the keys, but that they are more straight than curled. Curled fingers are not relaxed fingers (Photo DD). If fingers are curled or sticking up, the teacher should stop the student often and touch



the fingers to help them relax. This will gradually help the student learn the difference in sensation between relaxed and tense non-playing fingers.

A relaxed thumb is especially important. Carrying tension in the thumb makes the whole hand tense, because it is impossible to have a tense thumb while the other fingers stay relaxed. Stopping the student periodically to check the non-playing thumb by jiggling the thumb up from underneath is an effective way to help the student form an awareness of the feeling of a relaxed thumb (Video 7).



Up and Over the Keys

If the hand is playing with a tall bridge, on the corner of the thumb, with strong fingernail joints, the hand is put in a position of approaching the keys from above. Students who have collapsed bridges, fingers or flat thumbs tend to approach the keys from below, making it difficult to transfer the support of the arm to the playing finger (Video 8). Weems



also noted that when a finger plays with the support of the arm, there is a slight moving forward from the elbow. If a student tends to play with collapsed bridges or knuckles, the teacher may think the main problem is in the hand and strive to fix the hand shape. However, the problem may really lie further back, in the forearm. Having the student play with a slight forward motion from the elbow on each note can help to rectify the hand position problems (Video 9).



This translates to thinking of playing up and over the keys rather than from underneath.

Articulation

The research teachers had mixed opinions regarding whether legato or non-legato should be the first articulation that students learn. Most of the research teachers stated that non-legato should come first. The few who believed legato should be taught first said that if a student could not successfully play legato at first, the student was allowed to play non-legato for a short time to gain more control before legato was attempted. This means that non-legato is the easier articulation to begin with.

Most method books do not specify how the beginning pieces are to be played, whether students should use fingers or arm as the primary playing unit, or whether the articulation should be non-legato or legato. After interviewing and observing the research teachers, I have come to the conclusion that until students have control over the basic movement of the forearm, have formed a proper hand shape and have gained some basic finger dexterity, all beginning pieces in method books should be played non-legato with a forearm stroke (Video 10). Later, students can



Video 10

begin to play legato with a forearm stroke on each note (Video 11), followed by the



Video 11

more subtle finger work, which combines one arm gesture for a phrase of several notes (Video 12).



Video 12

Forearm First, Fingers Second

There are two main reasons children should play the piano using the large motions of their forearms as the primary playing apparatus to support the fingers, which are the secondary playing apparatus. First, children have more control over their large muscles than their small muscles. Therefore, they have more control and freedom at the keyboard when they use their arms to help their fingers play, rather than just focusing on playing the right keys with the right fingers, without help from the arm.

Second, children's fingers are small and weak, and the keys of the modern piano require more weight than the keyboard instruments a few centuries ago. The arm working in conjunction with the fingers provides the weight necessary for children to produce a healthy tone at the piano and to play the piano without injury.

In my experience judging festivals, I see many young students using their fingers alone with no awareness of the role of the arm (Video 13).



Video 13

I believe this is because most method books used by students and teachers emphasize finger numbers from the beginning and do not provide any instruction about which part of the body should be used to play those specific finger numbers. This leads the student and teacher to assume that as long as the correct fingers are used, the piece is being played properly.

In general, when using the arm as the primary playing unit while the fingers take the role of very active, but secondary playing units, the arm should stay behind the finger that is playing to support that finger in producing the tone. This coordination of the arm and fingers results in the following:

- ▶ The arm adjusts for each finger, creating what might be called a “choreography of gestures.” The arm moves in forward, backward, lateral, circular or rotating shapes with the hand and fingers depending on the shape of the passage (Video 14).



Video 14

- ▶ This choreography results in a synthesis of rhythm and gesture, furthering the musical expression of the phrase. This choreography has been codified by the Taubman approach through a set of rules denoting when the pianist should play further in toward the fallboard, out toward the edge of the keys, at various angles to the key, with single and double rotations and so on. Two of the research teachers, Carey and Weems, have had great success teaching their students these rules. Through following the general guidelines in Part I of this article, all teachers can incorporate the foundational principles that result in a choreography of gestures within their own teaching style, whether the teacher prefers stated rules for movement, such as those used by Weems, Powell and Carey; or whether the teacher’s style favors a more conversational approach to teaching movement, such as

that used by Shaak, Guy and Breth. Either way is effective. An individual’s teaching style may be drawn to one method rather than another.

