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A SURVEY OF STRING TEACHERS' OPINIONS REGARDING
THE TEACHING OF VIOLIN/VIOLA SHIFTING

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By

Beth A. Sievers
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A SURVEY OF STRING TEACHERS' OPINIONS REGARDING
THE TEACHING OF VIOLIN/VIOLA SHIFTING

A Dissertation APPROVED FOR THE
SCHOOL OF MUSIC

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I have been inspired to write about this particular topic for over ten years. After observing many violin/viola students experience frustration when playing in positions other than first position, I began to think about a possible research study in this area. I would like to take this time to thank many people that encouraged me along the way.

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Abstract

This study examined string teachers' opinions regarding the technical aspects of shifting on the violin and viola. Areas of interest included how to teach shifting, when to introduce shifting, what teaching methods were most effective, and what instructional materials were used by string teachers. Two hundred twenty-nine participants completed a questionnaire consisting of three sections: demographic information, pedagogical issues regarding shifting, and open-ended questions. The data were interpreted using statistical analysis, including a MANOVA to compare primary teaching areas to find any commonalities and/or significant main effects as well as significant interactions between teaching experience and education among the respondents. The open-ended data revealed various response trends and themes.

String teachers agreed that shifting is best taught in a private studio setting. Most respondents introduce shifting after 1st position is secure. Other commonalities included 1st position taught before 3rd position, the importance of ear training, and the use of scale studies.

However, many items had mixed responses. Findings revealed that K-12 teachers and college/private teachers' attitudes were polarized regarding teaching shifting. Also, interactions between teaching experience and education revealed differences between respondents with a bachelor's, master's, or doctoral degree combined with a range of a few to many years of teaching experience. Opinions differed regarding posture, needing more literature, and shifting taught during the third year. Further research is needed to isolate these differences to see what teaching methods regarding introducing shifting are more effective within various settings.

CHAPTER ONE

INTRODUCTION

Background

This study examined string teachers' attitudes regarding the technical aspects of shifting on the violin and viola. Shifting refers to the movement of the left hand from one position to another on the fingerboard of a stringed instrument. Shifting is a necessary and important technique on the violin and viola in order to play all of the notes that are required as well as achieving fluency in specific musical passages easier to accomplish. The art of shifting is as old as playing the violin/viola itself because once the range on any particular string is extended beyond an interval of a fourth or fifth, the hand must be moved to obtain any additional notes.

Historically, violinists/violists were required to develop this skill to a high level, but documented accounts or treatises describing the process were not made available to performers/pedagogues until the mid-sixteenth century, when efforts were made to codify technical demands. Shifting developed as the range of the violin literature expanded (Boyden, 1965), which also necessitated changes in the design of the instrument and fingerboard (Boyden, 1989). Prior to 1700, the violin fingerboard measured eight inches in length. From 1700 to the present, the fingerboard measures ten and a half inches in length (Boyden, 1989). The added length of the fingerboard made it easier to move the left hand when changing positions. By 1700, the technical demands required of the violinist continued to expand. The music composed for the violin during this time gives evidence that the art of fingering and shifting developed greatly as increasing demands upon performers extended the range and technical skills required.

The art of teaching shifting had a varied beginning, but the subject has now been addressed in various string method books. String method books usually introduce shifting to a violin/viola student in the second and/or third book of a series of books. For example, in Essential Elements, position exercises occur towards the end of book 2 (Allen, Gillespie, & Tellejohn-Hayes, 1995). Third position is introduced on the D string with a picture showing how first position and third position appear on the fingerboard of the violin/viola. After third position is introduced on the upper strings of the violin, shifting the hand from first to third position is introduced. Strictly Strings, another string method book, uses a slightly different teaching approach when introducing shifting (Dillon, Kjelland & O'Reilly, 1993). Third position is introduced to the violin/viola students by using a two-octave, G major scale. Another shifting exercise includes moving the first finger to each designated note, using a one octave G major scale exclusively on the G string. The benefits of this exercise include exposing students to seven positions (including first position), not just third and first position.

Using concepts similar to the G major scale exercise, Rolland (2000) and Zweig (2004) recommend that violin/viola students learn to move the left hand up and down the fingerboard, thereby introducing the concept of the entire fingerboard from the beginning. By learning the entire fingerboard from the beginning, students learn how to move their left hand without experiencing a locked left hand. Pre-shifting exercises, similar to exercises found in Essential Elements, are used when teaching beginning violin/viola students. The actual movement from one position to another (shifting) occurs at a later time in instruction.

Teaching shifting to an individual in a private lesson setting may have an advantage over teaching shifting in a classroom setting. Due to the one-on-one (1:1) relationship in a private lesson, if the student experiences difficulties with shifting, the teacher can immediately address those issues (Salzberg & Salzberg, 1981).

Teaching shifting to a large, heterogeneous string class can be challenging for a string teacher. In a public school setting, the teacher typically has 20-30 students in a classroom. According to Dillon (1978), it is almost impossible to keep track of a large string class when each student is trying different tasks. “Position study is much easier to handle in the homogeneous class or in private study” (Cook, 1957, p. 34). Since not every student is able to study privately or in a homogeneous classroom, a systematic approach to teaching shifting would be useful for the heterogeneous classroom setting (Nelson, 1983).

Using a combination of private lessons and group lessons on a weekly basis can be beneficial to a beginning string student. Students trained using the Suzuki method meet with a private teacher each week in addition to a homogeneous group (Schlosberg, 1987). Both private and classroom string teaching may be effective independently, but the two systems should work together towards designing a systematic approach to teaching pedagogical issues to string students (Cook, 1973).

There is a lack of consensus among string teachers regarding performance practices and the resulting technical aspects, such as shifting. As a result, many technical aspects of string playing, such as right and left hand techniques, have not been standardized (Nelson, 1983). Some of the difficulties relating to shifting include left arm-hand coordination, the role of the left thumb, the gliding finger, whether or not to use

an auxiliary note, and the musical expression that can be associated with shifting (Neumann, 1969).

Need for the Study

There are many different attitudes regarding how to teach shifting. For example, some pedagogues believe that introducing shifting early is beneficial to the student, while others believe that shifting should be taught after the 2nd or 3rd year of instruction. A study of string teachers' attitudes about the most effective approaches to teaching shifting could provide a better understanding of what string educators view as best practice.

What positions should be taught first? ["Position" refers to the placement of the left hand with respect to the fingerboard (Boyden, 1965; Carroll, 1997; Neumann, 1969; Yampolosky, 1967)]. Havas (1969) believed that third position should be learned after first position. Cowden (1972), however, compared first versus third position approaches to violin instruction. His research concluded that there was no significant difference of achievement between the students who started with first position compared to the students who started with third position.

Other violin pedagogues believe that second position should be learned after first position. However, avoiding certain positions on the violin/viola can create mental blocks for the string student (Carol, 1986). Shifting could be taught using whole and half step movement, just as a student would play the piano (Carol, 1986). Lower strings learn positions by using certain finger patterns, without labeling the particular position in which they are playing (Carol, 1986).

Beginning students may not even realize that there are positions other than first position. "Our teaching methods may be part of the problem" (Mishra, 1994, p. 43). If

other positions are not introduced at the beginning of instruction, a student will likely lock into the “first position” mold, and therefore may not be willing to try new positions (Mishra, 1994; Rolland, 2000).

The focus of this study was to explore string teachers’ attitudes regarding shifting, and in so doing, compile the data to show what teachers consider to be best practice when teaching shifting to violin/viola students. Hopefully, this information will contribute to developing pedagogy for teaching shifting.

Research

There is very little research relating to shifting instruction. Rolland (2000), for example, recommends that students learn pre-shifting exercises early in order to better prepare the left hand for shifting and vibrato techniques. Even with positive results, Rolland’s exercises regarding pre-shifting/shifting instruction were adopted by only a few string pedagogues. Cowden (1972) studied the effects of starting beginning students in third position instead of first position, but his results were inconclusive.

Some studies offer insight into a particular violin/viola pedagogue’s perspectives of teaching shifting (Carroll, 1997; Chee, 1998). Technical aspects of shifting are addressed, such as how to use the left hand when engaging in a particular shift, whether or not to make the shift audible or inaudible, and other specific requirements relating to shifting. The information provided is based on a studio teacher’s perspective of teaching shifting. These studies do not address the topic of when to introduce shifting to beginning students.

The Helsinki study, conducted by Garam (1990), looks at the effects on intonation as a result of the shifting process. Participants of the study were advanced violinists, not beginning violin students. Although insightful, results of this study are not helpful when introducing shifting to beginning violin/viola students.

Purpose of the Study

The purpose of this study was to examine perspectives of violin/viola private studio teachers, K-12 string educators, and violin/viola college/university professors regarding their attitudes about teaching shifting. It is hoped that this will reveal what techniques, procedures, and materials teachers believe to be most appropriate when introducing shifting to violin/viola students.

Areas of concern include how to introduce shifting to beginning violin/viola students; when to introduce shifting to beginning violin/viola students; what instructional materials should be used when introducing shifting; and how the college and university string teachers', public school string teachers', and private studio string teachers' attitudes regarding shifting differ.

Research Questions

This study addressed three broad research questions.

1. What are string teachers' attitudes regarding technical elements of violin/viola shifting, including:
 - a. how to introduce shifting,
 - b. the availability and appropriateness of instructional materials,
 - c. how to teach shifting effectively, and
 - d. correct posture as it relates to learning to shift?

2. How do attitudes regarding shifting compare when considering levels of primary teaching positions?
3. How do attitudes regarding shifting compare when analyzing background variables, such as education and teaching experience?

Definitions

The following definitions were used in this study:

Shift	the movement of the left hand from one position to another on the fingerboard of any stringed instrument; <i>Applicatur</i> (German)
Positions	the placement of the left hand with respect to the fingerboard; <i>orders</i> (Italian)
Portamento	audible ascending slide used for expressive purposes
Contraction	adjusting fingers of left hand to play slightly less than a fourth interval; used in chromatic scale passages
Extension	hand remains in a position while a finger extends up or down to reach a desired note
Guide Note	finger remains on the string during the shift and serves to link the original position to the new position; not necessarily the final arrival pitch

Delimitations and Assumptions

This study exclusively focused on violin/viola shifting techniques. Current trends of cello and bass left hand techniques, specifically shifting, were not addressed other than to report that shifting is introduced earlier due to necessity. In order to play the most

basic string literature, cellists and basses need to shift during their first year of instruction.

A brief overview of technical aspects of how to hold the violin/viola, posture, and left hand placement will be discussed in this study in order to show how these issues relate to the shifting process. Due to the vastness of materials relating to violin/viola pedagogy, this study is limited to only those pedagogical issues directly related to fundamental shifting.

There are many varieties of advanced shifting, and specific pedagogical techniques for teaching each variety. This study focused on the techniques and materials that relate to beginning shifting techniques. It was not intended to address all issues relating to shifting.

Participants in the study were limited to volunteers who were willing to fill out the survey. It was assumed that the responses given by these participants are accurate and honest.

Participants were selected from string teachers who are members of American String Teachers Association (ASTA), and/or are affiliated with National Association of Schools of Music (NASM), and/or Music Educators National Conference (MENC). This study is not generalizable to the entire string teacher population of the United States due to the fact that not all string teachers are affiliated with ASTA, NASM, and/or MENC.

Organization of the Dissertation

The following chapter is a review of the related literature. Sources related to the history of shifting, the principles of balance and posture, the left hand and thumb position, audiation, research relating to shifting, and violin/viola pedagogues who address how to teach shifting are discussed.

Chapter Three describes the procedures of the study, including survey development, selection of the target population, questionnaire administration, and data analysis.

Chapter Four presents the findings of the first two sections of the Shifting Questionnaire, including personal information and pedagogical issues.

Chapter Five describes the findings from the six open-ended questions using themes that emerged from the data received from respondents.

Chapter Six includes a summary of the study, conclusions, and recommendations for further research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

Many different approaches to teaching shifting have developed. With such diversity of approaches when teaching shifting, no single teaching method has been agreed upon as most effective. There is also lack of agreement among string educators and performers as to when and how shifting should be introduced to the violin/viola student.

This chapter examines research pertaining to teaching shifting. Areas of discussion include the history of shifting, principles of balance, posture when holding the violin/viola, correct hold of the violin/viola, the left hand and thumb positions, and the role of the ear (audiation) when shifting. Additionally, topics dealing with more technical aspects of shifting, such as the actual process of shifting, whether or not to use a guide note, and shifting into higher positions, will be examined. Different types of shifts and positions will be discussed in this chapter as well. Finally, current research relating to when and how to introduce shifting will be examined.

History of Shifting

The violin originated during approximately the third decade of the sixteenth century. Since, at that time, the violin was used primarily to double vocal music, the technique of the violin remained undeveloped. Shifting was one of the last left hand techniques to develop (Boyden, 1965).

Without documentation of various violin techniques, specifically shifting, Boyden (1965) speculates that the techniques described in Ganassi's treatise, *Regola Robertina*

(1543), written for viol players, could be transferred to violin playing. His treatise shows what was understood about higher positions at the time, specifics of how to shift, and perceptions regarding the tone color of each string. Ganassi gives musical examples in his treatise with alternative fingerings, including using different shifts and positions for each passage. He suggests that using different positions would alleviate awkward string crossings and avoid open strings (Boyden, 1965).

An example of the sophisticated concepts brought forth in Ganassi's treatise is the idea of using higher positions to achieve a richer tone color. This concept was not again found in a treatise until the middle of the eighteenth century in Leopold's Mozart's, *Versuch einer grundlichen Violinschule* (1756).

During the sixteenth century, violin playing was generally confined to the three upper strings, and the musician remained mostly in first position. At this time, the role of the left hand was not only to change the pitches of the strings, but it was also the primary method by which the violin was supported. The limited range of first position was probably due therefore to the immovable placement of the left hand, given its job of supporting the violin (Yampolosky, 1967).

Further, the violin neck and fingerboard were shorter and wider than present day, and they were not suited for playing above third position (Yampolosky, 1967). During the seventeenth century, the fingerboard was lengthened by two-and one-half inches in order to accommodate the use of higher positions. Changes to the slope of the fingerboard and neck were also made. These changes were made to facilitate movement of the left hand up and down the fingerboard as the musician employed various positions.

Elements of sound production, such as response, resonance, and projection of sound were thereby enhanced as well (Boyden, 1965; Stowell, 1992).

In 1738, Corrette was the first to establish an exact division of the fingerboard into seven positions. The fingerboard was divided into whole and half steps, with each position covering the interval of a perfect fourth on each string. “According to Corrette, changes of position could be made on all four strings, but preferably on the E string . . . position changes on the G, D, and A strings are shown only up to the fourth position, and on the E string up to seventh position” (Yampolosky, 1967, p. 3).

Leopold Mozart (1756) also divided the fingerboard into positions (*Applikaturen*). The present day odd-numbered positions (first, third, fifth, and seventh) represents “whole fingerings,” and the present day even-numbered positions (second, fourth, sixth, and eighth) represents “half fingerings” (Yampolsky, 1967). Mozart (1756) listed three reasons for using positions: necessity, convenience, and elegance. He also insisted that the actual changing of positions had to be imperceptible. This system was adopted by the German School of violin, and remains in use today (Boyden, 1965; Yampolsky, 1967).

"Half position," as we know it today, was probably first introduced by L'Abbe, a French violinist (Boyden, 1965, p. 378). Although half position appears in treatises and music written during the eighteenth century, L'Abbe used an abbreviation of “R” in his musical examples, which meant “*reculer la main contre le sillet* (move the hand back against the nut of the fingerboard)” (Boyden, 1965, p. 378). As the term suggests, half position is a half step away from first position, closer to the nut on the fingerboard (Yampolosky, 1967).

In addition to physical advancements with the violin, changes also began to occur in the way the violin was held. Rather than balancing the violin on the chest, with the left hand sharing in the task of supporting the instrument, the practice of holding the violin on one's shoulder became the accepted technique. Eventually, the chin also became involved in this process, in that during a change of position, a player would place the chin directly on the body of the violin to the right of the tailpiece. Due to the difficulty of playing in higher positions, and playing on the G string, the chin placement eventually moved to the left side of the tailpiece (Yampolsky, 1967).

During the nineteenth century, the development of virtuoso violin technique reached new and astonishing dimensions. The innovations of Paganini, for instance, were very important, requiring innovative technique that expanded the left hand technique and required new fingerings. He “broke through the bounds of the classical school of the eighteenth century, which were a barrier against the introduction of new principles into performing practice” (Yampolosky, 1967, p. 10). With the expansion of technical requirements and the invention of the chin rest by Spohr, the violin was now supported by the use of the head and shoulder, accomplishing a firm violin hold (Neumann, 1969), thereby freeing the left hand from fully supporting the instrument..

Principles of Balance

Good muscular balance is necessary when performing a passage requiring technical proficiency. A state of balance provides the coordination and use of muscles in a proper sequence and increases the efficiency of the muscles that are being used (Garam, 1990). “There is a close interactional relationship between balance, muscular relaxation and the configuration of movement in violin playing” (Garam, 1990, p. 30).

It is important to consider the body in its entirety when performing musical or any other physical skills. Conventional string teaching tends to isolate movements of the hands, fingers, and arms, without considering the body as a single entity. “Total body action,” including the unperceivable movements of the body, occurs when a violinist/violist is relaxed and well balanced when playing his/her instrument (Rolland, 2000, p. 32).

Various violin pedagogues use the image of a see-saw to visualize the concept of balance (Havas, 1961; Rolland, 2000). When a performer uses natural, continuous movements when performing, muscular fatigue should be minimized. If a student uses balanced movements from the beginning of study, he/she will experience a “self-propelled action,” with natural, unforced movements (Havas, 1961, p. 13).

Static tensions occur when part of the body is immobile. The result is a hindrance of natural movement followed by discomfort. Tension can occur unconsciously in areas of the body such as the shoulders, neck, knees, and ankles. If this problem remains uncorrected, it can have a negative effect on the playing action of the hands, arms, and fingers of violinists/violists (Rolland, 2000) and will affect the process of shifting.

Balance in Posture

One of the ways to experience balance while playing is to have good posture. There are two basic postures when playing a violin/viola: Standing and sitting. Cellists sit due to necessity. Due to the height of string basses, a performer can either stand or sit on a stool while playing. Although violinists/violists sit in the symphony orchestra, there are certain requirements pertaining to good posture that are necessary in order to perform without physical ailment. According to Szende (1971), “the best playing position is one

in which the smallest possible amount of muscular activity is required to maintain balance” (p 14). The teachings of Flesch (1930) emphasized having a balanced body when playing. “Although in the majority of cases violin playing is done in a sitting position, the concern of the literature is in inverse proportion directed towards the standing position” (Neumann, 1969, p. 11).

Most treatises begin with the standing position of the body. There are two basic forms of standing:

- 1) Unsymmetrical: the weight of the body is placed on one leg
- 2) Symmetrical: the weight of the body is distributed between both legs

Usually the left leg had most of the weight during an unsymmetrical standing position (Auer, 1980; Baillot, 1991; Flesch, 1930; Gruenberg, 1919; Neumann, 1969). Flesch (1930) supports the symmetrical standing position with equal weight distribution on both legs. Havas (1961) recommends standing when learning to play the violin/viola. If the feet are apart and the weight of the body is on the back of the heels, spine and shoulder blades, it will be less tiresome to stand while practicing. The hips should be pushed slightly forward to counteract the position of the violin/viola. Rolland (2000) recommends that children stand during all or most of their string classes. He maintains that poor positions may result from playing in a sitting position.

Even if a string teacher decides to teach the violinists/violists to play while seated, the same general principles apply. The body should be balanced, erect, and flexible. One way to achieve a good sitting position is to be able to move from a chair to the feet quickly with ease (Whone, 1972). “As teachers we should note how our students (particularly the beginners) use their bodies. This use should suggest our course of

procedure. If we fail to do this, we invite increased difficulty or, perhaps, total failure at a later stage” (Rolland, 2000, p 31).

A child’s top, giving the illusion of stillness at the moment of its greatest movement, illustrates even more clearly that dynamic stability equals movement. The equivalent movement that gives the violinist his stability is an alternative transferring of the weight of the body from foot to foot whilst he plays (Whone, 1972, p. 23).

There is very little literature concerning the sitting position (Neumann, 1969). “It is unfortunate that the violin has to be played at all in the sitting position” (Whone, 1972, p. 23). Performers in a symphony orchestra tend to experience difficulty when performing a challenging solo while in a sitting position. Balance is diminished by the body being restricted from the lower half downward. Auer (1980) stresses sitting upright, with both feet firmly planted on the floor, during orchestra playing. During chamber music, the right leg should be lower than the left leg in order to give the player more freedom of movement (Neumann, 1969).

Balanced Violin/Viola Hold

Proper hold of the instrument alleviates tension in the shoulder that might otherwise occur (Rolland, 2000). Learning to hold the violin/viola properly is very important since it can greatly impact the success of shifting, vibrato, and bowing techniques (Rolland, 2000). A balanced support of the instrument is desired. Many beginning students learn to hold the violin/viola by using a ‘vice-like grip’ with their heads (Bytovetzski, 1917; Carroll, 1997; Havas, 1961). The head should be able to move slightly instead of being static. The weight of the instrument is supported somewhat at the chin rest, and the left arm provides some support while in playing position.

However, there are many students, keeping the violin firmly in place, who are able to attain freedom in shifting. If a student continues to press his/her chin against the violin until it is painful, he/she will never grasp the concepts necessary to learn how to shift properly (Bytovetzski, 1917). Too much pressure placed on the chin rest can lead to unnecessary tension while attempting to shift.

Placing the violin/viola on the shoulder in a certain position plays an integral part in holding the instrument. When a player holds the instrument using the weight of the head on the chin rest, combined with the shoulder, the left hand has more freedom to move as needed (Carroll, 1997).

By placing the violin on the collar-bone, with the chin on the chin rest, while using the left hand to support the end of the neck of the violin/viola, students gain a false impression that their position is well established (Bytovetzski, 1917). This theory of supporting the instrument leaves the student ill prepared for learning how to shift (Bytovetzski, 1917). A consequence of this method includes the neck of the instrument being held too tightly, therefore depriving the left hand the freedom to move up and down the fingerboard.

“The preparation of any shift involves some anticipation and movement in the left arm in much the same way a person prepares to jump or throw a ball” (MENC, 1991, p. 9). Students may find it difficult to hold the violin/viola properly, yet leave the left arm free to move up and down the neck and fingerboard. With proper guidance, students will be able to learn how to have freedom of movement with the left arm as well as success in shifting (Bytovetzski, 1917; Carroll, 1997; Garam, 1990; Havas, 1961; Klotman, 1988; Menuhin, 1971; Rolland, 2000; Whone, 1972).

The Left Thumb

The left thumb plays an important role in the process of learning to achieve a smooth shift. The position of the thumb, as well as the height of the thumb in relationship to the fingerboard, must be examined when the shifting process occurs (Garam, 1990).

Various violin pedagogues have given exact instructions as to where the thumb should be in playing position in relationship to the left hand (Auer, 1921; Bytovetzski, 1917; Carroll, 1997; Dolejsai, 1939; Galamian, 1962; Green, 1966; Havas, 1961; Rolland, 2000). Some suggest that the thumb should be placed opposite the index finger base joint, while others suggest that the thumb be opposite the second finger of the left hand. Although there can be differences of opinion regarding where the thumb should be placed, there is general agreement that the thumb should not grab the neck of the violin, but remain supple and relaxed in order to move freely (Applebaum, 1972; Auer, 1921; Bytovetzski, 1917; Carroll, 1997; Dalton, 1988; Dolejsai, 1939; Galamian, 1962; Garam, 1990; Green, 1966; Havas, 1961; Klotman, 1999; Menuhin, 1971; Oddo, 1995; Rolland, 2000).

“One of the major obstacles to achieving a smooth shift is tenseness in the left thumb. To prevent this, it is helpful for the student to regard the thumb as an elevator that carries the hand when moving from a lower to a higher position” (Klotman, 1971, p. 138). One of the biggest mistakes that a violin/viola player can make is to squeeze the neck of the instrument with the thumb, causing a cramped left hand (Garam, 1990).

Auer (1921) states that “. . . too much is made of the thumb’s importance, it seems to me” (p. 35). Galamian (1962), in contrast, points out that the thumb needs special

attention. Due to excessive pressure and clutching of the thumb, shifting as well as vibrato would be too difficult to achieve successfully. Many pedagogues offer photographs to assist the reader with specific thumb positions (Bytovetzski, 1917; Dolejsai, 1939; Flesch, 1924; Galamian, 1962; Havas, 1961).

The height of the left hand, including the thumb, is an important concept (Garam, 1990). The height of the thumb varies among players. “Whether the thumb is placed high or low, it should provide sufficient support from underneath to oppose finger pressure, bow pressure, and violin weight” (Rolland, 2000, p. 109).

Jascha Heifetz, a famous violinist, kept his left thumb behind the index finger while playing the majority of the time. When he anticipated a shift to a higher position, the thumb moved to a forward position, opposite the index finger (Applebaum, 1972).

Lillian Fuchs, a noted viola pedagogue, states that the psychological aspect of shifting is important, and I mean by this the preparation for the shift should be in mind. We must feel that the thumb is capable of fast and subtle action, and it is in motion before the shift is made (as cited in Applebaum, 1973, p. 216).

Not only is placement of the thumb important, but the action it takes in response to a shift is important as well. When a performer is attempting to shift, the thumb should be in position relative to the left hand, and the instrument should be supported without the use of the left hand (Bytovetzski, 1917). Another way to keep the left hand from supporting the instrument is to shift without the thumb touching the neck of the violin/viola, thereby lightening the left hand and improving mobility (Barrett, 1978). Rolland (2000) suggests tapping the thumb against the neck of the violin/viola frequently while shifting to avoid tension.

The placement of the thumb is also helpful as a corrective measure if the left wrist collapses against the neck of the instrument. Placing the thumb opposite the second finger of the left hand will help alleviate the problem of poor left hand posture (Auer, 1921; Galamian, 1962; Green, 1966). “During the change of position the thumb muscles become relaxed and allow free displacement of the hand. As soon as the new position is taken up, however, a sudden increase in activity is noted: the thumb supports again” (Szende, 1971, p. 71). It is important that the thumb should allow the instrument to rest lightly against the first joint. The frame created by the thumb and index finger, resembling a round hole, should be pliable and avoid clamping the neck of the instrument (Carroll, 1997; Havas, 1961).

Audiation

Being able to internalize a pitch plays an important role in the execution of any shift. The performer must be able to hear mentally the resultant pitch before the shift is attempted (Carroll, 1997; Galamian, 1962).

It is very good practice first to sing the intervals, then to learn to hear them without making any sound at all. For if the mind is developed to anticipate the right pitch and quality of sound, the fingers will follow the demand of the mind. Instead of spending hours trying to train the fingers to play in tune, we should train our minds to hear the tune (Havas, 1961, p. 31).

Shifting accurately depends on the development of aural-tactile skills. A performer’s fingers can become supersensitive and respond to the slightest message from the ear while shifting properly from one place to another. Adjustments can be made when the finger is placed falsely on the string (Dolejsai, 1939). “The fact that the fingers are merely the tools with which we work and that the sense of hearing is the true master cannot be dwelt upon too strongly” (Dolejsai, 1939, p. 3). The pitch of the target note

should be heard internally followed by the sensation of the thumb and shifting finger as the student calculates the distance required to arrive at the target note and proper position (Oddo, 1995).

Students tend to use their eyes to calculate shifts instead of their ears, especially in higher positions. Some teachers/pedagogues advocate playing blindfolded, as it forces a student to listen to the shift instead of depending on visual guidance. When the ears are the guide, shifting becomes more accurate (Havas, 1973).

TECHNICAL ASPECTS OF SHIFTING

Purpose

The main function of shifting is extending the range of the violin/viola. Other reasons for shifting include eliminating awkward fingerings and string crossings, having the option to retain the same tone color on one string within a phrase, assisting with large intervals or leaps, avoiding unnecessary open strings, and facilitating the fingering of a particular passage (Edwards, 1959; Oddo, 1995). Additionally, shifting is necessary for certain tools of expressiveness such as portamento (Bytovetzski, 1917; Cook, 1957; Gruenberg, 1919).

Method of Shifting

According to Oddo (1995), to achieve an accurate shift and change of position, certain principles must be followed.

- 1) The execution of the shift takes place by releasing the pressure of the left thumb and fingers, followed by moving the left hand lightly to the position desired. It is important to avoid a jerking motion.

2) Shifts usually occur on the strong beat. The speed of the shift is determined by the context of the musical phrase: Fast passages demand quick shifts; slower passages require expressive shifts.

3) It is important to hear the target note before the actual shift occurs, as stated in the beginning section of this chapter dealing with the role of the ear while shifting.