Summary

From the very beginning of study, teachers should work to ensure the student is in control of the following aspects of piano technique:

- ▶ Proper posture
- ▶ A relaxed but controlled piano hand shape
- ▶ Approaching the keys from above
- ▶ Keeping the arm behind the finger that is playing
- ▶ Alignment between the arm and hand and finger
- ▶ A small and relaxed hand that avoids stretching
- ▶ Relaxed non-playing fingers
- ▶ Playing beginning pieces with a forearm stroke and a non-legato articulation, followed by legato articulation when the student has basic control of the playing apparatus

These aspects will result in a choreography of gestures that produce relaxed, coordinated and musical playing.

**Part II. Practical Application
Piano Safari Technique Exercises**

After observing and interviewing the research teachers, I decided that for my own teaching, designing a series of technical exercises would help me organize my teaching of technical concepts important to beginning pianists. The following exercises help students develop the choreographic gestures necessary to successfully play the repertoire in the first two years of study and are designed to be introduced in

the first semester of piano study. They are based on observations of the research teachers and formulated around the technical concepts found in Part I of this article.

The exercises are called Piano Safari Technique exercises because they are based on an animal theme that appeals to young students and because my colleague Katie Fisher and I are writing a piano method called *Piano Safari*, which incorporates these exercises (pianosafari.com).

It should be noted that playing these exercises is not enough to develop a good technique. The exercises must be played correctly, with attention to concepts such as hand shape, alignment and relaxed non-playing fingers that were discussed in Part I. The teacher should first study and play the exercises to understand the goals and gestures of each exercise in order to teach it correctly to the student. For most students, these exercises will take several weeks to master. Teachers must persistently work with students until they can play the exercises confidently and comfortably. Instant results are rare.

The exercises are cumulative and are taught by rote. Notation is provided for teacher and parent reference. Having the corresponding stuffed animal “watch” and “encourage” the student can provide extra fun and motivation. Once these exercises are learned, the gestures they teach can be applied to repertoire pieces the student is studying. In fact, I have found the students often find the gestures in pieces faster than I do!

**Exercise 1.
Grizzly Bear**

(based on exercises by Polonsky and Powell)

Goals: arm weight, relaxed hand and thumb, wrist flexibility, graceful arching movement between octaves



I begin teaching the “grizzly bear” by having a group of students stand with their arms by their sides. I talk about how my sleeping stuffed bear is floppy and heavy, just like their arms should be. I jiggle their arms as they rest at their side to check for relaxation.

When we play the “grizzly bear,” I hold the student’s arm and hand for the first few weeks to allow the student to understand the feeling of the exercise (Video 15). Gradually, the student learns to use his own arm weight to drop



Video 15

into the key without my help. I play an accompaniment of low chords to make the exercise sound more like a grizzly bear (Video 16).



Video 16

Prepare above the keys.
Drop with low wrist.
Release up with a relaxed wrist.
Move with a graceful arch to the next note.

Repeat on other notes with other fingers.

**Exercise 2.
Zechariah Zebra**

(Blickenstaff, Powell, Shaak)
Goals: fast and free movement of the forearm, firm nail joints



I was surprised when three of the first research

teachers I observed all had their students practice this exercise in the beginning weeks of study. I asked Powell why this “twinkle variation” from the Suzuki⁴ violin method had been transferred to the piano, and she gave three reasons:

1. Students play fast from the beginning, so as not to develop a fear of playing fast. Also, for children, fast is fun!
2. Repeating a note with the same finger helps strengthen the finger nail joints.
3. If a student can play this exercise fast, it shows that the arm is loose, since it is difficult to play this exercise at a fast tempo when the arm is too tense.

Powell calls this exercise “Mississippi hop frog.” When I observed Marvin Blickenstaff, he used the same exercise, calling it “Ebenezer sneezer.” Carolyn Shaak also used it, calling it “Colorado mountain.”

After three teachers in my research used this exercise, I decided it must be useful for students, and “Zechariah zebra” was added to the Piano Safari Technique exercises. Helping the student play by holding the hand and finger will help the student be more success-



Video 17



Video 18

ful at first (Video 17). Students can then play the exercise themselves (Video 18).



Exercise 3. Persian

Cat (Nearly all research teachers use this technique in pieces) *Goals: free and rhythmic forearm movement, moving around the keyboard, wrist flexibility*



“Persian cat” has two phases.

1. Students practice “Persian cat” non-legato with a forearm movement on each note and a non-legato articulation (the notes are separate but not as short as staccato) (Video 19).
2. Once students have control of “Persian cat”



non-legato, they learn “Persian cat” legato, where a forearm movement on each note is combined with fingers that connect the notes to form legato (Video 20). The beginning pieces are played with “Persian cat technique,” non-legato first and then legato, for the first several years of study while gradually also incorporating “flying squirrel,” Exercise 5.