4) The left hand and arm should move together as a single unit, moving to the new position while continuing to maintain the basic shape.

5) The left hand, elbow, fingers, and thumb must stay relaxed and limber during the actual shift.

6) During the actual shift, the finger completing the shift should remain on the string until the hand arrives at the new position. Once the new position has been established, the remaining fingers will arrive at their destination according to the music.

7) In higher positions, care must be taken to realize that the space between notes decreases in distance and the violinist/violist must adjust accordingly (Oddo, 1995).

There are additional specific guidelines that students can follow to assist in the process of shifting. They include:

- 1) Use open strings when shifting
- 2) Use natural harmonics during a shift
- 3) Shift on a strong beat if possible
- 4) Shift between a half step, or in an established sequence of fingerings
- 5) Shift between reverse bowing directions (Barrett, 1978; Flesch, 1979)

Guide Note

“The skill required in traversing a distance that must be accurate down to tiny fractions of an inch – in other words, accuracy in the shifting of position – is a goal the violinist must pursue throughout his career” (Flesch, 1979, p. 51). Due to the difficult process of shifting, specific practice techniques are recommended by leading violin/viola pedagogues. Using a guide note (also referred to as an auxiliary note or location note) as a point of reference when making the actual shift is an important prerequisite for accuracy in shifting (Carroll, 1997; Flesch, 1979; Garam, 1990; Henkle, 1968; Hutton, 1963; Klotman, 1988; Lamb, 2002; Oddo, 1995; Whone, 1972; Yampolosky, 1967).

A shift including the guide note teaches the hand where to go during the process of changing positions and acts as an intermediate stage. The guide note is not necessarily the final destination of the note in the new position. The finger, associated with the guide note, remains on the string during the shift and links the original position to the new position. This type of shift should be played slowly so that the guide note becomes audible. Once the shift is learned, this intermediate step can be eliminated and the sound of the shift should become inaudible (Oddo, 1995).

The Use of Higher Positions

Shifting into positions above 5th position requires numerous adjustments to the left hand and arm. When shifting into positions higher than 5th position, the combination of forearm and upper arm must be used to achieve the desired location (Flesch, 1979). A common fault when shifting into higher position is incorrect thumb placement (Rolland, 2000). In higher positions, the performer slides the thumb along the neck of the

instrument, extending the tip of the thumb while the left hand moves towards the bridge. The thumb aids in supporting the left hand during the process of shifting (Baillot, 1991).

Players may experience difficulty when shifting from higher positions to lower positions due to the fact that there are often anxiety factors associated with higher positions. “The very thought of going down (in position), or having to let go for a second (so that the hand and arm can go away from the main body of the violin) causes a devastating anxiety to many players” (Havas, 1973, p. 54).

In addition, the higher the position on the violin/viola, the larger the gap between the string and fingerboard. The performer tends to increase finger pressure to compensate for the larger gap, thereby causing more counter-pressure by the left thumb against the neck of the instrument. The result is a “spread-eagled, rigid hand” (Havas, 1973, p. 54). The increased pressure between the thumb and fingers causes an increase in pressure, counter-pressure between the shoulder and head, leading to unnecessary pressure and discomfort.

The size of the viola has hindered players from learning the higher positions on the two lower strings, G and C. According to Fuchs, a significant deterrent to technical progress on the viola is that most of the playing is done in first and third positions on the two lower strings.

Once you have gained facility in the high positions on the lower strings and have obtained freedom in these areas, the upper positions will be employed with great ease. Only then can one claim to have overcome the awkwardness of the instrument (Applebaum, 1973, p. 216).

Types of Shifts

Shifting is not just going from one position to another. Each shift has to be treated intelligently. Shifts have great significance in relation to the interpretation of a melody. Each shift should be microscopically analyzed

to determine how fast or slow it should be made in order to suit the musical sense of the phrase (Applebaum, 1972, p. 87).

Shifts fall into two categories: a “transportation” shift which moves from one position to another; and the “expressive” shift or portamento, which functions as a slide or glissando from one note to another. The technical shift should not be heard; the expressive shift should be heard for musical effect (Cook, 1957).

“Portamento is the means of joining or linking two notes of varied distances between them, smoothly and naturally” (Tertis, 1974, p. 148). Incorrectly played, too much slide can be very distasteful. Tastefully played, it can add a great deal of passion to the music (Tertis, 1974).

The most common shift involves sliding with one finger while the next finger is placed above or below it (Yampolsky, 1967). Other techniques were developed to assist the performer with inaudible slides. These include finger extensions, half-step shifts, and contractions (Carroll, 1997; Yampolsky, 1967).

Locatelli (1695-1764) and Geminiani (1687-1762), were the first violinists to use fingerings based on extensions and contractions. Normally, the left hand position is based on the achievement of the interval of the perfect fourth. In an extension, the left hand will achieve more than a perfect fourth, and in a contraction it will achieve less than a perfect fourth. Locatelli played an important role in the development of a virtuosic left-hand technique. He was the first to use open strings when changing positions. These practices are still in use today. Geminiani, in *The Art of Playing on the Violin* (1739), was the first to introduce a chromatic scale fingering, which consisted of consecutive contractions (Yampolsky, 1967).

In an extension, the left hand does not move out of position. The fingers stretch in order to reach the desired note, thus avoiding a shift. Leopold Mozart (1756) emphasizes the use of extensions as a way to make a seamless change of register. Babitz (1947) devised a system based on extensions that eliminates stretching. The benefits of this system include: elimination of shifts, the hand is relaxed and in contracted positions often, intonation problems become simplified, and overall smoothness and clarity are enhanced.

The famous cellist Pablo Casals sought new ways to finger musical passages for expressive reasons. When he wanted to change positions on an adjacent string, he would shift using a half-step, using one finger for both notes. With practice, the movement was cleanly articulated. “These semitone shifts were like the rungs of a ladder, permitting him to move up and down the string unobtrusively” (Blum, 1977, p. 132). Yampolsky (1967) also suggests using the half-step position change to produce an unnoticeable shift on the violin/viola.

Contractions involve adjusting the fingers of the left hand to play slightly less than the interval of a perfect fourth. For example, the first finger would stay in place while the fourth finger played something less than the interval of a perfect fourth. The first finger and entire hand would adjust to the new fingering (Yampolsky, 1967).

Positions

In 1738, Corrette was the first to establish the division of the fingerboard into seven positions. This concept was later adapted by the French School of violin, under the leadership of Baillot (Yampolsky, 1967). The fingerboard of the violin/viola was

divided into whole steps and half steps, with each position spanning the interval of a fourth.

The even-numbered positions as well as half position have generally been overlooked in the study of the violin:

The odd-numbered positions are the most convenient for use, and it is not difficult to understand why: starting with the first position at the beginning of the fingerboard the hand has a point of support for moving to the third position, thus securing correct intonation (Yampolsky, 1967, p. 48).

Performers are faced with awkwardness and technical difficulties in the left hand without being familiar with all of the positions (Yampolsky, 1967).

What Positions Should Be Taught First?

There is controversy concerning which positions should be taught first. Most teachers introduce their students to first position, followed by third position (Cowden, 1969; Havas, 1961; Yampolsky, 1967). Hutton (1963) suggests introducing second and fourth positions, in addition to third and fifth positions, after first position is initially introduced. Linn (1908) suggests that second position should be taught while third position is being learned.

Many violin/viola students suffer due to their inability to perform comfortably passages that require second and fourth positions. Some believe that learning the even numbered positions can be just as important as learning the odd numbered positions. In an interview, Zino Francescatti, a violin concert artist, suggests that students learn second, fourth, and sixth positions equally as well as first, third, and fifth positions. The even-numbered positions tend to be the weakest (Applebaum, 1972). Carol (1986) suggests learning second position before third position.

Odd numbered positions are usually taught before even numbered positions.

After first position has been taught, pedagogues believe that violinists should learn third and fifth position in order to learn standard violin repertoire, whereas violists can delay learning positions higher than third position due to their literature (Lamb, 2002). Most traditional violin methods introduce third position after first, followed by fifth position. Second and fourth positions would be introduced after fifth position had been mastered or when needed. Recent awareness has led teachers to introduce second and fourth positions earlier than previous instruction books had suggested (Lamb, 2002). “Second position is wrongly neglected or omitted in elementary stages for the sake of third position” (Stoeving, 1914, p. 101).

Some string pedagogues believe that starting in third position instead of first position can be advantageous to the beginning student. Benefits include: better balance; a greater degree of comfort is achieved if an instrument is otherwise too large for the student; and there tends to be more flexibility when first learning how to vibrate (Cook, 1957; Eberhardt, 1919, Geringas, 1987). Pernecky (1963) lists additional advantages to starting in third position:

- 1) The left hand and fingers form an easier placement on the fingerboard
- 2) The thumb position is easier to achieve
- 3) The whole and half steps are closer together, thereby making the curve of the left hand fingers easier to attain
- 4) The violin/viola is supported more easily.

When to Introduce Shifting

Typically, violinists and violists do not learn shifting until later in the instructional sequence. While basses and cellists learn to shift during the first year due to necessity, many violin/viola students do not learn shifting until their third year of instruction. This delay is indicative of the importance that violinists and violists place upon making sure the left hand is competent in first position before introducing shifting (Dillon, 1978; Oddo, 1995; Wentworth, 1977). “. . . student must know his fingerboard, have good intonation, correct position, and have knowledge of fundamental bowings before any position work can be introduced” (Linn, 1908, p. 18).

However, some string pedagogues believe that being introduced to “pre-shifting” and shifting concepts early will assist violin/viola students. “Frequent opportunities for young students to leave the security of first position should be provided” (MENC, 1991, p. 9). Children gain educational and pedagogical benefits when learning early shifting exercises. These benefits include ‘unlocking’ the left hand, reinforcing proper hold of the violin/viola, and aiding the early stages of vibrato technique. By starting early, it is hoped that the children will not be reluctant to shift at a later stage (Cook, 1957; Lamb, 2002; MENC, 1991; Rolland, 2002).

There is growing support for the concept of providing opportunities during the early stage of instruction for all students to do some shifting, regardless of the instrument they are playing (Lamb, 2002, p. 59)

At one time it was believed that the study of higher positions could follow only after arduous and long discipline in the first or fundamental position. This, however, is no longer true today. Instead of “freezing” the left hand in first position, which might make subsequent moving to higher positions move difficult than it should be, the development of modern playing technique demands the introduction of the higher positions quite early in the learning process (Kuhn, 1957, p. 57).

Early instruction in shifting and pre-shifting activities should promote an ease of movement, and help prevent the tendency to develop a learned fear of the upper half of the fingerboard. Shifting games should involve large motions first and gradually resolve to small motions (Klotman, 1988). The left arm should be able to swing in and out during shifting and pre-shifting activities (Rolland, 2002).

Essential Elements introduces pre-shifting exercises to violinists/violists in the second book of instruction (Allen, Gillespie, & Tellejohn-Hayes, 1995). Students are asked to form a “tunnel” with their left hand and move all four fingers up and down the fingerboard. Other pre-shifting exercises include “riding the rails” and “tapping and sliding” (Allen, Gillespie, & Tellejohn-Hayes, 1995, p. 5). Even though these pre-shifting exercises are similar to the teachings of Rolland (2000) and Zweig (2004), the important difference is that Rolland and Zweig start pre-shifting exercises from the beginning of violin/viola instruction.

Students learn low, middle, and high position on the fingerboard. Activities include plucking the strings with the left hand while in a position in order to shape the left hand. “The hand placement near the end of the fingerboard is particularly helpful in combating lazy violin/viola positions” (Rolland, 2002, p. 76).

Some contend that too much emphasis has been placed on habit formation in our beginning methods and not enough importance on flexibility (Green, 1966). Children should experience flexibility from the very beginning instead of rigidity. Green (1966) suggests that there are three necessary motions for the left hand fingers:

- 1) going off and on the strings
- 2) moving backward and forward on the string

- 3) moving across from one string to the adjacent string

Silent practice of these left finger exercises should be encouraged in order for children to move their fingers more easily (Green, 1966). If a student has relaxed left hand fingers, they will be more receptive to learning how to shift.

Rolland (2000) suggests shifting games in order for students to learn the three main fingerboard locations. Students learn where the natural harmonics occur on their instruments, in addition to learning flexibility of the left hand.

“Surprisingly few students after even five or six years of training know the upper registers of any but the highest string” (Carabo-Cone, 1966, p. 12). Students of the Carabo-Cone Method learn the entire fingerboard over the course of one year and tend to have no awareness of any difficulty in shifting. Students learn an auditory, visual, kinesthetic, and instrumental approach to intervals. Shifting is learned once open-string tone production and some bowing concepts have been acquired (Carabo-Cone, 1966).

Research

Very little quantitative research exists pertaining to the process of shifting. Cowden’s (1972) research examined the approach of starting students in third position versus beginning in first position. The experimental group received beginning instruction in third position, and the control group received beginning instruction in first position. The results from the study showed that there were no significant differences in achievement between the two groups.

A study conducted at the Helsinki Academy reviewed the influence of spatial-temporal structure of movement on intonation during the changing of positions in violin players (Garam, 1990). Twenty subjects chosen for this study were students studying

advanced violin at the Helsinki Academy. The age of the students ranged from 12-17 years old. Subjects were asked to prepare selected excerpts from advanced violin literature. The students were judged based on the accuracy of intonation while demonstrating difficult shifting passages within the musical excerpts. Results indicated that stiffness while shifting was detrimental to the success of accurate intonation. The timing of each shift was examined to determine whether accuracy of intonation could be achieved while performing each musical passage. Although this study offered insightful information pertaining to the fundamentals of violin playing, it did not examine how and when beginner violin/viola students should learn to shift. Also, a systematic approach to teaching shifting was not considered.

Rolland (2000) developed a String Project at the University of Illinois, Urbana, which served as a lab group for his string pedagogy class. Many new and innovative teaching methods were generated from this project. Among these methods, new and creative ways to introduce shifting to young students evolved such as pre-shifting exercises (shuttle game and octave harmonics). This teaching method has gained popularity among many string teachers. In spite of the current revisions of a few string method books containing pre-shifting exercises, there is not a general consensus regarding teaching shifting among the string teacher population.

There are performance-based studies that include shifting as a part of the left hand technique, but shifting is not studied exclusively (Carroll, 1997; Chee, 1998; Quick, 1977; Wentworth, 1977). Carroll (1997) looks at the left-hand technique of violinists/violists as it applies to articulation, intonation, vibrato, and shifting. Position of the instrument and maintaining balance while playing are discussed at length. The

framework of the left hand and thumb, and using audiation while shifting, are important concepts in Carroll's research. The topics of what position with which to start, as well as when and how to learn shifting, are not discussed.

A student of Steven Staryk, Chee (1998) examined the pedagogical method of her teacher/mentor, who formerly was concertmaster of the Royal Philharmonic Orchestra under the direction of Sir Thomas Beecham. Staryk suggests using a "half-step shift scale" when practicing shifting (Chee, 1998, p. 21). There is no mention of how to teach shifting or when shifting should be introduced.

A research project examining the pedagogical approaches of Imre Waldbauer, first violinist of the Waldbauer-Kerpely String Quartet, revealed the interesting point that Kato Havas and Paul Rolland were students of Imre Waldbauer (Quick, 1977). As a teacher, Waldbauer was interested in having the student develop a balanced left hand and arm. He accomplished this by having the student start in third or fourth position, instead of first position. Although no specific examples of how to shift are given, Waldbauer used shifting as a way of learning how to "get around" the fingerboard (Quick, 1977). Rolland and Zweig use the same approach when teaching pre-shifting exercises to beginner violin/viola students.

Wentworth (1977) examined teaching musicianship to a first year string class. While a beginning string curriculum was developed, shifting was not directly discussed. However, a possible pre-shifting exercise is described, and entails swinging the left elbow from left to right while under the violin/viola. Freedom of movement in the left arm by the use of swinging the left elbow is mentioned by various pedagogues as a pre-shifting exercise (Rolland, 2000; Zweig, 2004).

There is very little literature pertaining to when to introduce shifting, what teaching medium is preferred, and the ramifications of the current viewpoints of the learning process of shifting. Shifting methods taught today tend to vary according to the teacher's own personal views. There seems to be no clear consensus among professional string educators' regarding the most effective way of teaching shifting to beginning violin/viola students.

Summary

The literature discussed in this chapter includes: The history of shifting, the principles of balance when playing the violin/viola, balance in posture, balanced violin/viola hold, the left thumb, and audiation. In addition, technical aspects of shifting were addressed, such as the execution of a shift, the use of a guide note, and various types of shifts and positions. Literature pertaining to how and when to introduce shifting was also examined. Current research pertaining to shifting was addressed as well.

When teaching a stringed instrument, it is important that a teacher be aware of the principals of balance involving the body in motion. If a specific muscle or joint is not properly balanced, an adverse effect could occur while playing a stringed instrument (Henkle, 1968; Rolland, 2000). Whether a student sits or stands, it is necessary to maintain a correct posture in order to achieve an ease of playing as well as prevent unnecessary tensions.

Learning to hold the violin/viola is vital to successful playing. Poor placement of the instrument can have a detrimental effect on the technical aspect of learning how to play. Without a proper violin/viola hold, the left hand will remain rigid and not be able

to move freely. Rigidity in the left hand can lead to tension in the thumb. Most pedagogues agree that the thumb should not grasp the neck of the instrument (Applebaum, 1972; Carroll, 1997; Galamian, 1962; Green, 1966; Havas, 1961; Rolland, 2000).

Pedagogues suggest that a student sing the desired pitch before attempting to shift (Carroll, 1997; Galamian, 1962). If the pitch is in the mind of a student, the likelihood of achieving an accurate shift is elevated. Havas (1973) suggests blindfolding a student's eyes in order to let the student only focus on the sound of the note while shifting.

A shift is used for a variety of reasons in music. Reasons include avoiding awkward fingerings and/or string crossings, remaining on the same string in order to produce the same tone color, assisting with large leaps or intervals, and facilitating the fingerings of a musical passage (Edwards, 1959; Oddo, 1995). There are various types of shifts mentioned in this study: Audible and inaudible shifts.

There is a difference of opinion regarding when other positions should be introduced, as well as in what order they should be introduced to a beginner violin/viola student. Some pedagogues believe that various positions located on the fingerboard should be taught from the beginning of instruction (Hutton, 1963; Rolland, 2002; Zweig, 2004). Others believe that third position should be introduced after first position is secure (Linn, 1908; Oddo, 1995).

Very little empirical research pertains to the introductory learning process associated with shifting. Many pedagogues believe that violin/viola students should learn first position as the starting point for the left hand. While Cowden (1972) used a beginning violin class to look at the effects of learning to play in third and first positions,

results were inconclusive. Another research study pertaining to shifting used advanced violin students, not beginning students, as the test subjects (Garam, 1990). A string project at the University of Illinois was used as the basis of a study conducted by Rolland (2000). The results of his study are the basis for most of the pre-shifting exercises that are being used today.

While the subject of shifting does appear, typically to a very limited extent, in numerous dissertations, books, and articles, very few sources address the process of when and how to go about introducing shifting to beginning string students in significant depth or detail. In that there is no widely accepted system for teaching shifting, string teachers must therefore rely on their own resources and instincts, which may or may not be fruitful. The intent of this study is to survey violin/viola private studio teachers, K-12 string educators, and violin/viola college/university professors regarding their attitudes concerning best practice when teaching shifting. The information obtained from this study may be useful to string teachers when they are formulating a teaching strategy for shifting.

Significance of the Study

Pedagogical texts, string methods, and research literature reveal a lack of consensus regarding teaching shifting to beginning string students. Because of this lack of consensus, there is a need to learn about string teachers' opinions about best practice regarding teaching shifting. This study surveyed string teachers' attitudes regarding the teaching of shifting, and compared the findings to current research and trends. This study is a "first step" in research efforts that could eventually lead to developing a systematic approach to teaching shifting to beginning violin and viola students.

CHAPTER THREE

METHODS AND PROCEDURES

Introduction

The purpose of this study was to survey violin/viola private studio teachers, K-12 string educators, and violin/viola college/university professors regarding their attitudes about teaching shifting. Areas of concern include how to introduce shifting to beginning violin/viola students, what instructional materials are being used when introducing shifting, and when to introduce shifting to violin/viola students.

Development of the Research Instrument

Based on readings of the related literature, a questionnaire was formulated to elicit information pertaining to shifting among violin/viola students. Constructing questions for interviews and questionnaires: Theory and practice in social research (Foddy, 1993), was used to aid in the development of the questionnaire.

The questionnaire consists of three sections:

1. Personal Information
2. Pedagogical Issues
3. Open-Ended Responses

Item formats included five-point Likert-type scales, listing, and open-ended. Topics under consideration included: (a) introducing shifting to violin/viola students, (b) appropriate instructional materials, (c) sequence of events relating to shifting, (d) importance of audiation, (e) left-arm movement, (f) posture and position, (g) classroom setting when learning shifting, and (h) approaches to teaching shifting. Respondents were asked to list specific etudes/exercises as well as teaching methods that are effective

when introducing shifting to violin/viola students. Respondents were also asked to list advantages and disadvantages regarding introducing shifting early in a violinist's/violist's curriculum.

A preliminary version of the survey was examined for bias and face validity by a panel of four experts representing several disciplines, including a music education professor, public school string educator, collegiate studio violin educator, and a collegiate studio viola educator. After reviewing the questionnaire, the panel of experts recommended a few changes. The questionnaire was revised to reflect these changes (see Appendix B- Revised Questionnaire).

The revised questionnaire was pilot-tested with undergraduate/graduate students in string performance/education. Undergraduate/graduate string students were chosen as subjects of the pilot study so that the study population of college, private studio, and public school string educators remained intact. The pilot subjects were asked to complete the questionnaire, record the time necessary for completion, and make suggestions for revisions. According to Cates' (1985) findings, a response rate of 60% or better was acceptable as a return rate for a pilot study. Twenty-six surveys were returned out of twenty-seven, with a return rate of 96%.

A factor analysis was run to see if certain items belonged in each cluster. Cronbach's Alpha was used to calculate inter-item reliability of clusters in the pilot questionnaire (see Appendix B – Revised Questionnaire). Mode, median, and descriptives were used to determine central tendency. After reviewing the data, it was determined that sixteen items on the questionnaire were not reliable. Eleven of those items were dropped from the questionnaire due to the lack of correlation with the other

items. Five items dealing with unique aspects of teaching shifting were left on the questionnaire due to their prominence in the literature, but each item was unique and did not fall into a cluster category (see Table 1- Revised Version).

Table 1

Inter-Item Reliability Analysis – Pilot Study
N=26

Revised Questionnaire:		
Item Clusters	Survey Questions	Cronbach's Alpha
Difficulty with Shifting	14, 16	.77
Order of positions	13, 18	.77
Introducing shifting later	12, 15, 20	.67
Cello/bass learn shifting before violin/viola	29, 42	.69
Shifting during first year	11, 20	.73
Difficulty teaching shifting in large classroom setting	38, 39, 40, 45, 46	.73
Posture-Position	42, 47	.90
Instructional Materials	22, 30	NA
Audiation	27	NA
Guide Note	32	NA
Left Thumb	31	NA
Finger Tapes	35	NA

Administration of the Research Instrument

While attending an ASTA string conference in Dallas, Texas on March 12-14, 2004, the researcher distributed 226 hard copies of the questionnaire to string conference attendees. A cover letter stated the purpose of and the need for the study; presented instructions for completing the questionnaire, gave the approximate time required, and assured the subjects of complete confidentiality (see Appendix E). Labeled boxes were placed in the lobby of the hotel, near the conference registration table. Subjects were instructed to fill out the questionnaire and return it to the boxes labeled String Teachers' Attitudes Regarding Violin/Viola Shifting. Due to logistical problems with the return box almost being thrown out, only 47 hard copy questionnaires were returned to the researcher. The ASTA conference questionnaires are included in the total number of returned surveys.

The survey was sent via e-mail to members of the American String Teachers Association, Music Educator's National Conference, and Association of Schools of Music. Respondents identifying themselves as violin/viola teachers, including college professors, college music education professors with an emphasis on strings, private studio teachers, and public school string educators were included. A list of 8,553 orchestra teachers was compiled from a MENC directory. This list was reduced to 3,810 by deleting 7 states and systematically choosing even-numbered respondents from the list. Seven states were deleted from the MENC list because seven ASTA chapter presidents agreed to forward the cover letter containing the URL address to members of their organization. An additional list of an estimated 854 orchestra teachers were compiled

from NASM and ASTA organizations listed on the web, bringing the total number of letters sent via e-mail and/or regular mail to 4,890.

The e-mail message included a cover letter stating the purpose of and the need for the study, presented instructions for completing the questionnaire, gave the approximate time required, and assured the subjects of complete confidentiality (see Appendix D).

At one-week and three-week intervals after the initial e-mailing of the questionnaire, subjects who did not respond were sent follow-up reminders via e-mail (see Appendix F). Approximately one month after the initial e-mailing, non-respondents were sent an additional message via e-mail requesting their participation in the study. A closing date was determined for the return of surveys; any responses received after that date were not included in the study.

A master list with names and e-mail addresses was maintained in order to keep track of the responses. Once the surveys were returned, the master list was destroyed and any identifying e-mail addresses or names on the returned surveys were removed.

The results and data collected from administering the questionnaire will be presented in Chapter Four. Chapter Five will report the findings from the open-ended questions. Chapter Six will include implications of this research, conclusions, and recommendations for further research.

CHAPTER FOUR

RESULTS OF THE STUDY

Introduction

The purpose of this study was to examine violin/viola private studio teachers', K-12 string educators', and violin/viola college/university professors' attitudes about teaching shifting. Areas of concern included how to introduce shifting to beginning violin/viola students, what instructional materials were being used when introducing shifting, and when to introduce shifting to violin/viola students.

Data for the study were collected through a researcher-developed on-line questionnaire (see Appendix C) designed to elicit information pertaining to shifting among violin/viola students. The 39-item questionnaire was divided into three sections:

1. Personal Information
2. Pedagogical Issues
3. Open-Ended Responses

Section I, contained ten questions, and sought personal and demographic information. Respondents were asked to provide information regarding their primary instrument, highest degree received, years of study on their instrument, years of experience as a performer (amateur or professional), primary and secondary teaching duties, and years of experience as a string teacher. Information regarding the state in which a respondent was currently teaching was also included in Section I. The final question in this section asked for the respondent's age.

Section II contained 23 questions pertaining to pedagogical issues. These questions concerned when and how to introduce shifting to violin/viola students,

appropriate instructional materials, sequence of events relating to shifting, importance of audiation, left-arm movement, use of a guide note, posture and position, classroom setting when learning shifting (one-on-one, homogeneous, and heterogeneous), and particular attitudes regarding how to teach shifting.

The final section of the questionnaire elicited open-ended responses from the participants. Six questions were formulated to give the respondents an opportunity to include pertinent information regarding the teaching of shifting to violin/viola students. Respondents were asked what etudes/exercises are most effective when introducing shifting, what particular teaching method is most effective, advantages and disadvantages of introducing shifting early in a violinist's/violist's curriculum, what violinists/violists learn in the classroom while cellists/bassists learn to shift, and what factors enable or constrain the respondent's teaching of shifting.

Data Analysis

Data were recorded and analyzed using SPSS 10.0. Descriptive statistics (frequencies, percentages and means) were used to summarize response trends of all respondents and various subgroups. A MANOVA was used to compare survey attitude scale responses according to each of the following variables: years of experience as a string teacher, level of education, and primary instrument. Chi-square statistics were also used to compare demographic information of participatory string teachers including age group, years of string teaching experience, years of performing experience, primary teaching assignment, and geographic location of the teacher.

In order to test for reliability with the main study, the survey was reviewed by a panel of experts as well as pilot tested to see if it yielded stable results. The researcher looked at internal consistency of subscales with Cronbach's Alpha, but the instrument did

not have true subscales, thereby determining that this was not a good way to determine reliability for this study. By using two pilots, the survey was retested and revised using different samples, and in so doing, developed one stable instrument.

A level of $p < .05$ was used for all tests of significance. There is concern about inflated Type I error when repeated statistical procedures were used on the same data set. However, given the descriptive nature of this study, it was deemed appropriate to employ $p < .05$.

The data from the open-ended questions were collected and various phrases and/or topics were sorted into response codes. Some of the response codes matched topics discussed in related literature while others were new to the study. Response codes were tallied to determine the relative importance of a particular topic. A master teacher reviewed the coding of the open-ended responses to confirm or question the writer's interpretation of the data. She concurred with the interpretation of the qualitative data that will be presented in the last two chapters.

Topics were ranked according to how many times respondents commented on the same topic. Topics occurring less than 10 times among the total responses were not reported. Topics occurring 10-20 times were considered some indication of interest, while topics with 21-34 occurrences considered a moderate indication of interest. Topics with 35-49 occurrences were considered a strong indication of interest, while topics with 50 or greater occurrences were considered a very strong indication of interest.

Survey Data: Participants

A consent letter containing the questionnaire URL address was sent via bulk mail to 3,807 orchestra teachers listed in the MENC directory (see Appendix D). In order to

complete the survey, each respondent had to go to the URL address listed in the letter and complete the on-line survey. The original MENC directory contained 8,553 orchestra teachers. The list was reduced to 3,807 by deleting 7 states and systematically choosing even numbered respondents from the list. Seven states were deleted from the MENC mailing list due to the state ASTA chapter presidents agreeing to send out the consent letter containing the URL address of the on-line survey to those particular seven states. Three respondents contacted the researcher and asked for a hard copy of the questionnaire due to the unavailability of a computer. Out of 3,810 letters mailed, 23 were returned undeliverable.

Two hundred twenty-six questionnaires were distributed at the ASTA conference in Dallas, TX. Due to logistical problems at the hotel, the materials were mistakenly thrown out in the trash. Luckily, 30 questionnaires were salvageable. Seventeen questionnaires arrived via USPS after the ASTA conference, bringing the hard copy total to 47.

Seven hundred forty-four e-mail letters were sent out to college, K-12, and private string teachers. The e-mail list was compiled from NASM and ASTA organizations listed on the web. Seven ASTA state chapter presidents agreed to pass along the survey information to their members, so it is difficult to give an accurate account of how many actual e-mail letters were sent to respondents. One hundred ten letters were added to the total sent to compensate for the forwarded ASTA e-mail letters. Out of an estimated 854 e-mail letters, 87 were returned undeliverable.

Of the 4,780 surveys that were distributed either via e-mail, in person, or USPS, a total of 229 responses were received. Of these 229, 182 were received via e-mail. The

remaining 47 responses were received from an ASTA conference in March 2004, and via regular mail. A few of the respondents left out certain items in the questionnaire.

With an estimated target population of 4,780 and a sample size of 229 (5% response rate) at a confidence level of 95%, the confidence interval is + or - 6.32. Due to the low response rate, this study cannot be generalized to the entire string teaching population.

The total sample size of the study was 229 respondents. However, some respondents elected not to answer some items. Missing responses were not included in the data analysis. Because of this, *N* fluctuated with less than 229 responses for some items.

Primary Instrument

Violin was most frequently identified (53.7%) as the primary instrument followed by viola (23.6%), cello (10%) and the string bass (4.4%). Eighteen (7.9%) respondents listed other primary instruments, including piano, saxophone, viola da gamba, flute, trumpet, percussion, and clarinet. One respondent left the primary instrument blank.

Education

Respondents were given a choice of the highest degree program they had received. In question 2, options included high school diploma or equivalency, bachelor's degree, master's degree, doctoral degree, and artist diploma and/or certificate (see Table 2). Almost half received a master's degree (48.5%), followed by a bachelor's degree (27.5%), and a doctoral degree (17.9%).

Table 2

Education

Highest Degree Received	Participant (<i>n</i> =227)	Percentage
High School diploma or Equivalency	8	3.5%
Bachelor's	63	27.5%
Master's	111	48.5%
Doctorate	41	17.9%
Artist diploma or certificate	4	1.7%

Focus of Highest Degree

Question 3 pertained to the focus of the highest degree achieved (see Table 3).

Options included a string performance degree, string music education degree, string pedagogy degree, and a choice of “other” degree. A string performance degree was most frequently identified (37.6%), followed by a string music education degree (36.7%).

Forty-seven teachers (20.5%) listed “other” as a non-string degree.

Table 3

Focus of Highest Degree

Highest Degree Emphasis	Frequency (N=229)	Percentage
String Performance	86	37.6%
String Music Education	84	36.7%
String Pedagogy	12	5.2%
Other	47	20.5%

Years of Study

Of the 221 useable responses, the range of years of private study by the respondent was 74 years (see Table 4). The most frequently listed years of study included 11-20 years (34.1%), followed by 31-40 years (19.7%).

Table 4

Years of Study

Years of Study	Frequency (<i>n</i> =221)	Percentage
0-10	29	12.7%
11-20	78	34.1%
21-30	38	16.6%
31-40	45	19.7%
41-50	24	10.5%
51-60	4	1.7%
61-70	2	.9%
71-74	1	.4%
Missing	8	3.4%

Primary and Additional Teaching Areas

The most frequent response to Primary Teaching was K-12 (47.2%), while the most frequent response to Additional Teaching was Private Studio (42.8%) (see Table 5). Due to the small sample size in the “other” categories, this subgroup will not be included in additional analysis procedures.

Table 5

Primary and Additional Teaching Areas

Primary Teaching	Frequency ($n=228$)	Percentage
K-12	108	47.2%
Collegiate	61	26.6%
Private Studio	45	19.7%
Other	14	6.1%
Additional Teaching	Frequency ($n=179$)	Percentage
K-12	57	24.9%
Collegiate	21	9.2%
Private Studio	98	42.8%
Other	3	1.3%

Current States

Only three of the 50 states were not represented: Alabama, Delaware, and Montana. The range of responses per state was from 2 to 50. The majority of participants were from Oklahoma (24, 10.5%), followed by Pennsylvania (14, 6.1%), and Illinois (13, 5.7%).

Years of Teaching Experience

The range of years of teaching experience was 1 to 48 years (see Table 6). The most frequent response for years of teaching experience was 0-10 years (30.6%), followed by 11-20 years (27.5%).

Table 6

Years of Teaching Experience

Years of Teaching Experience	Frequency (<i>n</i> =227)	Percentage
0-10	70	30.6%
11-20	63	27.5%
21-30	55	24.0%
31-40	33	14.4%
41-50	6	2.6%

Age of Participant

Nearly one third of the respondents were between the ages of 46-55 years old (31%), followed by the 36-45 year old age group (23.1%) Only 19 (8.3%) respondents were 25 years old or below (see Table 7).

Table 7

Age of Participant

Age of Participant	N=229	Percentage
25 or below	19	8.3%
26-35	48	21.0%
36-45	53	23.1%
46-55	71	31.0%
56-65	33	14.4%
66 or older	5	2.2%

*Research Question 1: What are String Teachers' Attitudes**Regarding Technical Elements of Violin/Viola Shifting?**How to Introduce Shifting?*

Item 11 asked respondents whether or not pre-shifting exercises should be incorporated into the first year of violin/viola instruction (see Table 8). Item 17 referred to introducing shifting from the beginning of instruction in order to avoid the “set in concrete” left hand. Responses to introducing pre-shifting exercises were mixed with 139 (60.7%) respondents indicating “strongly agree” or “agree” with the item about incorporating pre-shifting exercises into the first year of violin/viola instruction. However, 100 (43.7%) disagreed/strongly disagreed with the notion that shifting should be introduced from the beginning in order to avoid the “set in concrete” left hand.

Table 8

Introducing Shifting Early

ITEM	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	freq	%	freq	%
Item 11	87	38.0%	52	22.7%	33	14.4%	26	11.4%	23	10.0%
Item 17	30	13.1%	58	25.3%	35	15.3%	60	26.2%	40	17.5%

When Should Shifting Be Introduced?

Item 12 states that “shifting exercises should be introduced after first position is secure.” Item 15 pertains to the idea that shifting should be introduced during the second year of violin/viola instruction. The majority of teachers (78.2%) strongly agreed/agreed with introducing shifting exercises after first position is secure (see Table 9).

Most respondents (50.2%) agreed with introducing shifting during the second year of instruction. However, a substantial number of respondents (29.7%) were undecided or had no opinion.

Table 9

Introducing Shifting Exercises

ITEM	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	freq	%	freq	%
Item 12	119	52%	60	26.2%	14	6.1 %	18	7.9%	12	5.2%
Item 15	38	16.6 %	77	33.6%	68	29.7%	21	9.2%	18	7.9%

Order of Positions

Item 13 states that “third position should be taught before first position,” and item 28 states that “third position should be taught after first position is taught.” Seventy-five percent of overall respondents strongly disagreed/disagreed with the notion that third position should be taught before first position. Not surprising, 194 respondents (84.7%) strongly agreed/agreed with teaching third position after first position (see Table 10).

Table 10

Third Position Taught Before/After First Position

ITEM	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	freq	%	freq	%
Item 13	8	3.5%	6	2.6%	35	15.3%	40	17.5 %	133	58.1%
Item 28	155	67.7%	39	17.0%	14	6.1%	3	1.3%	5	2.2%

Where Should Shifting Be Taught?

Items 14, 27, and 32 are related to the classroom setting in which shifting can be taught successfully, namely in a private studio (one on one), a heterogeneous classroom setting, and a homogeneous classroom setting. The majority of respondents (90%) strongly agreed that shifting can be taught successfully in a private studio setting (see Table 11).

Item 27 suggests that shifting can be taught successfully in a heterogeneous string class. Sixty-two percent agreed/strongly agreed with the statement (see Table 11).

Item 32 states that shifting can be taught successfully in a homogeneous string classroom. Almost 80% of respondents strongly agreed/agreed that shifting can be taught successfully in a homogeneous string classroom (see Table 11).

Table 11

Shifting Taught Successfully in a Classroom Setting

ITEM	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	freq	%	freq	%
14	206	90.0%	8	3.5%	2	.9%	1	.4%	5	2.2%
27	63	27.5%	78	34.1%	29	12.7%	28	12.2%	11	4.8%
32	105	45.9%	77	33.6%	18	7.9%	11	4.8%	6	2.6%

Difficulty While Shifting?

Item 16 states that violin/viola students beyond the third year of instruction do not have difficulty with shifting, while Item 30 suggests that the students beyond the third year of instruction have difficulty shifting. Sixty-seven percent of respondents disagreed/strongly disagreed with the idea that third year string students and beyond do not have difficulty with shifting (see Table 12). Responses to Item 30 reveal a more even distribution of opinion. However, where 38.4% of respondents agreed/strongly agreed that violin/viola students beyond the third year of instruction experience difficulty with shifting, 24.9% of respondents were either undecided regarding Item 30 or disagreed/strongly disagreed (29.7%) (see Table 12).

Table 12

No Difficulty/Difficulty Shifting for Students Beyond Third Year

ITEM	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	freq	%	freq	%
16	11	4.8 %	20	8.7%	38	16.6%	82	35.8%	72	31.4%
30	25	10.9%	63	27.5%	57	24.9%	47	20.5%	21	9.2%

Availability and Appropriateness of Instructional Materials

Items 18, 22, and 31 relate to the availability and appropriateness of instructional materials. Item 18 refers to scale studies as a useful tool when learning to shift. Item 22 refers to using one-octave scales on the same string as useful when learning to shift. Item 31 suggests that more pedagogical literature is needed to prepare violin/viola students for shifting. Eighty-six percent strongly agreed/agreed that scale studies were useful when learning to shift (see Table 13). Thirty-seven percent agreed that one-octave scales on the same string are useful when learning to shift. Thirty-four percent of respondents strongly agreed, but only 10% disagreed with one-octave scales being used for shifting exercises. Forty-seven percent of respondents agreed/strongly agreed that more literature was needed for shifting preparation (see Table 13). It is interesting to note that 23.6% of respondents remained undecided or had no opinion regarding the question of literature.

Table 13

Availability and Appropriateness of Instructional Materials

ITEM	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	freq	%	freq	%
18	139	60.7%	58	25.3%	14	6.1%	6	2.6%	5	2.2%
22	77	33.6%	85	37.1%	21	9.2%	23	10.0%	9	3.9%
31	35	15.3%	73	31.9%	54	23.6 %	35	15.3%	21	9.2%

Posture/Position When Learning to Shift

Items 19 and 33 solicit information regarding correct posture when learning to shift. Item 19 indicated that violin/viola students should sit down when learning to shift, while item 33 indicated standing up while learning to shift. Forty-seven percent of respondents were undecided or had no opinion as to whether or not students should sit down while learning to shift (see Table 14). Forty-four percent of respondents strongly disagreed/disagreed that violin/viola students should sit down while learning to shift.

Similar to Item 19, 51% of respondents were undecided or had no opinion with the statement that students should stand up while learning to shift (see Table 14). Only 37.5% of respondents strongly agreed/agreed with standing while learning to shift.

Table 14

Violin/Viola Students Learn to Shift Sitting Down/Standing Up

ITEM	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	freq	%	freq	%
19	4	1.7%	4	1.7%	108	47.2%	33	14.4%	67	29.3%
33	47	20.5%	39	17.0%	117	51.1%	6	2.6%	7	3.1%

How to Teach Shifting Effectively

The use of ear training as a part of learning to shift is surveyed in Item 20.

Ninety-three percent of respondents strongly agreed/agreed with using ear training while violin/viola students learned to shift (see Table 15). In comparison, only three participants strongly disagreed/disagreed.

Item 23 refers to the left hand thumb playing an important role in leading the shift. Fifty-four percent of participants strongly agreed/agreed with the left thumb playing an important role in leading the shift (see Table 15). In comparison, only 25.3% respondents disagreed/strongly disagreed with the idea of using the thumb when leading a shift.

Item 24 refers to using a guide note when locating a new position. Eighty-four percent of participants strongly agreed/agreed with using a guide note (see Table 15).

The use of finger tapes when introducing shifting is stated in Item 25. Thirty-five percent of participants strongly agreed/agreed to using finger tapes while introducing shifting to violinists/violists (see Table 15). Twenty-two percent of respondents were

undecided or had no opinion, while 36.7% of respondents disagreed/strongly disagreed with the idea of using finger tapes when introducing shifting.

Teachers may not have the flexibility in their curriculum to teach shifting as they see appropriate. Item 26 states: “When teaching shifting, there are certain factors that do not allow me to teach as I feel best.” Thirty-one percent of respondents were undecided or had no opinion with the statement (see Table 15). Forty percent of respondents disagreed/strongly disagreed, while 14% agreed with the idea that certain factors do not allow for the best teaching of shifting in a particular setting.

Table 15

Teaching Shifting Effectively

ITEM #	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	freq	%	freq	%
20. Ear Training	175	76.4%	37	16.2%	7	3.1%	1	.4%	2	.9%
23. Left Thumb	84	36.7%	39	17.0%	36	15.7%	30	13.1%	28	12.2%
24. Guide Note	129	56.3%	64	27.9%	17	7.4%	3	1.3%	4	1.7%
25. Finger Tapes	15	6.6%	66	28.8%	50	21.8%	43	18.8%	41	17.9%
26. Factors	15	6.6%	32	14%	71	31%	36	15.7%	56	24.5 %

Violinists/Violists Learn to Shift Later/Same Time as Cellists/Bassists

Violinists and violists often learn to shift later than cellists and bassists. Item 29 asked respondents for their attitudes regarding this statement. Item 21 elicited attitudes regarding violinists/violists learning to shift at the same time as cellists/bassists. Fifty-eight percent of respondents agreed/strongly agreed with the idea that violinists/violists should learn to shift after cellists/bassists. Regarding Item 21, 36.2% were undecided or had no opinion whether or not violinists/violists should learn to shift at the same time as cellists/bassists (see Table 16).

Table 16

Violinists/Violists Learn to Shift Later/Same Time as Cellists/Bassists

	SA		A		U		D		SD	
ITEM	freq	%	freq	%	freq	%	freq	%	freq	%
21	17	7.4 %	23	10 %	83	36.2 %	55	24 %	28	12.2 %
29	45	19.7 %	87	38 %	53	23.1 %	13	5.7 %	8	3.5 %

Research Question 2: How do Attitudes Regarding Shifting

Compare When Considering Levels of Primary Teaching Positions?

The primary teaching areas used in this research study were K-12, collegiate, and private studio. K-12 represented elementary, middle school, and high school string teachers. Collegiate represented undergraduate and graduate string studio teachers, college music education teachers, and college string pedagogy teachers. Private studio represented private studio string teachers and Suzuki string teachers. The largest response

rate came from the K-12 teaching area (see Table 18). Due to a small sample size, 13 respondents categorized as “other,” including piano, saxophone, flute, trumpet, percussion, and clarinet, were not included in additional data analysis procedures (see Table 17).

Table 17

<i>Primary Teaching Areas</i>	<i>Frequency (N=229)</i>
K-12	106
Collegiate	59
Private Studio	43
Other	13

A MANOVA was used to find any significant differences between K-12, Collegiate, and Private Studio teaching areas. A Tukey Post Hoc Test was run as a follow-up to the significant MANOVA. Results showed a significant ($p<.05$) difference between K-12 and Collegiate and/or K-12 and Private Studio in 10 out of 23 Likert-type items on the survey (see Tables 18 and 19).

Table 18

Significant MANOVA Results for Survey Items by Primary Teaching Areas

Item #	df	F	<i>p</i>
<hr/>			
11. Pre-shifting exercises in first year	2	3.34	.038
17. Shifting introduced from beginning	2	3.57	.031
19. Learn to shift sitting down	2	8.15	.000
23. Thumb plays important role	2	5.82	.004
25. Use of finger tapes	2	6.99	.001
26. Factors don't allow best teaching	2	22.96	.000
29. Learn to shift later than cello/bass	2	7.58	.001
31. More pedagogical literature needed	2	6.70	.002
32. Shifting taught in homogeneous class	2	3.79	.025
33. Learn to shift standing up	2	3.82	.024

Table 19

Tukey Post Hoc Test: Significant Differences Between Primary Teaching Areas

Item #	Primary Teaching Areas	Significance
11. Pre-shifting exercises in first year	K-12 and Collegiate	.026
17. Shifting introduced from beginning	K-12 and Collegiate	.034
19. Learn to shift sitting down	K-12 and Collegiate	.002
	K-12 and Private	.007
23. Thumb plays important role	K-12 and Collegiate	.002
25. Use of Finger tapes	K-12 and Collegiate	.001
26. Factors don't allow best teaching	K-12 and Collegiate	.000
	K-12 and Private	.000
29. Learn to shift later than cello/bass	K-12 and Collegiate	.001
	K-12 and Private	.032
31. More pedagogical literature needed	K-12 and Collegiate	.001
32. Shifting taught in homogeneous class	K-12 and Private	.057
33. Learn to shift standing up	K-12 and Private	.016

A Comparison of Primary Teaching Areas and Pre-shifting Survey Items

There was a significant difference between K-12 string teachers and collegiate string teachers regarding whether to introduce pre-shifting exercises during the first year

of instruction as well as introducing shifting from the very beginning. College string teachers generally agreed that “pre-shifting exercises should be introduced during the first year of violin/viola instruction” ($M = 4.10$, 74.5%), compared to private teachers ($M=3.55$, 57.1%) and K-12 teachers ($M=3.52$, 60%). In comparison, attitudes among string teachers were split as to whether “shifting should be introduced from the very beginning.” College string teachers agreed approximately half of the time (50.8%) compared to K-12 teachers (37.7%) (see Table 20).

Table 20

Pre-Shifting During First Year

		SA		A		U		D		SD	
Teaching Area		freq	%	freq	%	freq	%	freq	%	freq	%
K-12	(n=105)	33	31.4%	30	28.6%	12	11.4%	19	18.1%	11	10.5%
College	(n=59)	33	55.9%	11	18.6%	7	11.9%	4	6.8%	4	6.8%
Private	(n=42)	16	38.1%	8	19%	9	21.4%	1	2.4%	8	19%

Introducing Shifting from the Beginning

		SA		A		U		D		SD	
Teaching Area		freq	%	freq	%	freq	%	freq	%	freq	%
K-12	(n=106)	12	11.3%	28	26.4%	14	13.2%	32	30.2%	20	18.9%
College	(n=59)	10	16.9%	20	33.9%	9	15.3%	14	23.7%	6	10.2%
Private	(n=43)	7	16.3%	7	16.3%	7	16.3%	12	27.9%	10	23.3%

When Should Shifting be Introduced?

The response to the Item regarding “when to introduce shifting exercises after first position is secure” was favorable among the overall respondents ($M=4.15$). K-12 string teachers had a slightly higher mean score of 4.25 compared to the college mean score of 4.00. However, the response regarding “introducing shifting during the second year of instruction” was different between the private teachers ($M=3.16$) and K-12 teachers ($M=3.56$), but not enough to be significant. College ($M=3.42$) and K-12 ($M=3.56$) ranked this item similarly (see Table 26, p. 75).

It is not surprising to see a general disagreement among string teachers regarding “introducing third position before first position to beginning violin/viola students” (Havas, 1961; Linn, 1908; Stoeving, 1914). However, college teachers’ overall rating ($M=2.10$) is slightly higher than K-12 ($M=1.62$), and private teachers ($M=1.56$). The reverse question on the survey asked respondents whether “third position should be taught after first position.” It was expected to see the opposite attitude since the respondents disagreed with the previous item. The mean scores for the overall respondents, K-12, and college were over 4.5. Private teachers agreed, but the mean score was slightly below 4.5 ($M=4.40$). No significant difference was found.

Appropriate Classroom Setting

Respondents were asked whether shifting was successfully taught in a heterogeneous classroom setting, homogeneous classroom setting, or a private setting. In a heterogeneous classroom setting, the private teachers responded with the lowest mean score of 3.22. Data collected from the question regarding a homogeneous classroom setting revealed a significant difference between K-12 string teachers and private studio

teachers. K-12 teachers strongly agreed/agreed (94.3%) that shifting could be taught successfully in a homogeneous classroom setting. In comparison, private studio teachers were less in agreement (66.7%) (see Table 21).

Table 21

Shifting Taught Successfully in a Homogeneous Class

		SA		A		U		D		SD	
Teaching Area		freq	%	freq	%	freq	%	freq	%	freq	%
K-12	(n=106)	61	57.5 %	39	36.8 %	1	.9 %	4	3.8 %	1	.9 %
College	(n=58)	26	44.8 %	20	34.5 %	8	13.8 %	3	5.2 %	1	1.7 %
Private	(n=39)	11	28.2 %	15	38.5 %	7	17.9 %	2	5.1 %	4	10.3 %

Shifting Beyond the Third Year of String Instruction

Respondents generally disagreed with Item 16 that states: “violin/viola students beyond that third year of instruction do not have difficulty with shifting.” The overall mean score was 2.17. College teachers ($M=2.24$), Private ($M=2.16$) and K-12 ($M=2.17$) teachers generally disagreed with this statement. Item 30 was designed to be opposite item 16, but the opinions regarding these issues are not opposite of one another. Item 30 states that “violin/viola students beyond the third year of instruction have difficulty shifting.” The overall mean score for the respondents was 3.11. College and K-12 teachers’ responses were consistent with the overall score ($M=3.11$ and $M=3.18$ respectively), but the private teachers’ scores were even lower ($M=2.85$) (see Table 26, p. 75).

Availability and Appropriateness of Instructional Materials

Overall, string teachers were in agreement that scale studies are useful when learning to shift ($M=4.44$). One-octave scales on the same string of the violin and/or viola were not as favorable as general scale studies, probably due to the fact that one must shift if attempting to play a scale on the same string. When teaching scale studies, the teacher has the option of either using positions or staying in first position (depends on the scale and how many octaves there are in the scale). The overall mean score for the respondents was 3.92. College teachers had a more favorable response ($M=4.09$).

There was a significant difference between K-12 and collegiate string teachers regarding needing more pedagogical literature when teaching shifting to violin/viola students (see Table 19, p. 64). Fifty-nine percent of K-12 string teachers strongly agreed/agreed that more pedagogical literature is needed for violin/viola shifting compared to 39.6% of college teachers (see Table 22). This trend is substantiated by the open-ended responses given by respondents. In general, K-12 teachers would like to have more literature regarding teaching shifting to young string students. Many of the teachers commented that they created their own exercises for teaching shifting to violin/viola students.

Table 22

Pedagogical Literature Needed

	SA		A		U		D		SD	
Teaching Area	freq	%	freq	%	freq	%	freq	%	freq	%
K-12 (<i>n</i> =107)	22	20.6%	41	38.3%	26	24.3%	13	12.1%	5	4.7%
College (<i>n</i> =58)	5	8.6%	18	31%	26	24.3%	13	12.1%	5	15.5%
Private (<i>n</i> =39)	6	15.4%	10	25.6%	11	28.2%	7	17.9%	5	12.8%

Stand/Sit While Learning to Shift

After running a Tukey Post Hoc Test, there was a significant difference regarding whether violin/viola students should sit down as well as stand up when learning to shift (see Table 19, p. 64). College and private teachers disagreed with learning to shift sitting down ($M=1.96$; $M=1.98$ respectively). The differences occurred between K-12 and collegiate string teachers and K-12 and private studio string teachers. This is not surprising since many K-12 string teachers use a heterogeneous string classroom setting and collegiate and private studio teachers generally teach one on one (teacher - student relationship). Thirty-four percent of K-12 string teachers strongly disagreed/disagreed with sitting down while violinists/violists are learning to shift compared to 60% of college string teachers. Additionally, 62% of K-12 string teachers were undecided or had no opinion regarding sitting down when learning to shift compared to 38.6% of collegiate string teachers. Sixty-three percent of private studio teachers strongly disagreed/disagreed with learning to shift sitting down compared to 33.6% of K-12 string teachers. Similarly to K-12 and college string teachers, 61.5% of K-12 string teachers

were undecided or had no opinion with sitting down while learning to shift compared to 35% of private studio string teachers (see Table 23).

In comparison, there was a significant difference between private studio string teachers and K-12 string teachers regarding whether violin/viola students should learn to shift standing up. Fifty-four percent of private studio string teachers agreed/strongly agreed with standing while learning to shift while 33% of K-12 string teachers agreed/strongly agreed. Surprisingly, 39% of private studio string teachers were undecided or had no opinion as to whether shifting should be learned standing up compared to 62.1% of K-12 string teachers (see Table 23).

Table 23

*Position While Learning to Shift**Sitting While Learning to Shift*

		SA		A		U		D		SD	
Teaching Area		freq	%	freq	%	freq	%	freq	%	freq	%
K-12	(n=104)	3	2.9%	2	1.9%	64	61.5%	15	14.4%	20	19.2%
College	(n=57)	0	.0%	1	1.8%	22	38.6%	8	14.0%	26	45.6%
Private	(n=40)	1	2.5%	0	.0%	14	35%	7	17.5%	18	45%

Standing While Learning to Shift

		SA		A		U		D		SD	
Teaching Area		freq	%	freq	%	freq	%	freq	%	freq	%
K-12	(n=103)	15	14.6%	19	18.4%	64	62.1%	3	2.9%	2	1.9%
College	(n=58)	14	24.1%	13	22.4%	30	51.7%	0	.0%	1	1.7%
Private	(n=41)	15	36.6%	7	17.1%	16	39.0%	1	2.4%	2	4.9%

How to Teach Shifting Effectively

Ear training is an important aspect of teaching shifting to string students (Behrend, 1982; Havas, 1973; Oddo, 1995). Teachers from the three primary teaching areas were in agreement with this statement. The mean score for college string teachers and K-12 strings was 4.75.

In comparison, the item on the survey that pertained to the role of the thumb when leading a shift showed a significant difference between K-12 string teachers and college string teachers. Sixty-seven percent of K-12 string teachers strongly agreed/agreed that the role of the thumb was important compared to 45.7% of college teachers (see Tables 19 and 24).

The Tukey Post Hoc Test also revealed respondents' attitudes about the use of finger tapes when introducing shifting among K-12 and college string teachers. Fifty-three percent of K-12 string teachers strongly agreed/agreed with the use of finger tapes compared to reported disagreement by 55.4% of college string teacher respondents (see Tables 19 and 24).

Additionally, there were significant differences among K-12 and college string teachers as well as K-12 and private studio string teachers regarding Item 26: "When teaching shifting, there are certain factors that do not allow me to teach as I feel best." Seventy percent of college string teachers strongly disagreed/disagreed with this statement, while only 23.2% of K-12 string teachers strongly disagreed/disagreed. Likewise, 57.5% of private studio string teachers strongly disagreed/disagreed compared to K-12 string teachers (see Tables 19 and 24).