Exercise 4. Kangaroo (Shaak)

Goals: fast and free forearm movement, firm nail joints, accuracy and confidence

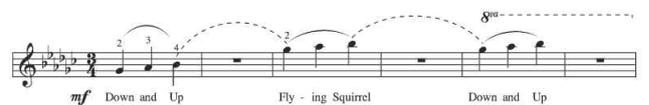
“Kangaroo” is a reiteration of the technique used in “Zechariah zebra,” but is more advanced than “Zechariah zebra” because there is no pause between finger changes (Video 21).



Exercise 5. Flying

Squirrel *Goals: down up wrist motion and flexibility, legato three-note slurs, graceful arching movement between octaves, one arm movement per phrase*

After students master “Persian cat” non-legato and “Persian cat” legato, they start incorporating groups of notes into one arm gesture. This is a more advanced form of legato (Video 22).



Exercise 6. Elephant Moonwalk

Goals: Development of the outer fingers of the hand in a proper position, arm weight, wrist flexibility, alignment



“Elephant moonwalk” is an extension of “grizzly bear” and requires control of the outsides of the hand and more control regarding which notes are played. It should be played slowly, simulating an elephant that falls with a thud onto the moon and then gently floats up in weightlessness (Video 23).



Exercise 7. Monkey Swinging

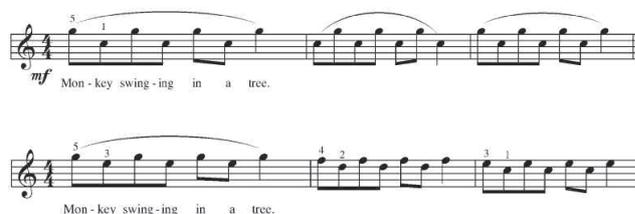
(Blickenstaff, Shaak, Weems, Carey)

Goals: rotation, legato, alignment

This is a beginning rotation exercise. Alignment is very important. The thumb should be on the end of the white key while the 5th finger is further in to prevent ulnar deviation. Also, it is imperative that the non-playing fingers are relaxed and that the student thinks of the thumb as being one unit while the other four fingers are a unit with and support the 5th finger (Video 24). The following



video is an example of working with a student to make the “monkey exercise” better. These exercises will not be perfect immediately, but must be worked on for perfection. (Video 25).



Exercise 8. Lazy Turtle

Goals: intervals, arm weight, alignment

This is an extension of “grizzly bear” and “elephant moonwalk” that focuses on the control of intervals (Video 26).



Application to Music

I have found that children readily apply the gestures taught in the Piano Safari Technique exercises to their repertoire pieces. Because the exercises have become cemented in a student’s muscle memory, when I say, “Use more Grizzly Bear right here,” about a specific place in a

piece, the student automatically releases more arm weight and drops into a key with a fuller sound. Or I can say, “Where is the Monkey spot?” and the student finds the places to use rotation. Of course, I also use the standard terms, such as rotation, arm weight, down up and so forth with the student. However, students seem to retain the motions better through the use of an animal theme and stuffed animals.

Below are four examples of how the Piano Safari Technique exercises can be incorporated into standard literature. Levels refer to the leveling system of Jane Magrath.⁵

Example 1. Duet by Köhler.⁶ Level 1.



Video 27



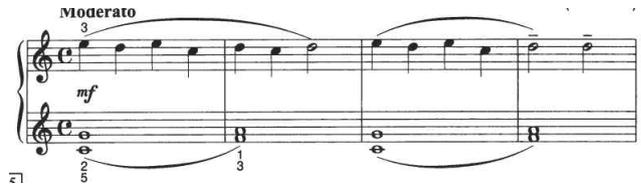
Video 28

Students first practice this piece with “Persian cat” legato technique (Video 27). Then they play it with “flying squirrel” technique based on the slur marks (m. 1, 2, 4) (Video 28). There are also “kangaroo” rhythms in m. 3.

In the Piano Safari system, technique is combined with rhythmic impulse

through tapping the “Zechariah zebra” , “kangaroo” and “Persian cat” rhythmic patterns on a table and playing them on the piano, as shown in the video under the section, Piano Hand Shape. Students then recognize these patterns in pieces, which reinforces the relationship between the technical gesture and the rhythmic pattern.

Example 2. Melody, Op. 39, No. 2, by Kabalevsky.⁷ Level 1.



The right hand uses “monkey” technique, a rotating motion where the arm stays behind the finger playing. The left hand uses “lazy turtle” technique combined with “flying squirrel” technique, where arm weight sinks into the first harmonic interval followed by an up motion on the second harmonic interval (Video 29).



Video 29

Example 3. Folk Dance, from First Term at the Piano, No. 5, by Bartok.⁸ Level 2.