Table 24

Teaching Shifting Effectively

Role of Thumb											
		SA		A		U		D		SD	
Teaching Area		freq	%	freq	%	freq	%	freq	%	freq	%
K-12	(n=102)	50	49.0%	18	17.6%	14	13.7%	10	9.8%	10	9.8%
College	(n=57)	14	24.6%	12	21.1%	10	17.5%	12	21.1%	9	15.8%
Private	(n=43)	16	37.2%	7	16.3%	6	14.0%	6	14.0%	8	18.6%

Finger Tapes											
		SA		A		U		D		SD	
Teaching Area		freq	%	freq	%	freq	%	freq	%	freq	%
K-12	(n=102)	8	7.8%	46	45.1%	21	20.6%	16	15.7%	11	10.8%
College	(n=56)	3	5.4%	7	12.5%	15	26.8%	16	28.6%	15	26.8%
Private	(n=42)	3	7.1%	10	23.8%	11	26.2%	7	16.7%	11	26.2%

Certain Factors Do Not Allow for Best Teaching of Shifting											
		SA		A		U		D		SD	
Teaching Area		freq	%	freq	%	freq	%	freq	%	freq	%
K-12	(n=99)	13	13.1%	25	25.3%	38	38.4%	12	12.1%	11	11.1%
College	(n=56)	0	.0%	3	5.4%	14	25%	10	17.9%	29	51.8%
Private	(n=40)	1	2.5%	4	10.0%	12	30.0%	12	30.0%	11	27.5%

Cello/bass students tend to learn to shift before violin/viola students due to necessity. Two items on the survey pertained to this subject matter. Item 21 stated: “Violinists/violists should learn to shift at the same time as cellists/bassists.” Item 29 mentioned that violin/viola students tend to learn to shift later than cello/bass students. Item 29 showed a significant difference between K-12 and college string teachers as well as K-12 and private studio string teachers. Seventy-nine percent of K-12 string teachers strongly agreed/agreed that violinists/violists should learn to shift later than cellists/bassists compared to 45.4% of college string teachers. Similarly to college string teachers, 52.8% of private studio string teachers strongly agreed/agreed with learning to shift later than cellists/bassists compared to 79% of K-12 string teacher (see Table 25).

Table 25

Violinists/Violists Learn to Shift Later Than Cellists/Bassists

Teaching Area	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	freq	%	freq	%
K-12 (n=100)	31	31.0%	48	48.0%	11	11.0%	6	6.0%	4	4.0%
College (n=55)	6	10.9%	19	34.5%	23	41.8%	4	7.3%	3	5.5%
Private (n=36)	6	16.7%	13	36.1%	13	36.1%	3	8.3%	1	2.8%

Table 26

Attitudes Regarding Shifting Among Primary Teaching Areas

Descriptive Statistics

ITEM	N=229	MEAN	SD	PT: N=59	COLLEGE		N=43	PRIVATE		N=106	K-12	
					MEAN	SD		MEAN	SD		MEAN	SD
11. Pre-shifting exercises in 1 st year	221	3.70	1.37	59	4.10	1.26	42	3.55	1.50	105	3.52	1.37
12. Shifting exercises introduced after 1 st position	223	4.25	1.18	59	4.00	1.34	43	4.14	1.26	106	4.25	1.02
13. Third position taught before first position	222	1.72	1.06	59	2.10	1.21	43	1.56	.98	105	1.62	.93
14. Shifting taught in a private studio	222	4.84	.67	58	4.98	.13	43	4.86	.64	106	4.75	.85
15. Shifting introduced in the 2 nd year	222	3.43	1.13	59	3.42	1.15	43	3.16	1.09	105	3.56	1.13
16. No difficulty shifting beyond 3 rd year	223	2.17	1.13	59	2.24	.36	43	2.16	.92	106	2.17	1.08
17. Shifting introduced from very beginning	223	2.90	1.34	59	3.24	1.28	43	2.74	1.42	106	2.81	1.32
18. Scale studies useful when learning to shift	222	4.44	.90	59	4.41	1.04	43	4.30	1.01	105	4.54	.73
19. Violin/viola students learn to shift sitting	216	2.28	.99	57	1.96	.96	40	1.98	1.03	104	2.55	.92
20. Ear training part of learning to shift	222	4.72	.63	59	4.75	.63	42	4.74	.50	106	4.75	.59
21. Violin/viola learn to shift same as cello/bass	206	2.74	1.09	55	3.04	1.12	35	2.80	.93	101	2.58	1.12
22. One octave scales on same string useful tools	215	3.92	1.12	57	4.09	1.07	43	3.93	1.14	100	3.80	1.13
23. Thumb plays important role when leading shift	217	3.56	1.44	57	3.18	1.43	43	3.40	1.56	102	3.86	1.38

ITEM	N=229	MEAN	SD	PT:	COLLEGE		PRIVATE			K-12		
				N=59	MEAN	SD	N=43	MEAN	SD	N=106	MEAN	SD
24. Guide note used when locating new position	217	4.43	.84	57	4.37	1.01	43	4.49	.77	102	4.48	.78
25. Finger tapes used when introducing shifting	215	2.87	1.24	56	2.41	1.17	42	2.69	1.30	102	3.24	1.14
26. Certain factors NOT allow for best teaching	210	2.59	1.23	56	1.84	.99	40	2.30	1.07	99	3.17	1.15
27. Shifting taught in heterogeneous class	209	3.74	1.18	57	3.67	1.04	36	3.22	1.24	101	4.00	1.11
28. Third position taught after first position	216	4.56	.86	56	4.59	.85	43	4.40	1.05	102	4.63	.73
29. Violin/viola learn to shift later than cello/bass	206	3.72	1.00	55	3.38	.97	36	3.56	.97	100	3.96	1.01
30. Difficulty shifting for students after 3 rd year	213	3.11	1.17	57	3.11	1.26	40	2.85	1.03	101	3.18	1.16
31. More pedagogical literature needed	218	3.30	1.20	58	3.93	1.24	39	3.13	1.26	107	3.58	1.09
32. Shifting taught in homogeneous class	217	4.22	.99	58	4.16	.97	39	3.69	1.24	106	4.46	.78
33. Violin/viola students learn to shift standing	216	3.52	.97	58	3.67	.91	41	3.78	1.13	103	3.41	.85

Research Question 3: How do Attitudes Regarding Shifting Compare When Analyzing Background Variables such as Education and Teaching Experience?

Education

Respondents' education was categorized into five categories: (a) High School diploma or equivalency; (b) Bachelor's degree; (c) Master's degree; (d) Doctoral degree; and (e) Artist diploma or certificate. Of the useable sample population ($n=227$), teachers with a master's degree represented the largest group ($n=111$) (see Table 27).

Table 27

Education

Degree status	Frequency ($n=227$)	Percentage
High School diploma or equivalency	8	3.5 %
Bachelor's degree	63	27.5%
Master's degree	111	48.5 %
Doctoral degree	41	17.9 %
Artist diploma or certificate	4	1.7 %

A MANOVA was calculated to see if there were any significant differences among respondents, using education as the independent variable. Results of a Tukey Post Hoc test showed where the significant differences occurred. Two items on the survey were significantly different when comparing respondents by different educational levels (see Table 28). Item 13 mentioned that third position should be taught before first position. The results showed a significant difference between participants with a High

School diploma, Bachelor's degree, Master's degree, Doctoral degree, and an Artist Diploma degree. The groups of Artist Diploma degrees ($n=2$) and High School degrees ($n=8$) were not of sufficient size to support statistical analysis.

Table 28

Significant MANOVA Results: Main Effects for Education

Item #	df	F	<i>p</i>
13. Third position taught before first position	4	3.35	.011
32. Shifting taught successfully in a homogeneous class	4	3.18	.015

Teaching Experience

Teaching experience was another independent variable when comparing attitudes regarding violin/viola shifting. Teaching experience was ranked according to the number of years teaching strings: (a) 0-10 years; (b) 11-20 years; (c) 21-30 years; (d) 31-40 years; and (e) 41-50 years of teaching experience. Of the useable 227 responses, 30.6% of respondents were in the 0-10 years of teaching experience category, followed by 27.5% in the 11-20 years of teaching experience category (see Table 29).

Table 29

Years of Teaching Experience

Category	Frequency	Percentage
1) 0-10 years	70	30.5%
2) 11-20 years	63	27.5%
3) 21-30 years	55	24.0%
4) 31-40 years	33	14.4%
5) 41-50 years	6	2.6%

A MANOVA was calculated to see if there were any significant differences among respondents, using teaching experience as the independent variable. Results of a Tukey Post Hoc test showed where the significant differences occurred. Four Likert-type items on the survey were significantly different (see Tables 30 and 31).

Table 30

Significant MANOVA Results: Main Effects for Teaching Experience

Item #	df	F	p
12. Shifting introduced after first position secure	4	2.71	.032
19. Violin/viola students learn to shift sitting down	4	3.62	.008
23. Thumb plays a role when leading shift	4	2.70	.033
31. More pedagogical literature is needed	4	2.99	.020

Table 31

Tukey Post Hoc Test: Main Effects for Teaching Experience

Item #	Teaching Exp. Subgroups	<i>p</i>
12. Shifting introduced after first position	0-10 yrs – 31-40 yrs	.006
	31-40 yrs – 41-50 yrs	.048
19. Learn to shift sitting down	0-10 yrs – 21-30 yrs	.019
	0-10 yrs – 31-40 yrs	.010
23. Thumb play important role	0-10 yrs – 31-40 yrs	.006
31. More pedagogical literature needed	0-10 yrs – 11-20 yrs	.013
	0-10 yrs – 21-30 yrs	.034

Item 12 stated: “Shifting exercises should be introduced after first position is secure.” There was a significant difference among respondents in the 0-10 year subgroup and 31-40 year subgroup as well as the 31-40 year subgroup and the 41-50 year subgroup. Ninety percent of participants in the 0-10 year subgroup strongly agreed/agreed with item 12 compared to 53.2% of participants in the 31-40 year subgroup. When comparing subgroups 31-40 year and 41-50 year, one must consider the sample size in the latter subgroup ($n=6$). Due to the small sample size in the 41-50 year subgroup, results are not conclusive (see Table 32).

Table 32

Shifting Exercises Introduced After First Position is Secure

Years	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	freq	%	freq	%
0-10 (n=68)	43	63.2%	18	26.5%	3	4.4%	4	5.9%	0	.0%
11-20 (n=61)	30	49.2%	19	31.1%	4	6.6%	4	6.6%	4	6.6%
21-30 (n=54)	28	51.9%	16	29.6%	2	3.7%	3	5.6%	5	9.3%
31-40 (n=32)	11	34.4%	6	18.8%	5	15.6%	7	21.9%	3	9.4%
41-50 (n=6)	5	83.3%	1	16.7%	0	.0%	0	.0%	0	.0%

A Tukey Post Hoc Test revealed a significant difference among participants in the 0-10 year subgroup and 21-30 year subgroup regarding violinists/violists learning to shift sitting down (see Table 31). Sixty-three percent of respondents with 0-10 years of teaching experience were undecided about whether violin/viola students should learn to shift sitting down compared to 45.1% of respondents in the 21-30 year subgroup. Similarly, 40% of respondents in the 31-40 year subgroup were undecided as well. Fifty-five percent of respondents in the 21-30 year subgroup and 60% in the 31-40 year subgroup strongly disagree/disagreed with learning to shift sitting down compared to 28.3% in the 0-10 year subgroup (see Table 33).

Table 33

Violin/Viola Students Learn to Shift In a Sitting Position

	SA		A		U		D		SD	
Years	freq	%	freq	%	freq	%	freq	%	freq	%
0-10 (n=67)	2	3.0%	4	6.0%	42	62.7%	10	14.9%	9	13.4%
11-20 (n=60)	2	3.3%	0	.0%	27	45.0%	13	21.7%	18	30.0%
21-30 (n=51)	0	.0%	0	.0%	23	45.1%	7	13.7%	21	41.2%
31-40 (n=30)	0	.0%	0	.0%	12	40.0%	3	10.0%	15	50.0%
41-50 (n=6)	0	.0%	0	.0%	3	50.0%	0	.0%	3	50.0%

A Tukey Post Hoc Test revealed a significant difference between 0-10 year subgroup and 31-40 year subgroup when considering the role of the thumb when leading a shift. Thirty-eight percent of respondents in the 31-40 year subgroup strongly disagreed/disagreed with item 23 compared to 16.4% of respondents in the 0-10 year subgroup (see Table 34).

Table 34

Important Role of Thumb When Leading Shifts

Years	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	freq	%	freq	%
0-10 (n=67)	31	46.3%	9	13.4%	11	16.4%	9	13.4%	7	10.4%
11-20 (n=59)	20	33.9%	13	22.0%	9	15.3%	12	20.3%	5	8.5%
21-30 (n=52)	22	42.3%	11	21.2%	8	15.4%	6	11.5%	5	9.6%
31-40 (n=32)	9	28.1%	5	15.6%	6	18.8%	2	6.3%	10	31.3%
41-50 (n=6)	2	33.3%	1	16.7%	1	16.7%	1	16.7%	1	16.7%

Item 31 pertained to the need for more pedagogical literature for violin/viola shifting. A Tukey Post Hoc Test showed significant differences between the 0-10 year subgroup and 11-20 year subgroup as well as the 0-10 year subgroup and the 21-30 year subgroup (see Table 31). Sixty-four percent of respondents in the 0-10 year subgroup agreed/strongly agreed with needing more pedagogical literature compared to 38.3% of respondents in the 11-20 year subgroup. Additionally, 36.7% of respondents in the 11-20 year subgroup were undecided regarding item 31 compared to 17.9% of respondents in the 0-10 year subgroup. Thirty-four percent of respondents in the 21-30 year subgroup disagreed/strongly disagreed with needing more literature compared to 17.9% of respondents in the 0-10 year subgroup (see Table 35).

Table 35

More Pedagogical Literature Needed for Violin/Viola Shifting

	SA		A		U		D		SD	
Years	freq	%	freq	%	freq	%	freq	%	freq	%
0-10 (<i>n</i> =67)	16	23.9%	27	40.3%	12	17.9%	9	13.4%	3	4.5%
11-20 (<i>n</i> =60)	5	8.3%	18	30.0%	22	36.7%	11	18.3%	4	6.7%
21-30 (<i>n</i> =53)	8	15.1%	19	35.8%	8	15.1%	10	18.9%	8	15.1%
31-40 (<i>n</i> =31)	6	19.4%	7	22.6%	8	25.8%	5	16.1%	5	16.1%
41-50 (<i>n</i> =6)	0	.0%	2	33.3%	3	50.0%	0	.0%	1	16.7%

Teaching Experience and Education

A MANOVA procedure was used to examine attitudes of participants with different levels of teaching experience and education. This analysis revealed four significant interactions (see Table 36). Two items pertained to posture/position when learning to shift for violinist/violists (specifically whether a student should stand up or sit down while learning to shift). The third item refers to violin/viola students not having difficulty shifting beyond the third year of instruction. The final item refers to the need for more pedagogical literature for violin/viola shifting.

Artist Diploma (*n*=2) and High School (*n*=4) degree categories were omitted due to the small sample size. All degree categories (*n*=2) with 41-50 years of teaching experience were also omitted due to small sample sizes as well.

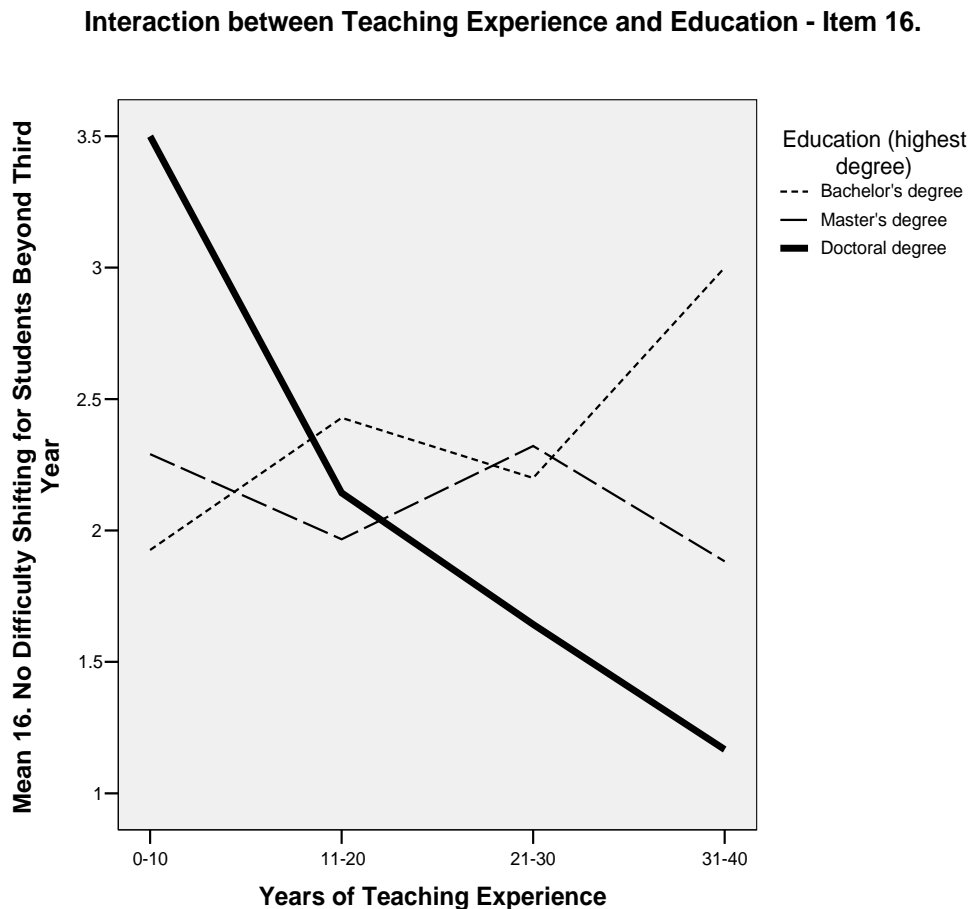
Table 36

Significant MANOVA Results: Interaction Between Teaching Experience and Education

Item #	df	F	p
16. No difficulty shifting for students beyond 3 rd year	11	2.70	.003
19. Violin/viola students learn to shift sitting down	11	2.80	.002
31. More pedagogical literature needed for shifting	11	1.91	.041
33. Violin/viola students learn to shift standing up	11	2.07	.025

When comparing responses to Item 16 (no difficulty shifting beyond the 3rd year) by years of teaching experience and education, doctoral degree respondents with 0-10 years of teaching experience were generally in agreement that there were no difficulties with shifting for violin/viola students beyond their third year of study. As the years of teaching experience increased, the level of agreement sharply decreased within doctoral respondents (see Figure 1). In contrast, when comparing respondents with bachelors degrees, the level of agreement went up as the years of experience increased. Respondents with bachelors and masters degrees with 0-10 years of teaching experience had similar levels of disagreement regarding item 16 ($M=2.00$; $M=2.30$ respectively). The same two subgroups went in opposite direction when comparing the 11-20 year subgroup ($M=2.38$; $M=1.96$ respectively). After coming to a similar level of agreement within the 21-30 year subgroup, respondents with bachelors and masters degrees split into opposite directions once again during the 31-40 year subgroup ($M=3.00$; $M=1.85$ respectively) (see Figure 1).

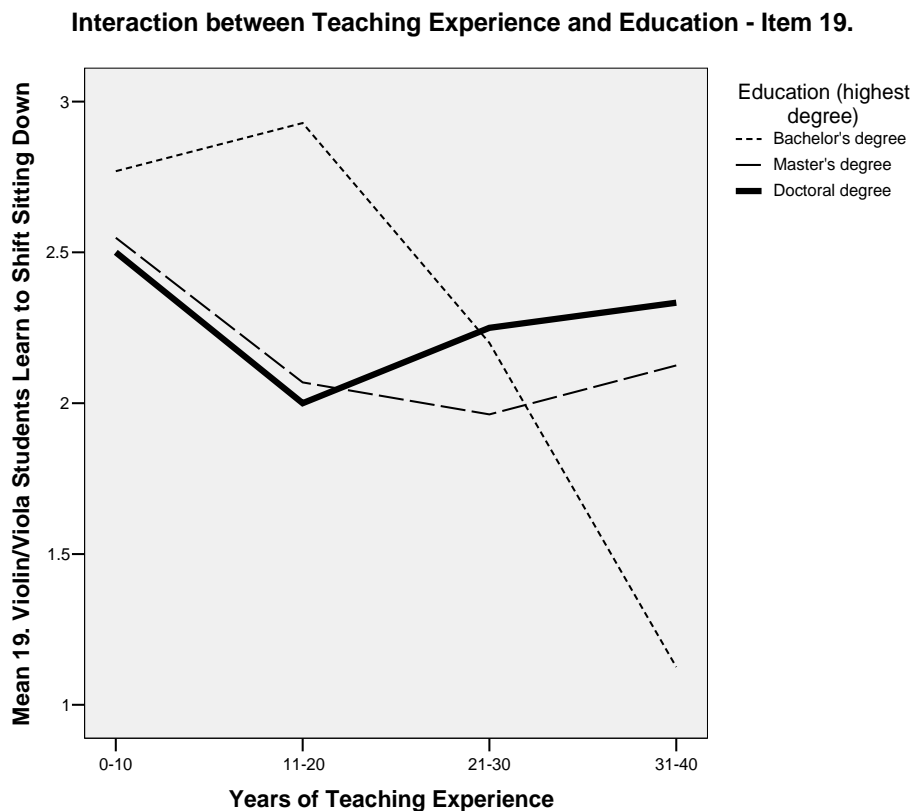
Figure 1



There was a significant interaction between teaching experience and education regarding whether violinists/violists should learn to shift sitting down. The greater the teaching experience level among respondents with bachelor's degrees, the greater the level of disagreement regarding whether to sit down while learning to shift ($M=1.17$). It is also interesting to note that 69.3% of the respondents were undecided or had no opinion regarding whether violin/viola students should learn to shift sitting down, especially respondents in the bachelor's degree, 0-10 year subgroup. In comparison, respondents with advanced degrees (masters and doctorates) generally stayed parallel to

one another in a downward slope towards greater disagreement within the 11-20 year subgroup. Doctoral degree respondents' attitudes regarding item 19 started to increase, but remained within a level of disagreement ($M=2.33$). (see Figure 2).

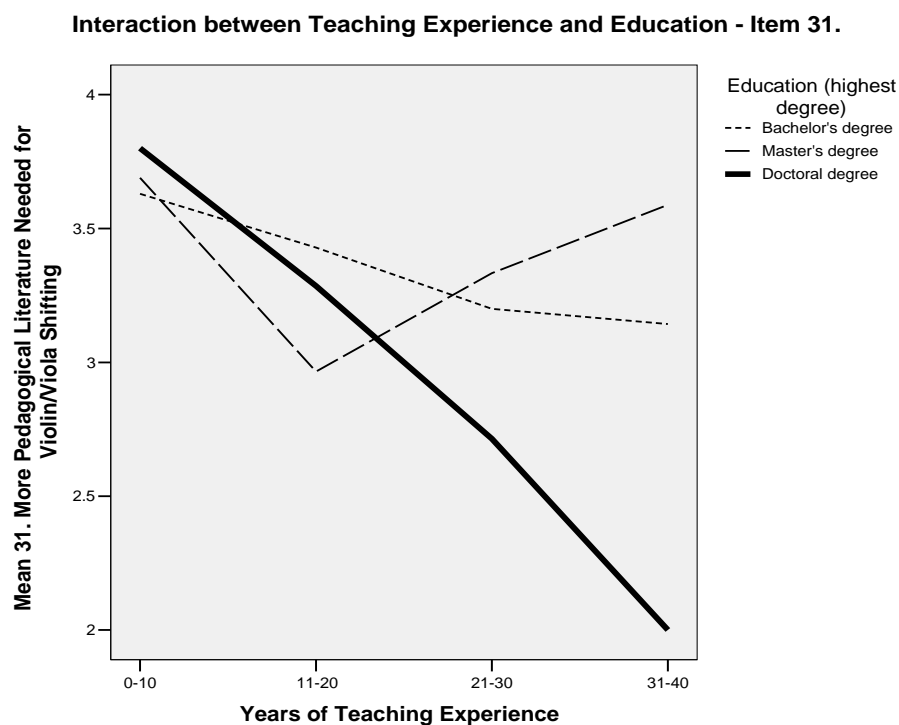
Figure 2



A significant interaction was revealed when comparing teaching experience and education with attitudes regarding the need for more pedagogical literature when teaching shifting to violin/viola students. In general, the level of agreement sharply decreased as the level of years of teaching experience increased within doctoral respondents. Doctoral respondents generally had a level of agreement regarding needing more pedagogical literature within the 0-10 year subgroup ($M=3.75$). In comparison, doctoral respondents

within the 31-40 year subgroup disagreed/strongly disagreed with needing more pedagogical literature ($M=1.67$). Respondents with masters' degrees generally agreed initially with doctoral degree respondents, but went sharply in opposite directions among the 21-30 year and 31-40 year subgroups ($M=3.36$, $M=3.85$). Respondents with bachelor's degrees stayed between a range of general agreement ($M=3.86$ to $M=3.17$), with a downward trend occurring as the years of teaching experience increased.

Figure 3

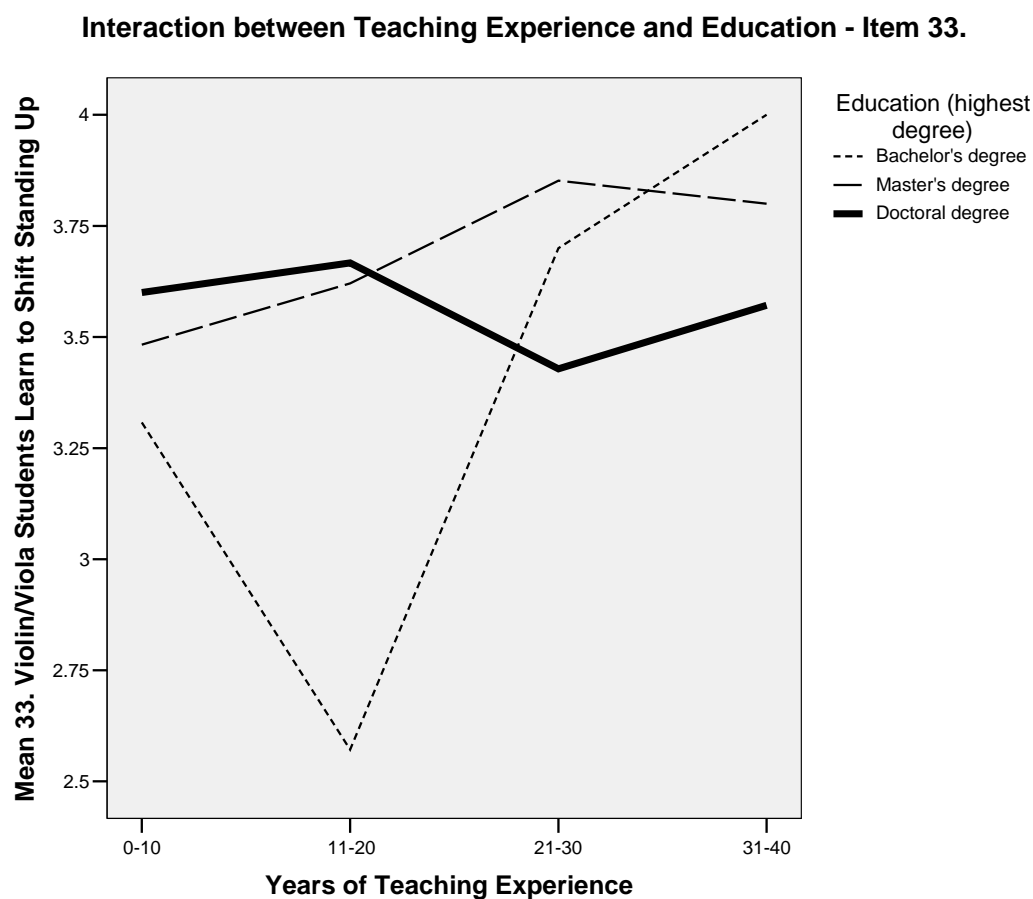


Item 33 pertained to learning to shift standing up. A Tukey Post Hoc Test revealed a significant interaction between respondents with bachelors' degrees, 11-20 years of teaching experience, and bachelors' degrees, 21-30 years of teaching experience. Respondents with bachelor's degrees and 11-20 years of teaching experience generally

disagreed with learning to shift standing up ($M=2.69$) compared to bachelor's degree respondents with 21-30 year subgroup generally agreeing to item 33 ($M=3.88$).

Advanced degree respondent (masters and doctoral degrees) were in agreement regarding standing while learning to shift ($M=3.41$, $M=3.50$ respectively), but the two groups split into opposite direction within the 21-30 year subgroup ($M=3.86$; $M=3.27$ respectively) (see Figure 4).

Figure 4



Summary

According to the results, there are differing attitudes among respondents regarding when to introduce shifting, how to introduce shifting, what posture/position is

appropriate, and what materials should be used when teaching shifting to violin/viola students. The items on the survey pertaining to pre-shifting and early introduction of shifting show a great disparity between subgroups of respondents, most notably between college teachers and K-12 and private teachers. Half of the K-12 and private studio respondents disagreed with introducing shifting from the very beginning of instruction compared to only a third of the college respondents.

Overall, almost all of the respondents strongly agreed that shifting can be taught successfully in a private studio setting. There was a significant difference between K-12 and private studio string teachers regarding whether shifting can be taught successfully in a homogeneous classroom setting. This is not surprising, as most K-12 respondents agreed since homogeneous classroom settings are often used in public school settings.