This piece can be practiced slowly with “Persian cat” legato technique for deep tone and looseness in the arms. Then the phrases are grouped using “flying squirrel” technique

(Video 30). This piece also contains “Zechariah zebra” (m. 1) and “kangaroo” rhythms (m. 2).



Video 30

Example 4. Arabesque, Op. 100, No. 2, by Burgmüller.⁹ Level 3



The right hand uses “monkey” technique (rotation) while left hand uses “flying squirrel” technique (down up) (Video 31). Using these different gestures between hands is complicated at first, but provides greater rhythmic energy and relaxed freedom of movement when mastered. Children who analyze for gestures from the beginning of study do not find complicated coordinations difficult by the time they reach this level.



Video 31

Conclusion

Interviewing and observing the research teachers provided me with a completely new perspective regarding the teaching of technique to beginning students. I was impressed with the great importance the research teachers placed on the beginning stages of study, exhibited by their professional and exacting approach to their student’s learning from the very first lesson, regardless of the child’s perceived “talent.” I was happy to discover that the children I observed were not “prodigies.” They were just very well trained students who had

parents dedicated to their musical education and teachers who cared greatly about every aspect of their piano education.

Technique was stressed in each studio because technique is the foundation to all future piano playing. I hope that this glimpse into my research will provide information that will be as helpful for other piano teachers as it has been for me in my own teaching of technique.



NOTES

1. Julie Knerr, “Formation of Piano Technique In Elementary Level Piano Students: An Exploration of Teaching Elementary Level Technical Concepts According to Authors and Teachers from 1925 to the Present,” (Ph.D. diss., University of Oklahoma, 2006).
2. Randall Faber and Nancy Faber, *Piano Adventures, Lesson Book, Primer Level* (Fort Lauderdale, FL: FJH, 1995), 3.
3. Thomas Mark, Roberta Gary and Thom Miles, *What Every Pianist Needs to Know About the Body* (Chicago: GIA Publications, 2003).
4. Sinichi Suzuki, *Suzuki Violin School, V. 1* (Secaucus, NJ: Summy-Birchard, 1975)
5. Jane Magrath, *The Pianist’s Guide to Standard Teaching and Performance Literature* (Van Nuys, CA: Alfred Publishing Company, 1995).
6. Keith Snell, ed., *Piano Repertoire, Romantic/Twentieth Century, Preparatory* (San Diego, CA: Kjos Music Publishing, 1997), 7.
7. Snell, 15.
8. Ibid., 15.
9. Keith Snell, ed., *Piano Repertoire, Romantic/Twentieth Century, Level 3* (San Diego, CA: Kjos Music Publishing, 1997), 9.

Bibliography

- Faber, Randall, and Nancy Faber. *Piano Adventures, Lesson Book, Primer Level*. Fort Lauderdale, FL: FJH, 1995.
- Knerr, Julie. "Formation of Piano Technique In Elementary Level Piano Students: An Exploration of Teaching Elementary Level Technical Concepts According to Authors and Teachers from 1925 to the Present." Ph.D. diss., University of Oklahoma, 2006.
- Magrath, Jane. *The Pianist's Guide to Standard Teaching and Performance Literature*. Van Nuys, CA: Alfred Publishing Company, 1995.
- Mark, Thomas, Roberta Gary, and Thom Miles. *What Every Pianist Needs to Know About the Body*. Chicago: GIA Publications, 2003.
- Snell, Keith, ed. *Piano Repertoire, Romantic/Twentieth Century, Preparatory*. San Diego, CA: Kjos Music Publishing, 1997.
- Snell, Keith, ed. *Piano Repertoire, Romantic/Twentieth Century, Level 3*. San Diego, CA: Kjos Music Publishing, 1997.
- Suzuki, Shinichi. *Suzuki Violin School, V. 1*. Secaucus, NJ: Summy-Birchard, 1975.

Julie Knerr, NCTM, is on the adjunct piano faculty at the Wanda L. Bass School of Music www.okcu.edu/Music at Oklahoma City University www.okcu.edu, where she teaches group piano and is an accompanist. She also maintains a private studio in Norman, Oklahoma. Until recently, Knerr was assistant professor of piano and pedagogy at University of Missouri, where she taught children's piano lessons; directed the group piano program; and created and directed the Piano Safari program for children. She holds a Ph.D. degree in music education with an emphasis in piano pedagogy from the University of Oklahoma, where her dissertation on elementary-level piano technique was nominated for the Best Ph.D. Dissertation Award in 2006. Additional degrees include M.M. degrees in piano performance and piano pedagogy from the University of Illinois at Urbana-Champaign, where Knerr studied both piano and harpsichord, and a B.M. degree in piano performance from the University of Puget Sound.