There was a significant difference between K-12 and collegiate string teachers regarding needing more pedagogical literature when teaching shifting to violin/viola students. K-12 string teachers would like to have more literature available to them when teaching shifting. Many of the teachers commented in the open-ended responses that they created their own exercises since very little literature exists for them to use in the string classroom setting. Also, a significant interaction occurred between teaching experience and education regarding needing more pedagogical literature. While K-12 string teachers (especially in the 0-10 years of teaching range) are in agreement that more pedagogical literature is needed to introduce shifting to beginning violin/viola students, college string teachers' attitudes regarding pedagogical shifting literature are favorable regarding adequate availability of materials. This is not surprising since there is a wealth

of advanced literature available to string teachers, but more beginning and intermediate-level material is needed.

Significant differences occurred between K-12 and college as well as K-12 and private studio string teachers regarding whether to sit down as well as stand up when learning to shift. In general, half of the college and private studio string respondents agreed that standing was desirable compared to sitting when learning to shift. However, it was surprising to see over half of the K-12 string teachers either were undecided or had no opinion regarding whether to sit or stand while learning to shift.

There were also significant differences between K-12 and college string teachers regarding the role of the thumb and the use of finger tapes when teaching shifting effectively. K-12 string teachers generally were in agreement that the role of the thumb was important. College string teachers' opinion regarding the role of the thumb was mixed, possibly due to the vagueness of the question or not enough specific information regarding the role of the thumb. Regarding finger tapes, it is not surprising that 52.9% of the K-12 string respondents agreed while only 17.9% of college string teachers agreed with using finger tapes when introducing shifting. Studies have shown that the use of finger tapes for general instruction on the violin/viola can be controversial among string teachers (Bergonzi, 1997).

Significant differences occurred between K-12 and college string teachers as well as K-12 and private studio string teachers regarding the following statement: "certain factors that do not allow me to teach as I feel best." College and private studio respondents generally disagreed with the statement, while only one fourth of the K-12 string respondents disagreed.

Chapter five will address the results of the open-ended questions taken from the on-line and hard-copy surveys. Questions asked included what specific exercises and/or etudes are the most effective when introducing shifting to violin/viola students; what is the most effective teaching method when introducing shifting; and what are the advantages and disadvantages to introducing shifting early in a violinist's/violist's curriculum? Two other questions included what are violinists/violists learning in the classroom while cellists/bassists are learning to shift; and what factors enable/constrain a string teacher's ability to teach shifting?

CHAPTER FIVE

OPEN-ENDED QUESTIONS

Results

Learning to shift is a multi-faceted left hand technique for the violin and viola student. A student should have certain fundamentals in place before shifting is introduced, such as proper playing position/posture when holding the violin/viola and a good, relaxed left hand frame (Collins, 1962; Linn, 1908; Oddo, 1995; Rolland, 2000). Teachers must decide when and how shifting should be introduced to their violin/viola students. In a private studio setting, teachers have more flexibility in their teaching curriculum when introducing shifting to violin/viola students. However, in a larger class setting (homogenous), teachers also need to consider each student's level of playing ability when introducing shifting. If the class is heterogeneous (upper and lower strings), the teacher's decision regarding when to introduce shifting becomes more challenging.

A survey was created to find out string teachers' attitudes regarding technical elements of violin/viola shifting; including how to introduce shifting, how to teach shifting effectively, what instructional materials are available and appropriate, and correct posture as it relates to learning to shift. It was hoped that by surveying string teachers' opinions regarding shifting, various commonalities and differences would emerge, giving insight into the important issues concerning violin/viola shifting.

The survey also contained six open-ended questions regarding appropriate exercises/etudes to apply when introducing shifting, an effective teaching method for introducing shifting, advantages and disadvantages of introducing shifting early, whether to teach shifting to violin/viola students while cellos/basses are learning to shift, and what

factors enable or constrain a string teacher's decision to introduce shifting to violin/viola students.

The data from the open-ended questions were collected and coded, and various themes began to emerge. In order to determine the level of interest, coded responses were tallied. Topics were ranked according to how many times respondents commented on the same topic. Topics occurring less than 10 times among the total responses were not counted. Topics occurring 10-20 times were considered to indicate some level of interest, while topics with 21-34 occurrences were considered to indicate moderate levels of interest. Topics with 35-49 occurrences were considered to indicate strong levels of interest, and topics with 50 or greater occurrences were considered to indicate very strong levels of interest. A master teacher reviewed the qualitative data and agreed with the researcher concerning the emerging themes and response trends. Quotes taken from the data were used to substantiate the coding and response trends that were found in the open-ended data. The quotes selected from the open-ended data were reviewed by the researcher to assure that the sample population was correctly represented ($N=229$).

Question 34: What Specific Etudes/Exercises Are the Most Effective

When Introducing Shifting to Violin/Viola Students?

Effective Etudes/Exercises

The first open-ended question asked respondents to list specific etudes/exercises that are effective when introducing shifting to violin/viola students. The first topic of interest was the use of scales when introducing shifting. One octave scales on the same string were listed as an effective way of introducing shifting, especially since they require shifts. Additionally, one octave scales on adjacent strings were also listed, but they do

not necessarily require shifting by the student. Two octave scales were also listed frequently by respondents ($n=58$).

Scales, 2 octaves, arpeggios - D major for violas, e minor/Major for violins (#066)

I teach 2-octave scales all beginning on the g string as in the Flesch Scale System moving chromatically up the g string and remaining in one position. Ex.: G, A-flat A, B-flat and B in first position, C in second position, D in third position, etc.(HC#37)

One-finger scales were also suggested as effective exercises when introducing shifting. The student would move up and down the same string using only one finger while playing a scale (see Figure 5, p. 101).

One finger scales; Happy Birthday on one finger (#195)

One finger scales and scales ending in higher positions
Also, scale-like patterns (HC#5)

Participants recommended specific scale study exercise books. The Carl Flesch Scale System and Hrimaly Scale Book were mentioned in regard to teaching shifting. According to respondents, these books would be more suited for a moderately advanced student in a private studio setting, and not necessarily suitable for a beginning heterogeneous classroom setting. Respondents generally agreed that materials taken from these books and adapted to fit in a string classroom curriculum would work.

The Whistler etude books, Introducing the Positions, were also frequently recommended as effective teaching materials when introducing shifting to violin/viola students ($n=39$) (see Figure 5, p. 101).

Introducing the Positions (#018)

Whistler books remain excellent (#038)

Whistler Bk [sic] has worked for years. It IS the teacher that causes success!!! (#162)

In my private studio, I always use the Whistler Introducing the Positions Books for violin and viola. In public school teaching (heterogeneous classes), I used some excerpts of Whistler. . . (#006)

Introducing the Positions series (Whistler) has worked well for me after I teach the most basic shifting techniques on my own. (#053)

Responses were mixed, but the most frequent method book mentioned in the first open-ended response was Essential Elements, including Essential Techniques from the same series ($n=19$).

Essential Elements series – Intermediate Techniques and then Advanced Techniques. This series is outstanding (#073)

Pre-Shifting Exercises

Another topic that emerged from the data was the use of pre-shifting exercises among respondents ($n=50$). Various pre-shifting games frequently mentioned included; the shuttle, sirens, sliding up and down the fingerboard, shifting to harmonics, shifting taps, the use of a “high dot,” the “meow” game, “polishing the string,” “shine the string lightly,” ghost tones, high mark plucking, arm swing action, “riding the rails,” and “grasshopper jumps” (see Figure 6, p. 102). Many of these pre-shifting concepts originated from Paul Rolland’s teachings. Mimi Zweig and other string pedagogues have included these pre-shifting teaching concepts into their curriculum.

Early exercises to free the left arm and hand are of prime importance. Use of harmonics is an easy way to get free motion. For example, Twinkle theme—play the octave harmonic for the second one of each repeated note. This can also be done with Perpetual Motion from Suzuki Book 1. (#056)

Teach shifting from the beginning by placing a “high dot” over the harmonic note on the A string and tapping, then slide down to first position. (#039)

I begin with “sirens” and “pizzicato glissandi” within the first or second lesson to help students feel comfortable moving around the instrument (#064)

Sliding up and down the fingerboard. In rest position, silent shifting with every finger. (#107)

First finger sliding on one string = meow. (#120)

Shuttling with no fingers down; polishing the string; taking turns having each finger glide up and down on the string. (#161)

Grasshopper jumps and harmonic series exercises emphasize freedom of movement in first position to the end of the fingerboard. Teaches release of weight and no weight while shift in progress. (HC#46)

Two important string pedagogues mentioned along with pre-shifting exercises included Paul Rolland and Mimi Zweig:

Mimi Zweig’s Pedagogy.com exercises (#035)

I use a combo of Mimi Zweig and ITP (Whistler) (#193)

Many of the pre-shifting exercises listed by respondents may be a result of Paul Rolland’s work with the Urbana, Illinois String Project Program. Many string pedagogues, including Mimi Zweig, have incorporated Rolland’s exercises as well as creating new ones.

Warm-ups I have created based on Paul Rolland’s work (and others!) (#139)

Paul Rolland’s Shuttle Game (#037)

Paul Rolland-type pre-shifting exercises (#101)

Lots of Rolland-stly pre-shifting exercises [sic] (#046)

Other Etude/Exercise Books

Participants ($n=40$) listed 20 etude/exercise books when responding to the open-ended Item 34: “What specific etudes/exercises are the most effective when introducing shifting to violin/viola students?” The majority of etude/exercises listed are typically used in a private studio setting. String teachers in a classroom setting can adapt some of the material if they so desire, but it would be difficult and not necessarily advantageous to re-write the material for a heterogeneous classroom setting. Of the etude/exercise books listed, Whistler’s Introducing the Positions (Volume I and II) was mentioned by respondents as an effective way to introduce shifting to violin/viola students ($n=39$) (see Figure 5, p. 101).

Respondents’ recommendations of other etude/exercise books are listed in order of interest: Sevcik, Op. 6, 7 and 8; Yost, Wolfahrt, Kreutzer, Applebaum, Mazas, Kievman, Geringas’ Shifting Studies, Kayser, Schradieck, Dounis, and Doflein.

Of these etude/exercise books, three were mentioned by respondents more frequently than the other books: Sevcik ($n=22$), Yost ($n=13$), and Wohlfahrt ($n=11$).

Early Wohlfahrt and Mazas etudes involving 3rd position. They train hearing the same pitch in both 1st and 3rd position. (#031)

Russian Method (compilations) is the best: Yost, some Sevcik, some Whistler [sic] (#033)

Yost – Exercises for the Change of Position (#075)

Creative Exercises and Familiar Pieces

Creating original exercises for introducing shifting reflected some interest among the respondents ($n=19$):

I design my own (exercises) which I find are more efficient and effective than method books. (#021)

In public school teaching (heterogeneous classes), I used some excerpts of Whistler but more method books (Essential Elements) paired with exercises I made up myself. (#002)

Non-published, homemade studies get their eyes away from the music so they can concentrate on the kinesthetic, aural, and visual. (#032)

I use a pattern of shifting practice that I learned in Jr. High but that I've never seen written. It leads through all possible starting/ending finger combinations for any shifting position. (#017)

Exercises that I have written and included in my pedagogy. (#065)

Some respondents used orchestral repertoire and/or method book materials incorporated into their newly designed exercises (see Figure 5, p. 101).

Familiar songs incorporated into shifting exercises were also of interest according to respondents ($n=19$). Playing a familiar song by rote in a position other than first position was suggested as an effective shifting exercise.

Playing familiar first position pieces in other positions – no shifting after starting and playing by ear – will give experience with how it feels. Playing familiar pieces with some parts in third position, ie. Handel Bouree in Suzuki Book 2 with the first phrase in third position every time it comes in the piece – the remainder of the piece in first position – gives experience moving from first to third position and back. (#056)

Immediate reward and ear training by playing music the student knows in new positions. A mistake made is immediately heard by the untrained ear of an early learner. (#081)

Audiation

Ear training ($n=10$) was reported to be of less importance in relation to effective exercises/etudes when introducing shifting, but becomes of greater importance to respondents when addressing how to teach shifting effectively. Matching pitches and using aural skills for training the ear were suggested by respondents.

Matching pitches with singing and with finger drills. (#176)

Ear training for interval recognition.(#090)

Using ear away from music (HC#41)

Songs students already know by ear (#178)

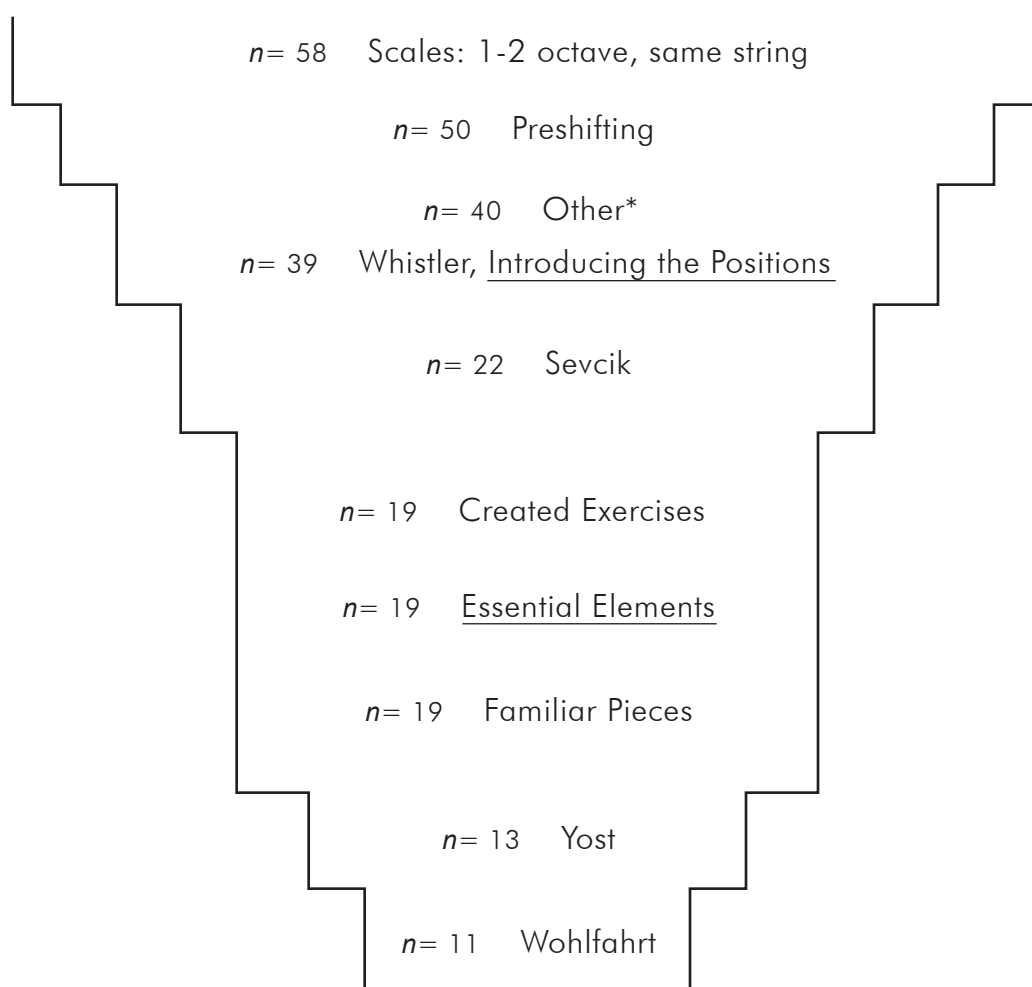


Figure 5: Materials Used When Introducing Shifting

*Suggested Etude/Exercises

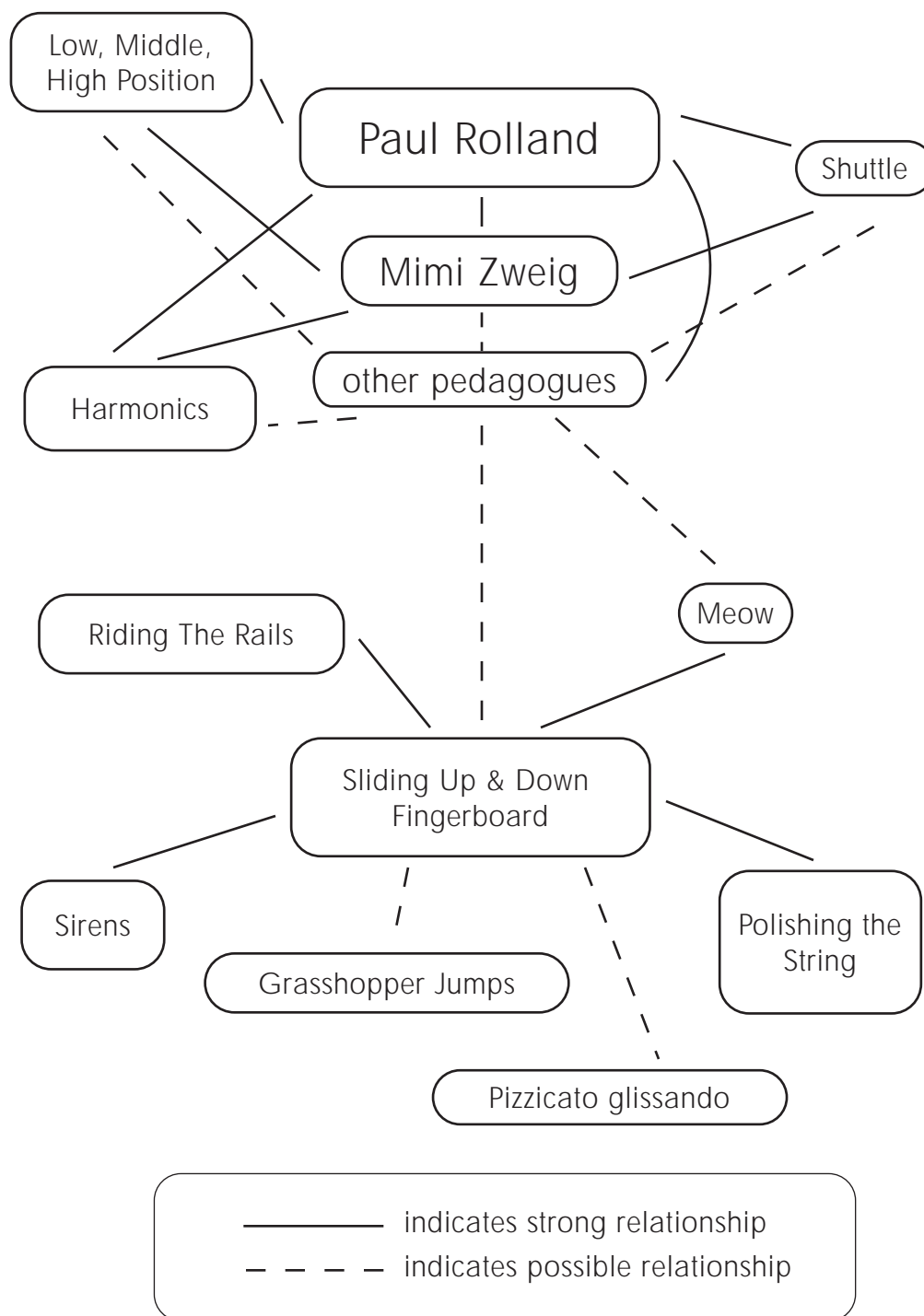


Figure 6: Preshifting Exercises/Games

Question 35: What is the Most Effective Teaching Method

When Introducing Shifting to Violin/Viola Students?

The second open-ended question asked respondents to comment regarding the most effective teaching method when introducing shifting to violin/viola students. Eleven topics emerged from the data, including using pre-shifting exercises, the importance of ear training ('listen, listen, listen'), various scales to teach effectively, the large kinesthetic motion of the arm and shoulder, modeling and demonstrating shifting for violin/viola students, and learning exercises by rote. Additionally, the role of the thumb was of interest to the respondents, as was the use of a guide note. Respondents mentioned that it was important to have a one-on-one relationship between the teacher and student when learning to shift.

In addition, various method books and etude/exercise books were listed regarding the most effective teaching methods to use when introducing shifting to violin/viola students. Essential Elements (1995) ($n=10$) was the most common method used, followed by Mueller Rusch ($n=6$). Whistler, Introducing the Positions (1944) ($n=15$) was the most commonly mentioned shifting etude book. Paul Rolland's book, The Teaching of Action in String Playing (1974) ($n=10$), was of moderate interest to respondents. According to some respondents, ideas in this book are appropriate for beginning violin/viola students, especially when introducing shifting.

Pre-Shifting Exercises/Games

Pre-shifting exercises and games ($n=29$) were most frequently mentioned by respondents when asked to suggest effective teaching methods for introducing shifting to beginning violin/viola students. Some of the exercises included sliding (using

portamento), making “sirens,” shifting to harmonics, left hand pizzicato, “tunneling,” swinging the left elbow while the left hand moves up and down the fingerboard, and the shuttle game (see Figure 6, p. 102).

I believe exploring the instrument is valuable (including) making sirens, finding harmonics, etc. (#002)

Tunneling – sliding to a specific pitch provided by the teacher (on one string) and placing toilet paper under the strings and sliding it up and down the fingerboard. (#034)

Lots of pre-shifting exercises: Left hand pizzicato, sliding, matching harmonics, and one-octave scales. (#046)

Pre-exercises for freedom of movement throughout the length of the fingerboard are very important from the very beginning of the student’s experience. (#079)

Sirens—moving up and down the fingerboard without much care for what the notes sound like. This encourages students to be free without having to worry about being precise. (#177)

I use the metaphor of ‘gliding up’ to create a smaller instrument (a mental picture of the student). (#183b)

Building on pre-shifting games and exercises to find a specific note. Shifting to and between harmonics for freedom. Using a same finger approach to shift up and back. (HC#45)

Listen, Listen, Listen

Ear Training was another topic that emerged from the open-ended data regarding the most effective teaching method when introducing shifting to violin/viola students ($n=25$). According to respondents, it is important for students to be able to hear the note before they attempt to shift. Therefore, incorporating ear training into a string student’s curriculum would be a valuable endeavor. Respondents indicated that effective teaching

methods for introducing shifting to violin/viola students would be:

Listen, listen, listen (#060)

EAR TRAINING ! ! ! ! You must know where you are going.
(#088)

Ear training must come first so that the student recognizes accurate pitch. (#183a)

Another important form of ear training is pitch matching. Students can listen to a pitch chosen by their teacher, and sing and/or play that particular note back to the teacher.

Calibration of shifting should be with the ear, not the hand. I say: 'Steer with your ear'. (#172)

Teach the student to learn to listen to the sound (interval) of the arrival note before doing the shifting. Sometimes making the student sing the interval is very helpful.(HC#13)

Additionally, reinforcing ear training by playing a passage in first position, even before attempting to play it in another position, was suggested.

Play it in first position and sing the notes first before any attempt to shift. (#176)

To play the intervals to be shifted in first position when possible to prepare the ear. (HC#3)

Scales

Similar to the first open-ended question regarding what specific exercises are useful when introducing shifting, using scales to teach shifting effectively was of interest to respondents ($n=24$). Various types of scales were suggested, including one octave scales on adjacent strings, one octave scales on the same string, two octave scales, and three octave scales.

I advocate heavy use of scales in class on a daily basis- all students learn all two octave major scales to three flats and three sharps by the end of their 2nd year on their instrument. (#020)

I use 2-octave D major scales in my heterogeneous string classes, requiring violists to shift to 3rd position for the 2nd 8va. (#064)

Using open strings during 2-3 octave scales can stimulate the violin/viola student to listen for correct pitches, especially when the student has shifted into positions other than first position.

I believe scales and arpeggios are essential for the development of shifting. At the beginning of shifting instruction, I prefer to use scales that begin in first position, go to third and so on so that the students can use the open strings as a control of error. (HC#17)

Kinesthetic Motion

Another idea that emerged from the data concerned the kinesthetic motion ($n=22$) of using the entire left arm and shoulder when teaching shifting to violin/viola students.

Teaching them (violin/viola students) that the movement is a 'whole-arm' movement and not a finger movement. Everything moves from shoulder to fingertips. (#147)

Another suggestion by respondents was that the student touch the left hand to the body of the violin/viola while shifting into third position, thereby getting the idea of how third position should feel. Using specific muscles of the left arm is another aspect of kinesthetic motion when learning to shift.

Hitting the violin body with the left hand as you enter 3rd position is a kinesthetic tool that I use that works for all my violin students in shifting from 1st to 3rd positions. (#062)

Shifting can be in an ascending motion as well as in a descending motion, depending on the notes involved.

Release and lead ascending shifts with the thumb using biceps muscle/ release and lead descending shifts with the index finger using triceps. (#130)

Using the whole arm rather than just the wrist to lead shifting; avoiding leading with the wrist on descending shifts, but rather with the back of the hand to avoid hyper-extending the wrist muscles and tendons and taking the hand out of frame. (HC#40)

Respondents recommend using large motor exercises for the left arm (including the thumb, hand, and elbow) in order to ensure freedom and mobility as well as release tension.

. . . whole arm/hand/thumb together, release tension during shift, harmonic fingers, timed to a pulse, breath, free motions, etc. (#139)

Regardless of etudes used or when introducing shifting, an emphasis on release of tension during the shift (both from thumb and fingers) and proper hand/arm angle) are [sic] necessary. (#141)

Others note the motion of shifting should be a relaxed, smooth gesture without any tension or pressure by the fingers, thumb, or left hand.

The motion should be soft and silky and then you can teach a specific location. (#118)

Release – Glide – Replace (#136)

Demonstration by Teacher

The topic of a teacher modeling and demonstrating a technical aspect of shifting was important to some of the respondents ($n=17$).

It's the teacher who introduces it, not the method. (#041)

I don't think the method is particularly important. Explanation, modeling and selecting first experiences that students can perform with a high degree of success is much more important than a particular method. (#119)

Willingness to show an example as well as support and praise are also vital to the student's learning process (#047)

Good teacher! (#135)

First, the teacher has to understand what a good shift is. Then they need to be able to explain it to the student. (#112)

Some noted that their own comfort level with shifting is of concern in order to give the students the correct concept of how shifting should occur:

As a wind player teaching strings, I need more training on teaching shifting. Right now, shifting is a haphazard skill that a few of my students master for specific literature. (#155)

I am still looking for it (HC#18)

Learning by Rote

Teaching shifting while using rote exercises can be useful according to some respondents ($n=17$). Initially taking music reading out of the shifting learning process can help alleviate the cognitive aspect of the brain assimilating too many learning processes at one time (Littrell, 2003, p. 5). When violin/viola students are novices, they typically learn the right hand, left hand, and music reading separately. Once they gain confidence with each skill, the teacher will combine two skills, and eventually all of the skills necessary to play the instrument. Using rote exercises when introducing shifting helps isolate the left hand in the students' thought processes, and in so doing removes the potential of over-complicating the experience by throwing the skill of music reading into the mix:

Avoid having the shift read. (HC#41)

Reading exercises distracts from the technique involved and hinders the ear training necessary. Rote teaching is necessary. (HC#37)

Rote – Double Talk. (HC#20)

Rote instruction must precede reading. (#182)

First I like them to look upon shifting as an exciting new adventure. Secondly, we learn to shift correctly without any music. (HC#44)

Guide Notes

Another topic mentioned by some respondents was the use of a guide note ($n=12$).

A guide note links the original position to the new position by way of leaving down a particular finger while shifting:

Shifting with guide notes (sliding on the exiting finger). (#030)

The overshift: going to the new position with the old finger, then applying the new finger. (#077)

Use of GUIDE NOTES! (#081)

Practice without the thumb and with guiding notes; shift with the finger of the note before the shift and then play new note. Practice: 1) with guide note; 2) without thumb and without guide note; 3) with thumb and with guide note; 4) with thumb and without guide note, etc.). (HC#38)

Thumb

The importance of the thumb in shifting was mentioned as a topic, with $n=11$. It should move simultaneously with the left hand fingers and not clutch the neck of the violin/viola (Barrett, 1978; Garam, 1990; Klotman, 1988; Rolland, 2000).

The thumb is extraordinarily important – it should move lightly at the same time and in the same relationship to the fingers up until the 4th position. Then it gradually moves under the neck. I think a shoulder rest is crucial to avoid dependence on the thumb for supporting the instrument. (#040)

Maintaining hand frame (position) by keeping the thumb aligned with first of second fingers; keeping thumb and fingers loose by introducing shifting with a harmonic-level finger weight until shifting is secure. (#065)

According to respondents, it is important that the first finger and thumb move together when shifting occurs. The thumb is also an important part of the left hand frame.

First finger and thumb always move together. (#108)

Move the left hand as a unit (#167)

I often would have students just glide up and down, making sure (the) thumb didn't grab or drag and that it was relaxed. (HC#19b)

When you synchronize the thumb with the kinesthetic motion of the left hand, the player produces a "landmark" for the hand to establish each time a violin/viola student shifts to third and fifth position. Some note this is important as well:

The use of landmarks: when shifting to third, a very slight brush of the wrist/base of the palm against the rib of the instrument is helpful. This brush of hand is not continued as the student plays the third position passage. When shifting to fifth, the thumb lands in the curve of the neck as the landmark. When shifting back to first, the landmark is that the thumb barely feels the curve at the end of the neck. (#105)

One on One

The teacher – student relationship (1:1) was another topic of interest ($n=10$) when introducing shifting to violin/viola students. A few believed that a student should have individual attention from a teacher in order to effectively learn how to shift.

Individual teacher/student interaction #037)

I feel that until the student can shift with position and pitch accuracy, all shifting exercises, etc., (should) be done in front of the teacher. (#092)

One on one is obviously most beneficial. (HC#19a)

Others note that if a student is having difficulty with a particular technical aspect of shifting, and/or pitch accuracy is not good, he/she should seek the expertise of their string teacher:

Personal, one on one, demonstration with correct pitch presented by teacher. (#156)

Teacher as model (#093)

Teacher demonstration (#120)

Question 36: What are the Advantages of Introducing Shifting

Early in a Violinist's/Violist's Curriculum?

Ten topics concerned whether or not there were advantages associated with the early introduction of shifting. They include: (a) being flexible, relaxed, freedom of movement of the left hand; (b) a lack of fear; (c) comprehension of the shifting process; (d) avoiding “set in concrete” left hand; (e) no advantages to introducing shifting early; (f) ear training, (g) opportunities for advanced literature; (h) left hand position; (i) attitudes about learning shifting, and (j) proper instrument position (see Figure 7, p. 112).

Freedom of Movement

Respondents suggested that introducing shifting early in a violinist's/violist's curriculum would promote freedom of movement and flexibility in the left hand/arm ($n=83$):

Freedom of arm motion is learned from the start. There is less tension if the freedom is learned early. (#035)

Letting students know their left hand will need to move; promotes freedom of movement even in 1st position and helps with establishing good elbow alignment. (#101)

Suppleness and flexibility of left hand (no locking thumb) intuitively encouraged as a constant in violin playing. (#172)

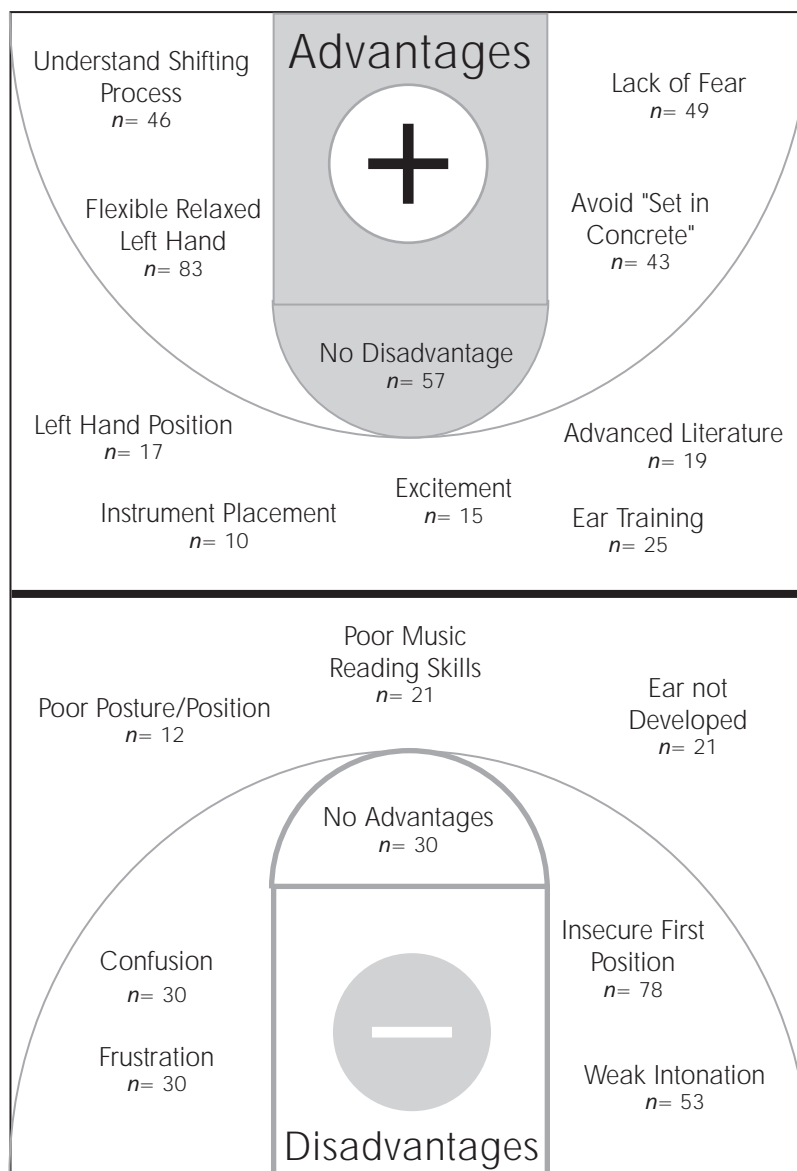


Figure 7: Advantages & Disadvantages
When Introducing Shifting Early

According to some, if a violinist/violist is comfortable moving around the fingerboard, the concept of shifting becomes a natural part of playing on their instrument:

If he/she is comfortable in first position, it shows that you can use more of the fingerboard and play some parts easier in 3rd than in 1st position. (#128)

Freedom of left hand – awareness of the fingerboard (#036)

Fingerboard geography refers to particular points on the fingerboard (low, middle, and high positions). It also refers to exact distances between shifts and the relationship between half steps and whole steps. Some indicate this would lead the student to become comfortable in all positions, not just first position:

To encourage mobility, i.e. elbow swing, which of course emanates from the shoulder joint; to further the knowledge of fingerboard geography by analyzing exact distance of shift, and defining a two whole-step shift as opposed to a one and ½ step shift. (#069)

Frees up the left hand in general; helps students to be more flexible; helps with fingerboard geography. (#046)

Geographic knowledge and confidence is essential in becoming a versatile string player, fluid hand motion developed early leads to SUCH more relaxed playing later on. (#048)

Lack of Fear

Many of the respondents stated that violin/viola students should not fear shifting. They agreed that it is important to introduce shifting early in order for the student to have less associations of apprehension in regard to shifting ($n=49$):

Gets them used to the idea of moving the hand before the fear factor sets in. (#190)

Eliminates fear. (#030)

Students do not develop a “fear of heights.” (#019)

It keeps the “fear factor” of high positions at bay. (#072)

They will be more confident with it – it will feel more natural and a lot less “scary” when they see all the ledger lines. (#053)

When introduced early there is no fear of shifting – it’s just another fun thing to do. (#186)

Students may also develop a mental block regarding learning to shift, according to respondents. After playing in first position exclusively, students may not be willing to try moving the left hand to other positions on the fingerboard.

It would help students overcome that “hill” when they get to that point in their curriculum. (#057)

Not setting up a psychological block about “up there.” (#002)

According to respondents, if shifting is taught as a natural part of playing the instrument and not as something that is “hard,” students might avoid developing fear concerning shifting:

Why be scared of playing someplace new on the instrument? That’s what happens when kids are feeling like they have to stick to 1st position all the time. I feel the same way about introducing 4th finger, too. What’s the big deal? It’s just another finger. (#064)

Student not intimidated by thought that shifting is a major hurdle to overcome. Perceived that it is just a part of playing the instrument and utilizing a greater range of notes. (HC#19)

Comprehension of Shifting

Understanding how to shift and why shifting is a necessary part of playing the violin/viola is important, according to respondents. They indicate that if students are taught the concepts of shifting early, they will realize that the left

hand will be mobile and naturally move from one position to another on the fingerboard ($n=46$):

Knowing right away that there are worlds above first position. (#025)

An appreciation for what higher level techniques there are to be mastered on the (violin/viola) instrument. (#006)

Respondents also mentioned that by introducing shifting early in violinists'/violists' curriculum, they will not think of it as a difficult left hand technique, but rather another facet of playing the violin/viola:

A teacher should open the entire fingerboard to a pupil as early as possible to avoid limitations. (#028)

Shifting becomes part of the everyday practice of playing, not something "new" and "hard." (#197)

The main advantage is that the earlier shifting is introduced the less difficulty younger students have in understanding and playing shifts from one position to another. (#015)

If shifting is taught early, students learn that a passage can have multiple fingering possibilities, not just one possibility. According to respondents, if a student stays in first position too long without being introduced to the rest of the fingerboard, they will be less likely to consider other fingerings for particular notes:

Too often I've found that students are dead set that a certain note is played with a first finger or a third finger. They don't think about the possibility of playing in another position, even if they've already learned that position. It's a mind block of always being in first position. (#127)

Introduce early the concept that the same note can be played with different fingers in different circumstances. (#024)

We hope to keep them flexible, able to accept any new idea and not resistant to new skills. We must avoid the first position as an "end all crutch." (#176)

Set in Concrete

According to respondents ($n=43$), violin/viola students that remain in first position exclusively may be prone to allowing their left hand to become “set in concrete.” This term refers to a left hand that is frozen in first position, and is usually accompanied by tension. Some believe that by introducing shifting early, it may be possible to avoid this problem:

Avoiding that “set in stone” left hand. (#007)

Oh please! If you don’t want that left hand to lock up, you **MUST** do this.” (#011)

Keeps the student from getting too rooted in first position. (#020)

Prevents “locking in” to first position. (#029)

It keeps the students from settling into a “permanent” place in first position with the left hand. (#043)

I think I would agree that it helps keep the student from becoming “married” to 1st position. (#083)

Respondents also indicated that a relaxed thumb that moves with the fingers as well as the arm is important:

The do not get “stuck” in first position. The thumb begins to move right away (#146)

Students are not “stuck” in one position; feel more comfortable (at ease) with the instrument, they know the importance of the thumb and hand moving as one. (HC#39)

Relaxed left hand – no squeezed thumb (#037)

No Advantages

Some respondents felt that introducing shifting early to violinists/violists was not a good idea ($n=30$). They contended that certain factors need to be in place, such as

proper left hand position in first position, good intonation, correct instrument position, and proper playing techniques:

First position and its extensions must be secure, both in hand position and intonation. (#021)

I would think one should be careful and make sure that the technique is well established first IN POSITION. (#079)

I do not believe shifting should be taught until a fundamental understanding of first position and proper playing technique is completely understood. (#163)

Other respondents mentioned that pre-shifting exercises would be helpful to keep the left hand loose, but introducing shifting too early might cause bad habits to form:

It's OK to start sliding around, but most students in the early stages don't do things carefully, so you may do more harm than good (#040).

I'm really not a believer in super early shifting. I suppose the advantages are to keep the left hand loose and moving, but I can accomplish that with pre-shifting exercises and careful work on posture. I don't want my students shifting until their basic posture/technique is solidly set and their ears are working well enough that they'll be able to hear whether or not they are in tune in new positions. (#084)

Introducing it too early (before good form and intonation in 1st position are secure) causes many later problems. (#094)

The question refers to introducing shifting early in a violinist's/violist's curriculum. Some respondents ($n=10$) suggested that pre-shifting exercises would be fine early, but the actual process of shifting should wait until certain technical requirements, ear training, and correct posture and position are in place:

I think things like glissandos are ok in the first year. It helps the student become comfortable with the instrument, lets them explore the variety of sounds they can make, and helps to loosen the hand. The teacher must be careful, however, not to introduce something

like that until the child has a firm grasp of first position and appropriate hand position and placement. (#117)

Other respondents commented that each student is unique, with some ready to learn shifting, others not. Determining when to introduce shifting should be decided according to each student's ability level, which is an assessment best made by the teacher:

I teach shifting when the student is ready. Meaning, their hand position and intonation are secure so they can start moving around. So for some students, I'll introduce it fairly early, and for others I will wait. (HC#37)

According to a few respondents, shifting might not be introduced due to confusion. Introducing shifting to string students playing various string instruments may be confusing in the classroom:

I have used two different method books – one where the students have to shift in the beginning and one where they do not shift until the second book, and beginners at the 6th grade level can shift early. The problem with introducing the concept this early is MASS confusion. I prefer to wait until the second year. (#171)

Ear Training

Training the ear to hear the note to which one wants to shift is essential according to respondents. If students can mentally hear the note before they actually play it on the fingerboard, intonation will be more accurate and there will be more awareness of where the note is located on the violin/viola fingerboard ($n=25$).

To shift accurately demands an excellent ear for intonation. (#005)

Teach them to hear (#026).

They listen to pitches. (HC#21)

It helps with their ear training and with their sense of independence. (#074)

According to respondents, it is important for violin/viola students to be able to hear half step and whole step relationships, whether in first position or in higher positions. Shifting involves not only the process of moving from one note to another, but also involves the intervallic relationship between the two notes. The students should rely on targeting the actual pitch, as opposed to simply relying on the fingerings. Further, when shifting to positions other than first position, a single note might have multiple fingering choice:.

Forces student to think about half steps and whole steps, pitch, and note names instead of fingerings. (#055)

Advantages might be better intonation and a better listening ear as well as an ease in locating the third position in difficult music as they get older. (#063)

Guiding ear to hear the note before you play. (#104)

Some respondents suggested that intonation must not suffer as a result of shifting early. Therefore, learning to shift should wait until intonation is solidified in first position:

It is important to have the student comfortable at each step, but letting his/her to learn to shift (without sacrificing intonation) helps keep them loose and interested. (#111)

Shifting should be introduced when 1st position intonation is secure. That point varies according to the amount of practicing the student does. (#138)

Using finger tapes while locating a note is one way of helping introduce shifting to beginning violin/viola students. Some respondents commented that the ear should guide the student to the correct note on the fingerboard, not just a finger tape:

The students must rely on their ears more than a visual spot such as tape to stay in tune, and they won't relate a specific note on a staff to a finger number. (#160)

Some respondents ($n=10$) also suggested that correct instrument placement is essential when learning to shift. If correct posture, instrument position, and listening skills are working together, the student will have a higher success rate when experiencing the process of shifting:

When shifting is done well the entire viola set up has to be well organized. Doing it early emphasizes that and also puts a premium on ear training. (#056)

Advanced Literature

According to some respondents ($n=19$), once a student becomes comfortable with shifting there is a greater possibility that the student will be ready for advanced literature which requires shifting, as well as other advanced techniques:

The earlier a student begins shifting, the more comfortable they will be in upper positions and therefore will be more open to more difficult repertoire. (#020)

Tone and literature (#034)

Facility on the fingerboard – quicker technical development (#067)

Other respondents commented that by introducing shifting early, students should develop a solid foundation from which to build upon as they mature musically and technically:

It gives you time to give them a solid base for when they have difficult shifting patterns in the repertoire. (#151)

Obviously some students will attain greater prowess in a shorter time. This is an advantage!! (#162)

Sets the foundation for work to come. (HC#7)

Builds a more flexible technique for a variety of musical situations (#124).

Some respondents suggested that students are able to move from beginning method books to standard literature sooner. Literature for violinists/violists, such as elementary concertos, typically included shifting to third position. There will also be a greater variety of other literature available to violin/viola students, including high school and youth orchestra repertoire:

Ability to move to more complex literature sooner and without the perception of it being “difficult.” (#075)

More music available for them to play. (#091)

Preparation for High School orchestra. (#114)

Correct Left Hand Position

According to some respondents ($n=17$), students must have a correct left hand position in order to be successful at learning to shift. The left hand should be free from tension and must maintain proper balance when holding the violin/viola:

The earlier all these concepts are taught the freer the left hand becomes and the better the instrument hold becomes. (HC#4)

Their left hand is free and not clamped on to the instrument (#109)

Freedom from being locked in a position – emphasis on balance of the instrument (#137)

Release of LH tension – freedom of movement – instrument hold/posture (#154)

The left hand forms a particular shape, which is referred to as a hand frame. According to respondents, the left hand frame is an important aspect of learning to play the violin/viola, whether in first position or in other positions. The shape (posture) of the

left hand is important when considering flexibility of finger movement and establishing a natural sense of playing the violin/viola with comfort:

Flexibility of arm motion, keeping hand shape steady and relaxed.
For later, vibrato easier introduced (HC#10)

When a student has the proper hand position, the 4th finger can be successfully introduced to violin/viola students. Some indicate that other left hand techniques can be incorporated into the student's curriculum as well:

Better left hand position which leads to better fourth finger and an easier time learning vibrato. (#004)

Reinforcing the need for a curved 4th (finger) hand shape with a relaxed wrist in the new position as well as the old. (#022)

Attitudes

According to some respondents, a teacher's attitude while introducing shifting to violin/viola students can have a great impact on the entire learning process. If the teacher portrays an attitude of excitement and a new adventure regarding shifting, students will be more likely to have a positive attitude as well. If a teacher refers to shifting as "hard" or "difficult," the student might develop a fear of shifting even before experiencing the shifting process ($n=15$).

EXCITEMENT OF TEACHING NEW AND HIGH NOTES (#008)

Get them used to the idea, ie. their mind is not set that shifting is hard. (#095)

No concept that shifting is an "advanced" technique. (#119)

Some respondents state that gaining confidence while learning to shift is important:

More confidence when sight reading student orchestra pieces that involve higher position work. (#121)

Beginners (sixth graders) think everything is easy and fun. Shifting by late in sixth grade or early in seventh is important to help students have more confidence as they develop. (#118)

Creates a sense of accomplishment. (#199)

Attitude they can DO IT! (HC#17)

Question 37: What are the Disadvantages of Introducing Shifting

Early in a Violinist's/Violist's Curriculum?

Respondents were asked to indicate any perceived disadvantages when introducing shifting early in a violinist's/violist's curriculum. Seven topics emerged as the most frequent responses to this open-ended question. They included: (a) first position was not secure enough to introduce shifting early, (b) concern about the possibility of weak intonation and a poorly developed ear, (c) a response of 'none', meaning there were no disadvantages when introducing shifting early, (d) when introducing shifting early, students' expressed frustration and a feeling of being overwhelmed, (e) confusion when learning to shift early, (f) poor music reading and note name identification, and (g) poor posture and position when holding the violin/viola (see Figure 7, p. 112).

First Position Not Secure

The majority of violin/viola students begin playing in first position. As students progress in their playing ability, first position becomes a place of security. Respondents ($n=78$) suggested that the left hand should feel comfortable in first position, and the hand shape (frame) should be able to move from string to string while remaining in first position:

May destabilize hand shape in certain individuals. (#002)

Sometimes the security in first position isn't fully developed. If a student can't consistently find the notes in first position, it's sometimes too cumbersome to shift. (#017)

If the teacher is not teaching properly, the student will not have a good framework in his hand (HC#11)

Without a solid "feel" of the first position, higher positions can be very troubling. After all, many shifts go back to the first position. (#077)

Respondents also mentioned that by not establishing a firm foundation in first position, other basic techniques necessary for beginning violin/viola development may be compromised.

It would detract from establishing a solid grasp of basic left hand techniques often learned in first position. It would put more emphasis on and require almost more attention to some more basic and essential techniques that beginners NEED. (#057)

I prefer students to be comfortable with first position before introducing third position. I only introduce shifting once students have demonstrated good playing position of the left hand and have appropriate bow control. I would prefer to wait to introduce difficult concepts until students are successful with the basics. (#079)

According to respondents, another important aspect of first position is the need for "muscle memory." Not only does the left hand form an important framework, the left arm and shoulder work together with the left hand to assist in establishing first position:

There is much to risk in the way of proper left hand positioning and development as well as developing concrete muscle memories for first position that are necessary in the early stages of string playing (#163)

I prefer establishing pitch in first position, establishing muscle memory, before having to readjust to upper position distances. (#058)

Change of losing the framework of the hand (#036)

Others indicate that without a solid grasp of first position, bad habits might creep into a violinist's/violist's playing which might be difficult to correct.

First position not solid; fishing for notes; learning to shift incorrectly early will reinforce mistakes; hard to fix that. (HC#27)

Some students tense up as they learn shifting and you have to undo that tension as you go along (#050)

Ear Not Developed/Weak Intonation

A necessary skill for playing the violin/viola is good intonation. Since the violin/viola only has four available pitches when using open strings (G, D, A, and E on the violin and A, D, G, and C on viola), the player positions the fingers on a string over the fingerboard in a particular way and in a certain place before notes other than the open strings can occur. Along with placing the finger on the string to produce a pitch, the ear should guide the violinist/violist to make sure the placement of the finger and hand is correct. Respondents ($n=74$) commented that a developed ear and good intonation work together (see Figure 7, p. 112).

Some state that if violin/viola students are not secure with how a particular note should sound, they might tend to wander up and down the fingerboard trying to find the pitch:

If a student's pitch is weak, they could wander even more; some may be overwhelmed with uncertainty as to where to play notes. (#025)

Students with less natural ability, especially in pitch recognition, may have more difficulty learning shifting early. For these students, pitch may be compromised. (#035)

Some respondents cautioned that if shifting is introduced prematurely, before the left hand shape is secure in first position, poor intonation may result.

In my experience students who have learned shifting too early rarely play well in tune, in any position. (#040)

The third position should definitely not be introduced early if the student is not secure in playing first position – it will cause bad intonation. (#063)

Teaching students to play out of tune (#061)

If the student does not have some good rudimentary aural skills, and if the hand frame is not yet well established, then teaching shifting could be very problematic. (#065)

Other respondents suggested that if a student does not have a developed ear and cannot play properly in first position, the student may experience poor intonation in other positions as well, namely third position. They infer that playing out of tune repeatedly reinforces bad intonation:

If the ear is not well developed, things get bad really fast (#056)

If a student does not have a good ear and is not successful in first position, the student will not play in tune in third position. (#073)

If a kid has a bad ear, they are going to sound even worse in the upper positions. (#074)

If the student does lots of playing out of tune, he learns to hear out of tune, and that's difficult to correct later. (#084)

They may not have the first position solidly in tune causing everything to be out of tune. (#098)

If the first position is not set, students will not have the ear for the notes. If they cannot hear that they are out of tune, shifting can be DEADLY (#127)

No Disadvantages

The third topic among respondents ($n=57$) was that there were no disadvantages when introducing shifting early in a violinist/violist curriculum. While many of the respondents answered this question with a “None” response, others included certain stipulations that would need to be in place in order to be certain that there would be no disadvantages when introducing shifting early (see Figure 7, p. 112).

One important stipulation was the importance of the string teacher having knowledge of how to introduce shifting to violin/viola students:

None, if students are properly instructed, supervised, and assessed. (#119)

None, as long as it's done well. (#053)

Another stipulation was to consider the academic giftedness of each student.

None as long as the student is bright. (#124)

According to some respondents, introducing shifting early using a step-by-step approach that did not move too quickly as to negatively affect the set-up of the left hand while in first position was a stipulation:

None, if it is done carefully and not too much at one time to interfere with the hand set up in first position. (#161)

Frustration/Overwhelmed

According to some respondents ($n=30$), introducing shifting too soon can have a detrimental affect on a violin/viola student. There are many technical aspects associated with shifting, and when combined with basic techniques such as posture, instrument position, correct left hand placement, bowing techniques, and music reading, a beginning violin/viola student might experience a feeling of being overwhelmed. In addition, the

student's cognitive abilities might not yet be developed enough to process the intricacies of learning to shift:

Too much too soon can scare students away from playing the violin or the viola. They might feel overwhelmed by all the techniques that are being pushed on them at the beginning when they are struggling with learning the basic playing techniques. (#012)

In a group situation, the slower learners may be overwhelmed by too many concepts at one time, but this just highlights the necessity of allowing students to progress at their own pace. (#029)

Too many things for the student to think about. Too much information to take in at once. They feel overwhelmed. (#149)

Beginning violin/viola students need parameters when learning new material.

According to some respondents, offering multiple options to a borderline student can have a negative affect. If students learn to shift to a position other than first position, they have a choice of multiple fingerings and positions when playing a particular passage:

The student may be overwhelmed with the amount of new material. Too many options on how to play any given material can frustrate a borderline student. (#071)

Could become a "roadblock" – frustrating. (#102)

Other respondents expressed concern regarding the lack of retention with string students due to the potential for failures while learning to shift:

In a class situation, some failure or difficulty may discourage an under achieving student from continuing. (#162)

An additional concern by respondents was whether or not a beginning violin/viola student could handle the physical demands of shifting. A student's left arm and hand

might not be sufficiently physically developed, whether in regard to the muscles used when shifting, or in regard to finger dexterity:

It may be physically awkward and lead to some frustration on the player's end (#014)

Confusion

When teaching in a heterogeneous classroom setting, a string teacher has to handle teaching multiple stringed instruments as well as various levels of playing ability. According to respondents ($n=30$), a student can become confused while learning in this type of classroom environment:

In larger classes, some students are going to be more ready than others to begin shifting. Finding the time to introduce shifting without overly confusing less-ready students is very difficult). (#020)

Without a firm foundation in first position, violin/viola students might be confused when trying to learn shifting:

It can be confusing to the students who are not SOLID in their knowledge of first position. (#043)

It has a high possibility of confusing the student and of shaking whatever elementary foundation of first position they had to begin with. If they lose that foundation, it will consume too much time trying to review and re-teach it, and it will also discourage the student. (#047)

If they are asked to shift to specific locations before they have a foundation of understanding in 1st position, they become confused. (#087)

Success with shifting, as well as with other technical aspects of violin/viola playing, depends on quantity and quality of practice. Without consistent, effective practice, the student might experience difficulty and/or outright failure in learning to shift.

Less bright students, or those who practice less, can get very confused. (#094)

Another concern expressed by respondents was the students' knowledge of where specific pitches are located on the fingerboard of the violin/viola, whether in first position or in other positions. Pre-shifting exercises can be used to locate specific places on the fingerboard, thereby teaching the students the "fingerboard geography" of their particular instrument.

May cause confusion if introduced before student is familiar with the location of pitches on the fingerboard. HC#22)

Can cause confusion ((#178)

Music Reading Skills

When introducing shifting early to beginning violin/viola students, other problems can arise. For example, when playing a note in first position, there are certain fingerings that are available to a student. When other positions are introduced, the student has multiple choices of fingerings. Put another way, students relate the position of how notes appear on a musical staff to their specific place on the fingerboard in first position. The note location on the fingerboard changes when using positions other than first position. According to some respondents ($n=21$), this scenario may be confusing for a beginning violin/viola student:

Confusion in note reading and fingerings. (#082)

If actual shifting (like reading from printed music) is introduced before the student is secure with pitch names in one position, it could be confusing. (#101)

Another important aspect of music reading is the relationship between whole steps and half steps. As one respondent suggested, without understanding the concept of

intervallic relationships between written notes, a student might have difficulty learning to shift.

It doesn't work well if the student doesn't yet have a mental picture of where notes can be found on the fingerboard, or an awareness of whole steps and half steps. (#112)

Spacing the fingers might be difficult – ear training not advanced enough. (#200)

A final concern regarding music reading is the issue of exposing a student to a larger quantity of notes to read in printed music once other positions have been introduced, compared to the quantity encountered when the student stays exclusively in first position.

Frustration to students who might feel overwhelmed with too many notes to remember. (#177)

Too much information to take in at once. (#160)

They are not comfortable and they are confused by new material (HC#41)

Position – Posture

According to some respondents ($n=12$), proper instrument/body position is crucial when learning to play the violin/viola. Without the correct instrument hold, the student will not be able to move freely with the kinesthetic motion of the left arm in order to learn to shift successfully:

Poor hand position may result if the student is not able to hold the instrument on the shoulder, something which takes my beginners a long time to perfect. We spend most of the first year of instruction on the lookout for “waitress/waiter wrist.” (#055)

In large classes it is difficult to make sure the student can hold the instrument with the head, not a problem with cellists and basses. Many student buy inexpensive shoulder rests and the cheaper instruments have very heavy scrolls, again hard to hold. (#059)

Instrument hold and fatigue. (HC#37)

Related to the above, posture is also very important when being introduced to shifting. If too much information is given to a violin/viola student to process at once, the basic fundamentals, such as posture, might suffer:

Presenting too much material too soon can lead to neglect of fundamental posture set-up and basic technique. (#084)

Introducing shifting in the beginning will make all the basic techniques suffer, such as posture. . . (#076)

Question 38: What are Violinists/Violists Learning in the Classroom

While Cellists/Bassists Learn to Shift?

Eight topics emerged from the open-ended question regarding what instruction violinists/violists received during a string class while cellists/bassists learned to shift (see Figure 8, p. 134). The most frequent answer to the question was “non-applicable” ($n=54$). Many of the respondents do not teach in a heterogeneous classroom setting. Some of the respondents taught public/private school, but the class only contained violin and viola students. Other respondents taught private lessons exclusively, either in a collegiate setting and/or private studio setting.

The second topic mentioned by respondents included teaching other techniques ($n=27$) such as bowing styles, musicianship, left hand pitch manipulation, improvising, writing notes, chromatic alteration strategies, dynamics, key signatures, more advanced phrasing, rhythm exercises, bow distribution, *detaché*, bow arm, and other techniques.

The third topic that emerged from the data was introducing 4th finger ($n=27$) to violin/viola students. The fourth topic was teaching shifting ($n=24$) followed by learning the same notes that cellists/bassists learn in various positions (except that only

violins/violas stay in first position) (topic 5, $n=15$). The sixth topic included pre-shifting exercises ($n=13$), and the final two topics were intonation skills ($n=12$) and finger patterns ($n=10$).

This question also had responses that were quite unusual, seemingly directed toward the researcher. Some of these responses included:

Ridiculous question! (#162)

This is a scary question! (#039)

Question too variable and vague (#068)

Let's hope they are learning something! (#112)

Non-Applicable

The most frequent response to the question regarding what instruction do violinists/violists receive while cellists/bassists learn to shift was “NA” (non-applicable). Some of the respondents do not teach in a classroom with cellists and bassists, and other respondents teach only one violinist/violist in a private studio setting. Some of the K-12 teachers do not teach heterogeneous beginning string classes. Others have a pull-out program that allows a string teacher to see each violin/viola student individually for approximately 10 minutes each week ($n=54$).

A respondent stated: “They (violinists/violists) should not be in the same classroom for that lesson to begin with.” However, for some violinists/violists, this might be the only opportunity for them to receive instruction pertaining to shifting (unless they have private lessons outside of the classroom).

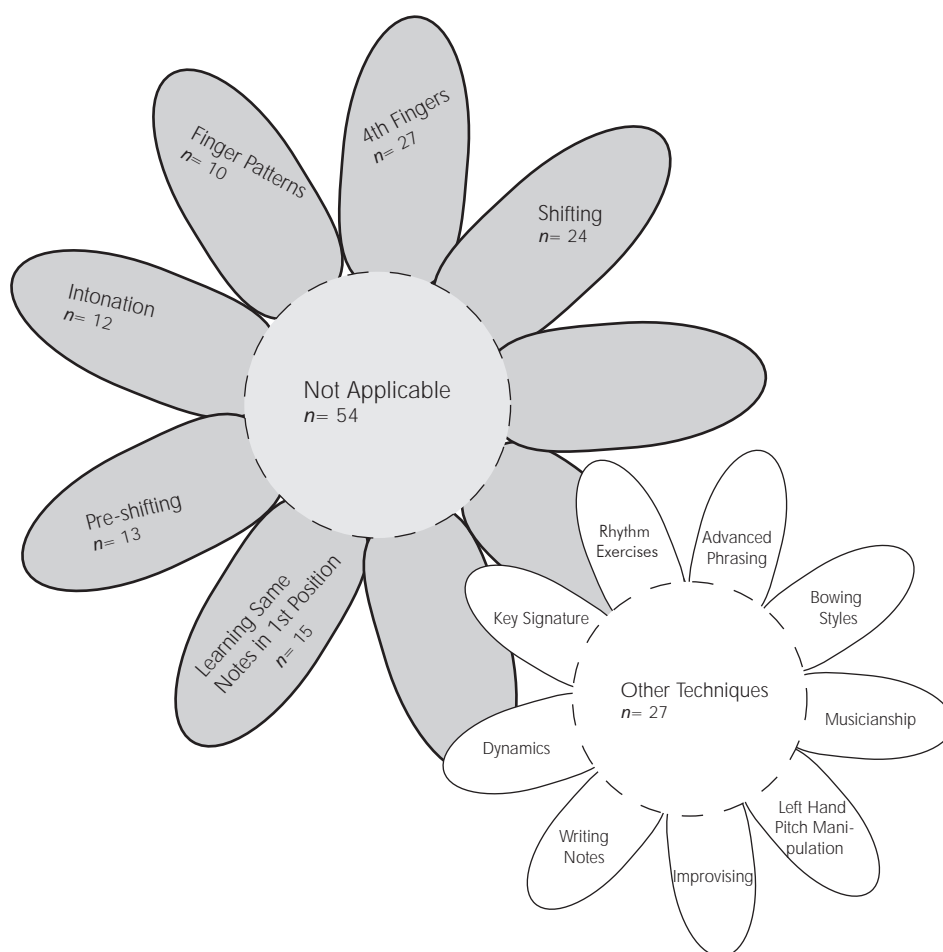


Figure 8: What are Violinists/Violists Learning in the Classroom

Other Techniques

Some respondents ($n=27$) mentioned that there are many techniques that violinists/violists can learn while cellists/bassists are learning to shift:

Bowing styles, musicianship, dynamics, and other techniques (#012).

Repetition of basic fundamentals such as right hand bowing movements (#034).

Sometimes they have more elaborate bowing problems (#142).

Detaché bow arm, relaxed and effortless (#199).

Other techniques such as learning key signatures, reading and writing music, and improvising were also important to learn, according to respondents.

They are practicing a phrase or improvising or writing notes; key signatures (#123)

Knowing the relationship of fingers to each other based on the key signatures (#059b)

Key signatures, pitch, hand position, bowing variations (#058).

Various other elements, such as music theory, pre-vibrato exercises, and rhythms patterns are also mentioned by the respondents as important instructional materials that should be taught to violin/viola students while cellists/bassists are learning to shift.

Rhythms, rudimentary vibrato (#107).

Preparatory vibrato exercises, other technique building exercises without the bow or silent practice (#174).

Generally they have a theory assignment or they are working on long bows to hold out notes for the low strings (#179).

Fourth Finger

According to some respondents ($n=27$), the 4th finger is commonly taught while cellists/bassists learn to shift, as dictated by the curriculum provided by particular method books:

Fourth finger if you look at the textbooks only. I always modify (#011).

Fourth finger in method books. I used Essential Elements (when I had beginners). About halfway through the method book, while the fourth finger was being reinforced in a piece and when to use if for violin/viola, I rewrote fingerings into cello/bass books to introduce 2nd position for cellos, 3rd position on the D and A strings for the basses (#071).

In my beginning classes, violins and violas learn to use 4th finger in first position while cellos and basses shift (#101).

Great use of the fourth finger is a must! (#176)

Shifting

Some respondents ($n=24$) mentioned that violinists/violists should learn to shift while cellists/bassists learn to shift:

Often they are shifting as well (#016).

Shifting to the same notes that basses and cellos are shifting to [sic] (#098).

Should be learning to shift, too (#157).

In Muller-Rusch, they shift right along with the cellists and bassists (HC#16).

Another respondent mentioned that violinists/violists should learn to shift with cellists, but after basses.

Basses should learn to shift in first weeks as part of the process of learning D major scale; all other instruments are likewise learning their notes of D major scale. Basses will continue to shift as all

others learn new notes. Then, violins, violas, and cellos can learn to shift at the same time (cellos learn extension first, and conceivably can learn 4th slightly prior to violin/violas, but not necessarily) (#168).

Some respondents mentioned what they would prefer to have happen in the classroom, yet what actually happened was practically no instruction for violinists/violists while cellists/basses were learning to shift.

Probably not much usually. It would be great to have them try extensions and shifting drills right along with the lower strings. Or get them to try playing in different octaves by ear even if they don't know the notes yet. (#132)

The word and concept of shifting and that basses are special because they have to shift so early. (HC#29)

Probably nothing much. Each instrument has a different "feel" and should be studied on its own. (#077)

Learning Same Notes

Some respondents ($n=15$) commented that violinists/violists should learn the same notes as the cellists/bassists, but play them in first position only. Also, violinists/violists could assist by providing accurate pitches in first position while the cellists/bassists tried to find the same notes in positions other than first position:

They learn the same new notes, but usually don't have to shift in order to play them. This can also work the other way around, but due to the size of the instrument, cellists/bassists end up learning a touch of shifting first. (#006)

They are learning the same notes but are in first position. (#073)

They are helping the cellists and bassists with their notes by playing them in first position as a reference note. (#091)

Some suggested that while violinists/violists are playing the same notes in first position, the teacher could introduce the concepts of shifting and ask students to observe and listen as the cellists/bassists practice shifting:

Reviewing pitches in positions that they already know, (and) the concept that there are notes outside of first position. (HC#4)

Continuing to play their 1st position notes in tune and learning that THEY (violinist/violists) will soon be learning to do the same thing - they should pay attention! (#102)

Pre-Shifting Exercises

Various exercises using pre-shifting ideas were suggested by some respondents ($n=13$) in the open-ended data. Isolating the left hand motion of moving up and down the fingerboard was mentioned as a pre-shifting exercise:

Practicing shifting LH only while working with cellos/basses. (#015)

All students can benefit from learning the process of gliding on the string to release tension and move along the fingerboard, therefore all students can participate to a degree. (#113)

Sometimes they do pre-shifting exercises or limited beginning shifting. (#169)

Other pre-shifting exercises include playing harmonics along various points on the fingerboard as well as a game called “sirens.”

Good question! They should be practicing shifting as well or at least “sirens”. (#177)

Pre-vibrato; shadow-shift (not actually placing fingers on specific notes). They can also play the harmonic series up and down the string to get ready to shift. (HC#39)

Intonation

Good intonation is, of course, an important aspect of playing; therefore, listening skills should be incorporated into a beginning string student's curriculum (Klotman, 1988; Rolland, 2000, Zweig, 2004) Improving intonation in first position is useful for violinists/violists according to a few respondents ($n=12$):

Refining intonation and framing the left hand. Serving as models. (#070)

Listen and watch, very valuable. (HC#32)

Developing better intonation. (#114)

Better intonation in first position. (#143)

Finger Patterns

Knowing the intervallic relationship between notes and the corresponding fingerings is important, especially the half step and whole step relationships. Learning finger patterns while cellists/bassists are learning to shift was recommended by a few respondents ($n=10$):

Use of all the fingers especially the fourth finger and knowing the relationship of fingers to each other. . . (059a)

The different formations of the left hand into intervals of whole and half steps. (#164)

In the method we use (Essential Elements) they are reviewing interval fundamentals. (#129)

Violinists/violists also learn finger patterns that include extensions and contractions of the left hand fingers. For example, low 2 refers to moving the 2nd finger down a half step towards the 1st finger. The half step relationship is between the first and second finger while playing a low 2, and the first and second

fingers actually touch each other. A low 1 refers to the 1st finger moving back a half step, and this position actually becomes half position. Some respondents note that the violinist/violist can extend the fingers up or down, but continue to remain in first position:

They are practicing extensions of the 1st and 2nd fingers. Everyone is working on the same scale or piece, just with different fingerings. (#181)

Low first fingers and high third fingers. (#100)

Typically they are learning how to deal with the high/low 2 differentiation which can be difficult. (#163)

New finger patterns, ex: low 2, high 3, low 4, etc. that cellists/bassists don't use. (HC#28)

Question 39: What factors Enable or Constrain Your Teaching of Shifting?

Four topics emerged that enabled respondents when teaching shifting to violin/viola students. They included: (a) a student's ability and talent ($n=22$), (b) student attitudes such as cooperation, interest, eager, motivation, and patience regarding learning to shift ($n=18$), (c) one-on-one relationship with the teacher and student in a private studio setting when learning to shift ($n=13$), (d) instrument set-up and proper position when playing the violin/viola during shifting practice ($n=11$) (see Figure 9, p. 141).

In comparison, there were more responses that constrained respondents' teaching of shifting to violin/viola students. Eight topics emerged from the data given by respondents. They included: (a) time constraint ($n=38$), (b) large class size ($n=32$), (c) poor aural skills ($n=26$), (d) poor position set-up ($n=31$), (e) lack of practice ($n=13$), (f) a response of "NONE" ($n=12$), (g) poor training and lack of preparation at a feeder school ($n=12$), and (h) tension in the thumb, shoulder, and/or hand ($n=11$) (see Figure 9, p. 141).

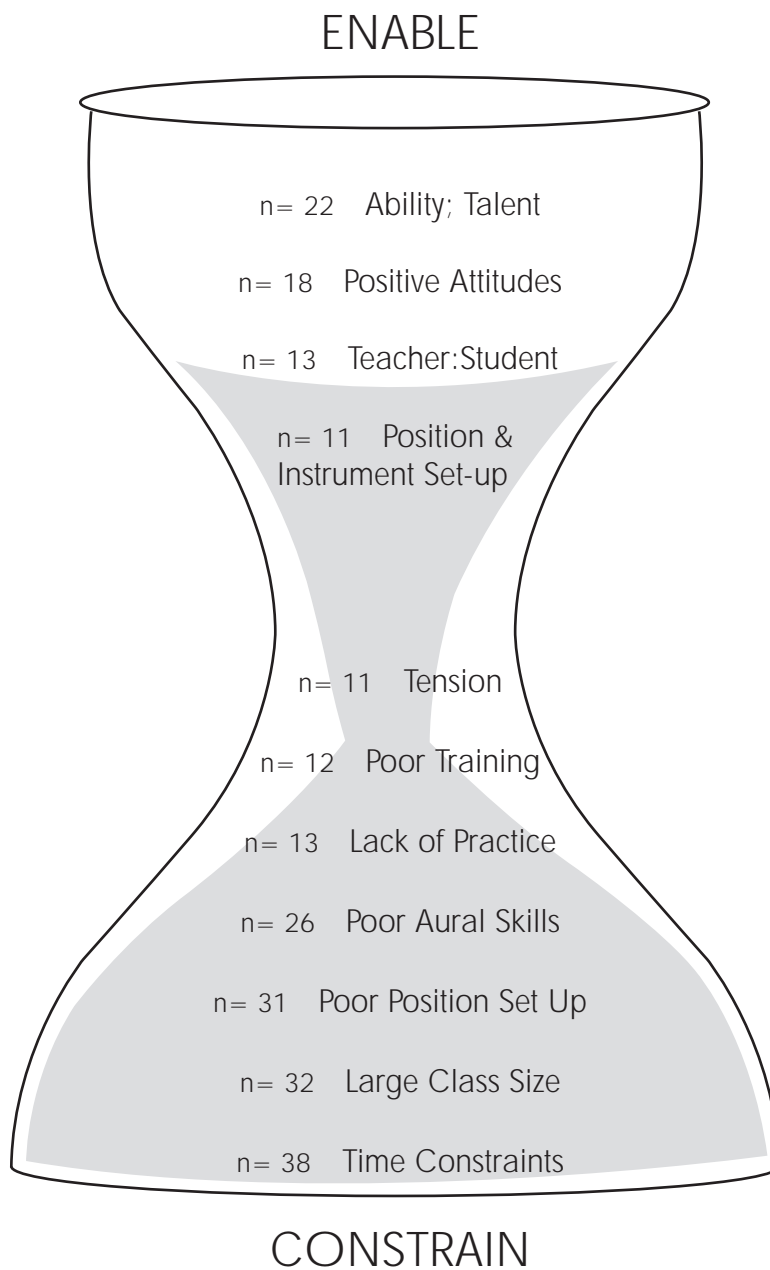


Figure 9: Factors Enable/Constraining Teaching of Shifting

Factors that Enable Teaching of Shifting

Student's Ability

According to some respondents ($n=22$), a student's ability level is important to consider when introducing shifting. Students that have correct left hand position and posture as well as overall comfort and relaxation while playing seem to grasp the concept of shifting more readily than students who struggle with the fundamental set-up techniques of the violin/viola:

Student maturity affects the rate that I push it. Students that are still struggling with basic left hand technique will be given smaller steps and more exercises in preparing. (#050)

The particular student's ability level is the key to deciding when to introduce shifting. (#163)

The kinesthetic motion of the large muscle groups is an important aspect of teaching shifting. One respondent notes that the large muscles need to be balanced and relaxed in order for a violin/viola student to succeed at learning to shift:

Shifting is most successful and successfully taught when all other factors of the large muscular structure are well balanced and free. Consequently, I don't deal with teaching or re-teaching shifting until the student has successfully incorporated and is relatively at ease with these large muscle issues. (#130)

Ability, combined with hard work, plays an important role when violin/viola students learn to shift. A respondent suggested that violin/viola students will encounter many technical challenges while playing their instruments, but with dedication and overall ability, students will be able to overcome difficulties that might arise:

Teaching shifting is integral to teaching string playing. Nothing constrains my teaching of shifting per se (or of any other integral function of violin playing). Shifting is simply one of the many technical hurdles over which a teacher must bring the student. Some students are more challenged by others by various physical

demands of instrumental technique. These require creative solutions to help them solve the problems. But any student who is willing to work seriously will solve basic physical problems like this. There are more advanced problems that sometimes test the underlying capability of even the hardest working student. (#172)

Attitudes

Students' attitudes regarding learning shifting were mentioned by some respondents ($n=18$) as an important factor when teaching shifting. Students' levels of cooperation, interest, eagerness, motivation, and patience were important considerations to teachers in this process.

Cooperation among students can be helpful, both in a private studio setting and in a classroom setting. Students learning from one another can be a positive, motivational aspect of learning successfully to play the violin/viola in general, as well as learning to shift:

As a private teacher, it is important to group my students so they can learn from and observe each other. I need them to see others succeeding. (#036)

Having students who know how to shift who can help their fellow classmates is a real plus. (#143)

My responsibility to teach shifting makes it necessary to motivate the student to want to learn to shift confidently. (#015)

Respondents also indicated that students who are eager and curious about learning to shift can assist the teacher:

Enabled by the student's curiosity. (#190)

Students eager to learn are interested in trying new things (#107).

According to some respondents ($n=13$), it is necessary for a teacher to work with an individual student in order to teach successfully and monitor shifting. In a large

classroom setting, teachers may not always be able to work with each student individually. Some public school string programs in the United States (identity unknown due to the anonymous survey responses) are able to pull students from class each week for 10-15 minute private lessons. During these private lesson times, shifting can be introduced to the violin/viola student:

Our orchestra program is set up so that I see each student one a week for a 10-minute private lesson. This really helps in teaching shifting. (#012)

Pull out lessons reinforce and refine the introduction of shifting. (#071)

Shifting is taught best one on one. It can also be taught in a homogeneous class, but with less effectiveness. (#021)

Another advantage of teaching shifting in a private, one on one setting was the ability to tailor instruction to meet the needs of the individual student. Each violin/viola student has a different playing ability level, and in the one on one setting the teacher has the flexibility to diagnose each student and provide the necessary instruction accordingly:

I mostly teach privately, so I'm able to teach shifting when each student is ready, and I can tailor the student's repertoire, etc., to his developing shifting abilities. (#084)

One on one studio time enables me to take the time to teach shifting properly. (#111)

Some classes progress at a homogenous rate. In others, some students are ready to shift long before others. Privately is much easier! (#180)

According to a few respondents ($n=11$), correct placement of the instrument as well as proper left hand skills are necessary when learning to shift. If a student has incorrect left hand techniques, learning to shift would be a difficult task:

A good left hand position with fingers over the fingerboard is very helpful. The wrist bent inward inhibits clean shifting. Clutching the violin with the left hand also is a negative. (HC#38)

Physical set up is relaxed and without tension. (#107b)

Factors that Constrain Teaching of Shifting

Time Constraints

Respondents ($n=58$) mentioned that due to limited class time, it was difficult to introduce shifting and cover other necessary instruction such as basic fundamental techniques and preparation for concerts. Also, some public/private schools meet with string students on a limited basis, which inherently yields a shortage of valuable instruction time:

How often I see the kids: At the elementary school, I see them once a week; at the middle school, I see them two or three times a week; at the high school I see them every day. I will have my beginning high school players shifting within 10 months from when they started. I really need things to be the opposite. It would be nice to see the little ones more often. (#150)

If I had more time with my students I would be able to start them earlier on shifting. (#051)

The primary limiting factor is time; only one 30 minute meeting per week for the first two years. (#113)

Time spent on preparation of contest and concert repertoire puts a limitation on availability of time for learning technical aspects of playing the violin/viola (such as learning to shift). On the other hand, respondents mentioned that if string students had a stronger technical foundation, they would be more likely to learn contest music more readily:

I used to feel constrained by the need to teach concert repertoire. Now I feel that it is far more important to teach technique and draw the concert repertoire from the new technique. (#064)

Students have orchestra music that is too hard for them, thus we spend valuable lesson time learning how to get through that music rather than sticking to basics. If students have a solid technique then they should be able to teach themselves most of their ensemble music. (HC#23)

Large Class Size

According to respondents ($n=32$), having a large string class made it difficult for teachers to introduce and monitor shifting. In a large heterogeneous string class, introducing shifting was even more difficult due to the combined string instrumentation plus large numbers in the class:

In public school, it was extremely difficult to give the hands-on help needed to each of my 300+ students. (#006)

Class sizes are often way too large to facilitate effective shifting lessons. (#043)

In a large string class, it is difficult to monitor every violin/viola student to see if shifting has been learned correctly. According to respondents, without close supervision by the string teacher, incorrect techniques can occur:

Large heterogeneous classes: sometimes it's not possible to check every student every day. If students miss a lesson, bad habits can go unchecked. (HC#46)

It is hard to teach shifting in large, mixed classes. Each student has individual problems that must be addressed if he/she is going to be successful. When the class is large, some problems have to be overlooked. (#087)

Another challenge when teaching a large, heterogeneous string class is being able to teach shifting effectively to a small group of students while keeping the rest of the class on task:

It also requires more individual attention when one risks losing the focus of a large, young class. (#123b)

Another respondent also mentioned that difficulties arose when string teachers were required to cover various positions and/or notes in a large, heterogeneous classroom setting.

Only the heterogeneous classroom situation, since the positions/notes don't always match up. Again, I appreciate All For Strings Book 3 for this reason (it's not the most fun book in the world, but the shifting ideas are great). (#177)

Poor Position/Posture

Correct position and posture are critical when learning to shift (Applebaum, 1960; Auer, 1980; Barrett, 1978; Bytovetzski, 1917; Dalton, 1988; Dolejsai, 1939; Green, 1966; Klotman, 1988; Whone, 1972). Some respondents ($n=31$) commented that a combination of incorrect position and the ensuing tension would constrain teaching of shifting:

The biggest enemy to shifting is tension in the thumb and shoulder. The misconception that there is a certain position that must be maintained by clamping down on the chin rest. Many students actually pull down on the instrument when they shift. Encouraging them to push up helps counteract this. William Primrose advocated it for viola, and it works well for violin too [sic] (#159)

Left and right arm tension. Poor instrument setup. Everything else can pretty much be adjusted [sic]. (#067)

Only if the student has learned to hold on to the neck of the instrument so tightly that they have trouble moving up in position [sic]. (#031)

Whether left thumb is relaxed; whether the student can easily hold violin without supporting it w/left hand [sic]. (#069)

Students who come to me with poor left hand positions and poor tone, but have played quite a while make it difficult to teach positions. They want to move to more advanced music, but are not in good technical shape to shift. ((HC#44)

The violin/viola student should be taught how to form a correct left hand frame, whether learning to play in first position or other positions (Carroll, 1997; Havas, 1968; Klotman, 1988; Rolland, 2000). The left hand frame is also referred to as the left hand “shape.”

If a student has a bad left hand set up – “shape” – then this hinders ability to shift well [sic]. (#148)

Poor Aural Skills

Respondents ($n=26$) report that students with poor aural skills would have difficulty playing in tune while in first position and while learning to shift:

Students who do not use their ears while practicing will spend the longest time to master shifting. (#076)

If the student cannot play in tune in 1st position, then it is a disaster. (#145)

“Tin ear” of student; lack of ear training. (#197)

Further, in a large, heterogeneous string class, a student might experience difficulty with intonation due to the fact that they cannot hear their own pitch relative to others’:

Individual intonation is a problem, especially in a group setting, because there are always students who just can’t find the pitch. They either overshoot or undershoot and it is frustrating for them and others (including the teacher). But we must continue to try. (#166)

Lack of Practice

Some respondents ($n=13$) mentioned that students’ lack of practice was a constraining factor when trying to teach shifting. If violin/viola students did not spend adequate time practicing assigned shifting exercises/etudes/scales, learning to shift was more difficult.

The only significant constraint is established bad habits and/or an unwillingness to practice exercises/etudes/scales. (#029)

Lack of practice on the part of some students makes it difficult to learn the skill. (#078)

Willingness of the student to practice technique correctly and implement. (HC#27)

NONE

Some respondents ($n=13$) listed “none” to the question pertaining to the issue of what constraining factors were there when teaching shifting to violin/viola students. Due to the nature of this response, there was nothing on which the researcher could comment.

Lack of Preparation

A few respondents ($n=12$) commented that in the case of a lack of, or inadequate training by a former teacher and/or the feeder school of an individual, it was more difficult to teach shifting. Some students did not have the proper technical foundation with which the string teacher could build upon to effectively teach shifting. Other violin/viola students were at disparate skill levels, making it difficult or inappropriate for the teacher to introduce shifting to every student at the same time.

WIDE VARIATION IN PREVIOUS LESSON EXPERIENCE [sic] (HC#17).

The amount of re-teaching of the basics I have to do at the beginning of the school year to old and new students. (#095)

Time varied materials and extreme low level of feeders. (#098)

Lack of preparation at the feeder schools. (#106)

I now teach high school. Some of my ninth graders have never shifted, and we have to have a “crash course” to catch them up with where they should be. (#119)

I don't teach beginners, so the constraints I work against are students who have had poor or no instruction on proper shifting in the past and yet are attempting to play advanced repertoire. (#141)

The lack of exposure to any shifting in MS (middle school).
((#176)

Summary

Various themes, topics, and response trends emerged from the data given by respondents. String teachers used scales and shifting etude books, including Introducing the Position (Whistler, 1944) when introducing shifting to violin/viola students (see Figure 5, p. 101). Some respondents listed pre-shifting exercises, developed by Paul Rolland, as effective materials when introducing shifting to violin/viola students (see Figure 6, p. 102). Other exercises/etudes included Essential Elements (Allen, Gillespie & Tellejohn-Hayes, 1995) as well as exercises newly created by the string teacher. Various violin/viola etude/exercises books were listed as effective materials when introducing shifting.

Opinions were mixed regarding what was the most effective teaching method when introducing shifting (see Figure 7, p. 112). Some respondents listed particular exercises and concepts as effective teaching methods when introducing shifting. Others suggested pre-shifting exercises and scales as an effective teaching method, and others suggested ear training. The kinesthetic motion of the left arm, hand, wrist, and shoulder was mentioned by some respondents. Demonstration and teacher modeling were also listed by a few respondents, as well as teaching shifting while using rote exercises. Using a guide note while in the process of shifting and the correct use of the left thumb were mentioned by a few respondents as helpful techniques when introducing shifting.

Teaching shifting in a private studio setting (1:1 ratio) as well as using familiar music were mentioned by a few respondents.

Respondent's opinions regarding whether or not there were advantages to introducing shifting early in a violinist's/violist's curriculum were mixed. The most frequent response to this question included students' achieving a flexible, relaxed, loose left hand and arm, followed by a violin/viola student's lack of fear of shifting (see Figure 7, p. 112). A student's comprehension and understanding of shifting were important to respondents, as well a lack of tension in the left hand while in first position (often referred to as "set in concrete" left hand). On the opposing side, respondents mentioned that there were no advantages to introducing shifting early, and a few mentioned that it might be considered detrimental to the student if shifting was introduced too early.

The most frequent response to the question regarding disadvantages to the early introduction of shifting was that if first position was not secure, violin/viola students would most likely have difficulty. The second most frequent response was "NONE." Respondents did not identify any disadvantages regarding introducing shifting early. Poor intonation was another issue listed by respondents, followed by a student's feeling of being overwhelmed, frustrated, or confused when trying to learn shifting. An under-developed ear and poor music reading skills were also mentioned by a few respondents as two disadvantages when introducing shifting early.

Responses to the question regarding what violinists/violists are learning in the classroom when cellos/basses are learning to shift varied greatly (see Figure 8, p. 134). Many of the respondents did not teach cellists/basses and/or did not have lower strings mixed with the upper strings in a heterogeneous classroom setting. Other respondents

only taught violin/viola private lessons. Some of the respondents did teach in a heterogeneous classroom setting taught other string techniques such as bowing styles, musicianship, left hand pitch manipulation, and bow distribution while the lower strings were learning to shift. Other subjects taught included improvisation, composition, dynamics, key signatures, and rhythms. The 4th finger was introduced by some respondents as dictated by the curriculum of a particular method book used in the string class. Some respondents believed that shifting should be taught to violin/viola students while cello/bass students learned shifting. Other areas mentioned by a few respondents included; learning pre-shifting exercises, good intonation, and finger patterns. This question also elicited responses such as, “this is a scary question!” and “let’s hope they are learning something!” It is possible that some string teachers were not familiar with how shifting is taught in a heterogeneous classroom setting and were surprised at the question. Perhaps this question could have been worded in such a way that such respondents would have been able to more confidently answer the question.

The last open-ended question asked respondents to list factors that enabled or constrained their teaching of shifting. Both responses were quite mixed, thus giving the impression of no general consensus among the respondents. A few respondents listed the student’s ability and talent as a factor. Positive attitudes (including eagerness, motivation, and cooperation) were listed by a few respondents as enabling factors. Others suggested the desirability of a 1:1 student teacher ratio in lessons.

Constraining factors were also very mixed (see Figure 9, p. 141). Time constraints and large class sizes were most frequently mentioned by respondents as constraining factors while teaching shifting to violin/viola students. Poor position and/or

posture were contributing factors, as was poor aural skills. A few respondents mentioned the students' lack of practice as being a difficulty to overcome. Others mentioned the lack of good previous training, whether from a previous teacher or school. A few respondents did not think there were any constraining factors when teaching shifting to violin/viola students.

The final chapter summarizes the findings of the research study. Data and the open-ended responses from the questionnaire, and their overall comparison to related literature will be examined and discussed. The chapter concludes with implications for future research.

CHAPTER SIX

SUMMARY, LIMITATIONS, OBSERVATIONS, AND IMPLICATIONS FOR FUTURE RESEARCH

Summary of the Study

The purpose of this study was to examine string teachers' views on teaching shifting to violin/viola students. A questionnaire was developed to elicit responses from a targeted string population regarding the technical elements of violin/viola shifting. The sample size came from three areas: K-12 string teachers, collegiate string teachers, and private studio string teachers. The on-line questionnaire consisted of three sections: Demographic information; pedagogical issues; and open-ended responses. Section One, questions 1-10, consisted of demographic questions regarding primary instrument, education of the respondent, years of study, primary and secondary teaching areas, geographic location, years of teaching experience, and age category of the respondent. Section two, questions 11-33, consisted of Likert-type items that were designed to seek the opinions of respondents regarding pedagogical issues when teaching shifting to violin/viola students. Section three, questions 34-39, gave the respondents an opportunity to make suggestions, both positive and negative, using their particular teaching approaches to shifting as a point of reference by using an open-ended format.

Summary of Demographic Information

The intended target population for this study included all facets of string teaching : private and public schools, Suzuki, private studio, college music education, pedagogy, and studio teachers. College faculty e-mail addresses were

systematically selected from four year institutions located on the NASM website. ASTA members were contacted via their state chapter presidents. MENC orchestra teachers received a bulk mailing using a systematic process of selecting only the even numbered addresses which appeared on a larger list. However, seven states were deleted from the MENC mailing list due to the state ASTA chapter presidents agreeing to send out the consent letter containing the URL address of the on-line survey to those particular seven states.

Two-hundred twenty-nine respondents completed and returned the survey, either by e-mail or via USPS. Out of a sample population of 229, over half of the respondents (53.7%) listed violin as their primary instrument, followed by violists (23.6%). Due to the specification of violin/viola shifting, it is logical that the majority of the respondents would be violin/viola teachers. It is interesting to note that almost half of the respondents had a master's degree (48.5%), followed by a bachelor's degree (27.5%). The degree emphasis was almost equal between string performance (37.6%) and string education (36.7%). It would be interesting to know if master's degree respondents had a bachelor's degree in performance or education, followed by a master's degree in performance or education, or a combination thereof. The third degree emphasis was listed as "other" (20.5%), and included degrees outside of string performance/education/pedagogy. It is not uncommon to see a non-string teacher conducting orchestra classes at public/private/college/professional institutions. Given the need for string teachers across the country, band teachers are being trained to teach string classes in public/private school settings (Gillespie & Hamann, 1998). If these particular string teachers are not familiar with the

techniques of shifting, violin/viola students might not receive the necessary tools to succeed at shifting.

Seventy-eight respondents studied their primary instrument 11-20 years (34.1%), followed by 45 respondents studying 31-40 years (19.7%). It is interesting knowing that over half of the respondents studied their instrument more than 10 years or ten years of study in a certain subject matter implies having reached some level of expertise in that particular field (Ericsson, Krampe & Tesch-Romer, 1993).

Almost half of the respondents taught in a K-12 classroom setting (47.2%), followed by college string teachers (26.6%) and private studio string teachers (19.7%). It is difficult to say what percentage of K-12, college, and private studio string teachers initially received the information regarding the shifting survey. It is interesting to note that 98 respondents (42.8%) teach privately as an additional teaching area. Many string teachers teach privately outside of their primary teaching area due to the necessity or desire to teach one-on-one, or for monetary reasons. It would be interesting to find out if the respondents taught shifting a particular way at their primary teaching area but differently in their additional teaching area.

Years of teaching experience were categorized into groups of ten years: 0-10; 11-20, 21-30, and 31-40 years. The first three groups had similar representation among the respondents (30.6%, 27.5%, 24.0% respectively), followed by 33 respondents (14.4%) in the 31-40 year category. One hundred fifty-one respondents (65.9%) had a mean score of 25 years of teaching experience. Along with many years of teaching experience, 71 respondents (31.0%) were in the 46-55 year old category, followed by 53 respondents (23.1%) in the 36-45 year old category, and 48

respondents (21.0%) in the 26-35 year old category. Since many of the respondents involved in this study seem to be experienced string teachers with advanced degrees, it is possible that many of them have developed their own teaching methodology, including the technique of shifting.

OBSERVATIONS

The desirability of introducing pre-shifting exercises during the first year of a violinist's/violist's curriculum was agreed upon by 60.7% of the respondents.

Reasons for using pre-shifting exercises included promoting an ease of movement.

These responses are consistent with the literature, indicating that by using pre-shifting exercises, students will be able to learn how to have freedom of movement with the left arm as well as success in shifting (Carroll, 1997; Garam, 1990; Havas, 1961; Klotman, 1988; Rolland, 2000; & Whone, 1972).

Teaching them (violin/viola students) that the movement is a 'whole-arm' movement and not a finger movement. Everything moves from shoulder to fingertips. (#147)

"Frequent opportunities for young students to leave the security of first position should be provided" (MENC, 1991, p. 9). Children gain educational and pedagogical benefits when learning pre-shifting exercises. These benefits include 'unlocking' the left hand and reinforcing proper position of the violin/viola.

Another reason given by respondents for using pre-shifting exercises included helping violin/viola students to prevent a learned fear of the upper half of the fingerboard. Violin/viola students can experience difficulty when shifting from higher positions to lower positions due to anxiety factors associated with higher positions. "The very thought of going down (from a higher position), or having to let

go for a second (so that the hand and arm can go away from the main body of the violin) causes a devastating anxiety to many players” (Havas, 1973, p. 54).

Students do not develop a “fear of heights.” (#019)

By starting early, it is hoped that the children will not be reluctant to shift at a later stage (Cook, 1957; Lamb, 2002; MENC, 1991; Rolland, 2002).

Pre-shifting games should involve large motions first and gradually resolve to small motions (Klotman, 1988). The left arm should be able to swing in and out during shifting and pre-shifting activities (Rolland, 2002).

Pre-exercises for freedom of movement throughout the length of the fingerboard are very important from the very beginning of the student’s experience. (#079, Item 34)

However, opponents discouraged pre-shifting and/or shifting exercises during the first year of instruction. For example, correct position, good intonation, and knowledge of fundamental bowing must be in place before position work should be introduced in a violinist’s/violist’s curriculum (Linn, 1908).

I would think one should be careful and make sure that the technique is well established first IN POSITION. (#079, Item 36)

College string teachers tended to be in favor of using pre-shifting exercises, compared to K-12 string teachers. Possible reasons for this variance could be attributed to class size, heterogeneous classes versus one-on-one teaching relationship, available literature, training and background of the string teacher, time constraints, as well as other factors. Another possibility may be trying new ways of teaching shifting to violin/viola students. Until recently, only a few string method books suggested using pre-shifting exercises in a heterogeneous classroom setting.

For example, Essential Elements introduces pre-shifting exercises to violinists/violists in the second book of instruction (Allen, Gillespie, & Tellejohn-Hayes, 1995).

There is growing support for the concept of providing opportunities during the early stage of instruction for all students to do some shifting, regardless of the instrument they are playing (Lamb, 2002, p. 59)

Further research is needed to isolate various pre-shifting exercises/games within an experimental group to determine effectiveness when learning to shift among violinists/violists.

The other Likert-type item which stated that “shifting should be introduced from the very beginning to avoid the ‘set in concrete’ left hand” also revealed a mixed response from participants. Overall, 43.7% of respondents disagreed with the notion of introducing shifting from the very beginning of instruction. If this question was worded using “pre-shifting” as the first word instead of “shifting,” perhaps the response would have been different.

When comparing primary teaching areas, there was a significant main effect between K-12 and college teachers regarding introducing shifting from the beginning. College string teachers had a 50.8% agreement to shifting from the beginning compared to K-12 string teachers (49.1% disagreement). A reason for this difference might be due to different teaching settings (one on one versus heterogeneous classroom setting). College string teachers can adapt their curriculum to fit the needs of an individual student; K-12 string teachers work with multiple students and cannot necessarily meet the individual needs of each student. According to respondents, a disadvantage to introducing shifting early is a lack of security in first position by a violin/viola student. Some pedagogues have suggested that in spite of the differences,

K-12, college, and private studio string teachers need to come together and find an appropriate teaching method that works in both scenarios (Cook, 1973).

When Should Shifting Be Introduced?

Overall, the majority of respondents favored introducing shifting exercises after first position is secure.

I prefer students to be comfortable with first position before introducing third position. I only introduce shifting once students have demonstrated good playing position of the left hand and have appropriate bow control. I would prefer to wait to introduce difficult concepts until students are successful with the basics (#079, Item 37).

Making sure the left hand is competent in first position before introducing shifting is important to many string teachers (Dillon, 1978; Oddo, 1995; Wentworth, 1977).

However, according to advocates of introducing pre-shifting/shifting exercises from the beginning, are we setting violin/viola students up for failure or at least discouragement regarding shifting?

Shifting (and pre-shifting) activities should be introduced in the early lessons to encourage ease of movement and to avoid and artificial, learned fear of the upper region of the fingerboard (Rolland, 1988)

Responses were mixed regarding the issue of whether shifting should be introduced during the second year of violin/viola instruction. Overall, half of the respondents were in favor of introducing shifting during the second year of instruction, but almost 30% were undecided. It is possible that this question was more difficult to answer due to the specific time line attached to it. In the open-ended responses, a few Suzuki respondents mentioned that the 2nd year of instruction for a 4-5 year old student would be different compared to a 2nd year of instruction for a 9-

10-year-old student. Further research is needed to compare Suzuki, K-12, and private studio violin/viola students according to ability levels, and not just by a specific timeline of study (1st year, 2nd year, 3rd year).

There was a significant interaction between education and teaching experience concerning the lack of difficulty of shifting beyond the 3rd year of instruction among violin/viola students. Doctoral respondents with 0-10 years of teaching experience had the highest level of agreement compared to bachelor's and master's degree respondents. In contrast, as the years of teaching experience increased, there was a higher level of disagreement, especially among the 31-40 year subgroup ($M=1.17$). Bachelor's and master's degree respondents had similar views regarding Item 16 ($M=2.00$; $M=2.30$, respectively) until the 31-40 year subgroup ($M=3.00$; $M=1.85$, respectively). Respondents with doctoral degrees and 30+ years of teaching experience realized that violin/viola students have difficulty with shifting beyond the third year of instruction. Perhaps this is the reason for greater use of pre-shifting exercises among new and revised string method books. For example, Essential Elements introduces pre-shifting exercises such as "tunneling" to violinists/violists in the second book of instruction (Allen, Gillespie, & Tellejohn-Hayes, 1995). Artistry in Strings introduces pre-shifting exercises such as "string polishing" and "shuttle swingstrum" from the beginning of instruction (Frost & Fischbach, 2002). According to Lamb (2002), there is a growing trend for the idea of providing opportunities to do some shifting and pre-shifting for violin/viola student during the beginning stages of instruction.

Order of Positions

The majority of respondents agreed with introducing first position before third position to violin/viola students. Many of the shifting exercises start in first position, followed by third position. Most teachers introduce their students to first position, followed by third position (Cowden, 1969; Havas, 1961; Yampolsky, 1967).

However, according to various string pedagogues, there are mixed opinions concerning which positions should be taught first. Some string pedagogues believe that starting in third position instead of first position can be advantageous to the beginning student. Benefits include: better balance; and there is a greater degree of comfort is achieved if an instrument is otherwise too large for the student (Cook, 1957; Eberhardt, 1919, Geringas, 1987). Geringas (1987) mentioned that playing in first position is difficult for young violin/viola students due to the greater distances between notes on the fingerboard.

Odd-numbered positions are usually taught first before even-numbered positions (Lamb, 2002). Recent awareness has led teachers to introduce even-numbered positions (second and fourth positions) earlier than previous instruction books had suggested (Carol, 1986; Lamb, 2002). According to Geringas (1987), there is no “easy” or “difficult” position on the violin/viola. It is a psychological mistake to leave out even-numbered positions, but this practice is still common among violinists/violists. According to some respondents, a lack of pedagogical literature relating to teaching higher positions is a reason for leaving out even-numbered positions.

Cowden’s (1972) research examined the approach of starting students in third

position versus beginning in first position. Although the results were inconclusive, further research is needed to determine what order positions should be taught, including even and odd-numbered positions.

Where Should Shifting Be Taught?

Ninety percent of respondents strongly agreed that shifting should be taught in a private studio setting. Due to the one-on-one relationship in a private lesson, if the student experiences difficulties with shifting, the teacher can immediately address those issues (Salzberg & Salzberg, 1981). However, not all violin/viola students have the opportunity to take private lessons. According to Collins (1962), introducing shifting in a classroom setting is a necessity.

Shifting is taught best one on one. It can also be taught in a homogeneous class, but with less effectiveness (#021, Item 39).

College and private studio string teachers generally teach violin/viola students in a one-on-one relationship, thus giving the teacher greater flexibility to create a curriculum that is appropriate for each student. K-12 string teachers do not have as much flexibility when teaching specific technical issues such as shifting to a heterogeneous string class. Size of the class, time constraints, available literature for every student, and a lack of flexibility within the teaching curriculum might be a few reasons why this difference of opinion regarding teaching shifting has occurred among K-12 string teachers.

Dillon (1978) commented that teaching shifting to a heterogeneous string class can be challenging for string teachers due to the large class sizes of typically 20-

30 students. In spite of this difficulty, 61.6% of respondents strongly agreed/agreed that teaching shifting can be successful in a heterogeneous classroom setting.

Teaching shifting in a homogeneous classroom setting (Item #32) had a favorable response rate among participants (79.5%). However, when comparing primary teaching areas, this item showed a significant main effect between K-12 string teachers and private studio teachers. K-12 teachers strongly agreed/agreed ($n=100$, 94.3%) that shifting could be taught successfully in a homogeneous classroom setting. K-12 string teachers usually teach in a homogeneous and/or heterogeneous classroom setting. It is not surprising for K-12 string teachers to strongly agree with teaching shifting in a homogeneous classroom setting.

In comparison, private studio teachers were less in agreement ($n=26$, 66.7%). Private studio teachers are more likely to teach shifting to a violinist/violist when there is a one-on-one relationship. Some respondents considered teaching shifting in a private studio setting to be an enabling factor for them. Since not every student is able to study privately or in a homogeneous classroom, a systematic approach to teaching shifting would be useful for the heterogeneous classroom setting (Nelson, 1983).

According to Suzuki teachers, using a combination of private lessons and group lessons on a weekly basis can be beneficial to a beginning string student. Students trained using the Suzuki method meet with a private teacher each week in addition to a homogeneous group (Schlosberg, 1987). Both private and classroom string teaching may be effective independently, but the two systems should work

together towards designing a systematic approach to teaching pedagogical issues to string students (Cook, 1973).

“Position study is much easier to handle in the homogeneous class or in private study” (Cook, 1957, p. 34).

Availability and Appropriateness of Instructional Materials

K-12 string teachers expressed a need for more instructional material relating to teaching shifting to violin/viola students. Respondents mentioned that they were not able to find suitable literature for heterogeneous string classes outside of a performance piece, so it was necessary to create their own exercises. Many of them use these created exercises, and familiar pieces that the students already knew, to assist the teaching process of shifting.

I design my own (exercises) which I find are more efficient and effective than method books.

Overall, college string teachers were satisfied with the existing literature available to them for teaching shifting. Nonetheless, while numerous shifting etudes and exercises have been written for the violin and viola, the level of playing ability necessary is at an intermediate or greater level. According to respondents, very few exercises exist for the beginner violin/viola student.

The use of scales was an emerging topic among respondents regarding what materials are used by string teachers when teaching shifting. Respondents suggested using one and/or two octave scales when practicing shifting. For example, Strictly Strings (Dillon, Kjelland, & O'Reilly, 1993), a string method book, uses a two octave G major scale when introducing shifting. Another benefit when using scales to teach

shifting is learning by rote. According to respondents, by not reading music, there is one less cognitive task that the brain has to deal with when practicing shifting. Since most violin/viola students are familiar with scales in first position, using skill already acquired before moving on to new skills can be advantageous (Behrend, 1982).

Another advantage to using scales when practicing shifting is the step-wise motion of notes, either ascending or descending, within a defined musical scale.

Various types of scales can be incorporated into a shifting curriculum. Using one octave, one-finger scales is beneficial according to Collins (1962) as well as respondents. One octave scales on the same string require at least one shift (depending on the fingering).

One finger scales and scales ending in higher positions. Also, scale-like patterns (HC#5, Item 34)

There was a significant difference between string teachers with 0-10 years of experience and 11-20 years of teaching experience regarding attitudes toward the availability of pedagogical literature. Overall, string teachers with 0-10 years of teaching experience (64.2%) would like more pedagogical literature for teaching shifting. String teachers with 21-30 years of experience had slightly less agreement (50.9%), but disagreed (34%) twice as much as 0-10 year string teachers (17.9%). String teachers with 11-20 years of teaching experience had the least amount of agreement regarding the need for more pedagogical literature (38.3%), but the same group was undecided (36.7%) about the issue (refer to Table 35, Chapter 4).

When comparing education and teaching experience among the respondents, there was a significant interaction regarding the need for more pedagogical literature

for teaching shifting. In general, the level of agreement among doctoral respondents decreased sharply as the level of years of teaching experience increased.

Respondents with bachelor's and master's degrees agreed to the need for more pedagogical literature within the 0-10 year subgroup. It is not surprising that string teachers with less teaching experience are interested in more pedagogical literature for teaching shifting since they have not had time to develop a method of teaching and the necessary music library associated with years of teaching. It is interesting to see similarities between respondents with bachelor's degree and doctoral degrees with 0-20 years of teaching experience, but surprising to see such a difference among master's and doctoral degree respondents. Possible reasons for this discrepancy might be due to the various teaching levels of respondents, whether master's degree respondents are currently teaching and/or attending a doctoral program, and/or if the respondents have had experience teaching private studio.

How to Teach Shifting Effectively

Various response trends emerged regarding how to teach shifting effectively to violin/viola students. Ear training was one of the most frequent responses to this issue. Without the internalization of a particular pitch, a violin/viola student might have difficulty shifting successfully (Carroll, 1997; Galamian, 1962). When a violin/viola student has been exposed to ear training, there is a greater chance that shifting will be more successful. The ear guides the arm and finger motion while shifting (Behrend, 1982; Havas, 1961).

The role of the thumb was another topic that emerged from the data. Overall, 53.7% of respondents agreed to the importance of the thumb leading a shift. When

comparing primary teaching areas, there was a significant main effect between K-12 and college string teachers on this subject. College string teachers disagreed as to the role of the thumb 36.9%, compared to K-12 string teachers (19.6%). Auer (1921) comments that there is too much importance placed on the role of the thumb when shifting from one position to another. When comparing teaching experience among the respondents, there was a significant main effect between string teachers with 0-10 years of teaching experience and 31-40 years of teaching experience when considering the role of the thumb. String teachers with less teaching experience tended to disagree less (0-10 years; 16.4%) compared to string teachers with more teaching experience (31-40 years; 37.6%). It is possible that string teachers with more teaching experience realize that there are a number of factors relating to the role of the thumb, such as a lack of tension, placement of the thumb in relation to the other left hand fingers, and freedom of movement. Various violin pedagogues have given exact instructions as to where the thumb should be in playing position in relationship to the left hand (Auer, 1921; Bytovetzski, 1917; Carroll, 1997; Dolejsai, 1939; Galamian, 1962; Green, 1966; Havas, 1961; Rolland, 2000). Although there can be differences of opinion regarding where the thumb should be placed, there is general agreement among string pedagogues that the thumb should not grab the neck of the violin, but remain supple and relaxed in order to move freely (Applebaum, 1972; Auer, 1921; Bytovetzski, 1917; Carroll, 1997; Dalton, 1988; Dolejsai, 1939; Galamian, 1962; Garam, 1990; Green, 1966; Havas, 1961; Klotman, 1999; Menuhin, 1971; Oddo, 1995; Rolland, 2000).

The use of finger tapes was another item on the questionnaire. Overall, there was a mixed attitude among respondents whether finger tapes should be used when introducing shifting. There is debate as to whether or not finger tapes are beneficial to students, but if a student uses them, they should not become a crutch (Bergonzi, 1997). When comparing primary teaching areas, there was a significant main effect between K-12 and college string teachers. K-12 string teachers agreed (52.9%) with using finger tapes compared to college string teachers (17.9%). The difference could be attributed to the classroom setting (heterogeneous versus private studio), and relative age of the violin/viola student. Other reasons may include an auditory screening of students at the college level before shifting is taught compared to teaching shifting to the entire class without consideration of aural readiness. Further research is needed to test the effectiveness of finger tapes when introducing shifting to violin/viola students in K-12, private, and collegiate classroom settings.

Another issue regarding teaching shifting effectively was that certain factors inhibit best practice of teaching shifting to violin/viola students. There was a significant main effect between K-12 and college string teachers as well as K-12 and private studio string teachers. College string teachers had the highest level of disagreement (69.7%), followed by private studio string teachers (57.5%). K-12 teachers only disagreed 23.2%, but there were a great deal of undecided responses (38.4%). It is possible that college and private studio string teachers teach in similar settings, while K-12 string teachers teach in heterogeneous and/or homogeneous classroom settings and might not have the flexibility in their curriculum to teach shifting as they deem appropriate. It is unfortunate that some K-12 string teachers

may be teaching under conditions that do not allow them to teach shifting to violin/viola students in such a way that the teacher deems most appropriate.

Cellists and bassists tend to learn how to shift earlier than violinists/violists out of necessity. In order to play a one-octave scale on a string bass, it is necessary to shift. The notes and fingerings are spaced farther apart on a cello and bass due to the size and length of the instruments and strings, compared to a violin and viola. This study limited the scope of shifting to the violin/viola with the exception of when violinists/violists learned to shift compared to cellists/bassists. Overall, respondents were split between being undecided (36.2%) as well as in disagreement (36.2%) regarding whether violinists/violists should learn to shift at the same time as cellists/bassists. When asked whether violinists/violists should learn to shift later than cellists/bassists, respondents were generally in agreement (57.7%). There was a significant main effect between K-12 and college string teachers, as well as K-12 and private string teachers when comparing primary teaching areas. Seventy-nine percent of K-12 string teachers agreed to shifting later than cellists/bassists, while only 45.4% of college string teachers agreed. The greatest variance was between the undecided respondents. K-12 teachers were undecided (11%) compared to college string teachers (41.8%). Perhaps the college string teachers only teach upper (violin/viola) or lower (cello/bass) stringed instruments, so their attitude regarding this topic is uncertain. Private string teachers also had a higher level of indecision (46.1%) compared to K-12 string teachers.

Posture

Opinions were mixed regarding whether violinists/violists should stand or sit while learning to shift. Although much of violin/viola playing is performed in a sitting position, much of the pedagogical literature pertaining to posture recommends standing while learning to play (Havas, 1961; Neumann, 1969; Rolland, 2000). According to Szende (1971), “the best playing position is one in which the smallest possible amount of muscular activity is required to maintain balance” (p. 14). Overall, respondents were undecided whether to sit (47.2%) or stand (51.1%) when learning to shift.

When comparing primary teaching areas, there was a significant main effect between K-12 and college string teachers as well as K-12 and private teachers regarding sitting while learning to shift. College and private teachers disagreed (59.6% and 62.5%, respectively) compared to K-12 string teachers (33.6%). Also, K-12 teachers were undecided (61.5%) compared to college (38.6%) and private (35%) string teachers. It is interesting to see a high level of indecision among K-12 string teachers when the majority of classroom teaching is done in a sitting position. According to Neumann (1969), there is very little literature pertaining to the sitting position when learning to play the violin/viola.

There was a significant difference between years of teaching experience regarding sitting while learning to shift. Respondents with 21-30 (54.9%) years and 31-40 (60%) years of teaching experience had a greater level of disagreement regarding a sitting position compared to 0-10 (28.3%) years of teaching experience. The higher the level of teaching experience, the greater the level of disagreement and

less indecision there was among respondents when considering whether to sit or stand while learning to shift. It is possible that experienced string teachers view sitting and standing positions as viable options when teaching shifting to violin/viola students and have no opinion as to which posture is more suitable than the other.

When considering standing while learning to shift, there was also a significant main effect between K-12 and private string teachers. Private teachers agreed/strongly agreed (53.7%) compared to K-12 (33%) string teachers. Surprisingly, K-12 teachers were undecided (62.1%) compared to private (39%) string teachers. K-12 respondents had the greatest level of uncertainty compared to college and private studio teachers regarding sitting and standing positions.

When comparing the education and teaching experience of each respondent, there were significant interactions between various subgroups regarding whether to sit or stand while learning to shift. Respondents with a bachelor's degree and 31-40 years of teaching experience had the highest level of disagreement among the other subgroups. In general, all respondents in the 0-10 year subgroup were within a similar range, with bachelor's degree respondents being slightly higher than the others ($M=2.82$, $M=2.56$, $M=2.50$, respectively). Respondents with advanced degrees generally had similar levels of disagreement between all four subgroups (0-10, 11-20, 21-30, and 31-40), while respondents with bachelor's degrees had opposing attitudes except within the 21-30 year subgroup. Bachelor's degree respondents with more teaching experience might be questioning whether shifting should be taught in a sitting position.

The issue of standing while learning to shift also had significant interactions among respondents when comparing teaching experience and education. Respondents with bachelor's degrees and 11-20 years of teaching experience generally disagreed with learning to shift standing up, while the 21-30 year subgroup generally agreed. Advanced degree respondents (master's and doctoral degrees) were in agreement regarding standing while learning to shift, but the two groups split into opposite direction within the 21-30 year subgroup. String pedagogues favor standing while learning to play the violin/viola (Flesch, 1930; Havas, 1961; Rolland, 2000). Rolland (2000) believes that poor positions may result from playing in a sitting position.

LIMITATIONS

The primary purpose of this study was to look at string teachers' attitudes regarding violin/viola shifting. Due to limited research regarding when and how to introduce shifting, as well as numerous articles discussing the "fear factor" when violin/viola students attempt to learn shifting (Joines, 1991; Klotman, 1988; Mishra, 1994), the writer attempted to encompass a wide variety of issues as opposed to focusing upon a few issues in greater depth.

The questionnaire was designed to provide quantitative and qualitative data (see Chapters 4 and 5). However, a few limitations to the study occurred while collecting the data. The questionnaire sought to solicit information from all string teaching areas, including Suzuki teachers. Due to adapting the format of the questionnaire to an on-line survey, the number of response options for each item was limited to 5 options. Because of these limitations, Suzuki teacher was not a specific option listed under primary and/or secondary teaching areas in the demographic

section of the questionnaire. Also, a prominent Suzuki teacher sent the researcher an e-mail discussing the difficulty of responding to specific questions on the survey that pertained to “first year, second year” violin/viola students. Suzuki students start violin/viola study at a much younger age (4-5 years of age) compared to public/private school children (9-10 years of age). It is possible that Suzuki teachers were not able to answer specific questions on the survey due to the wording of certain questions.

Another limitation was due to the fact that certain string teachers do not teach violin/viola students, only cello/bass. Low string teachers might have experienced difficulty interpreting the survey due to their lack of experience teaching upper strings. Also, the researcher’s point of reference is limited due to specific teaching experiences, and perhaps certain questions regarding shifting might have been confusing to the respondents or simply left out of the survey altogether.

Due to a low response rate (5%), this study cannot be generalized back to the entire string population across the country. Much more research is needed to observe if these attitudes are evident among a larger group of string respondents from across the nation.

Nevertheless the data have revealed certain trends that warrant additional consideration. This study confirms a lack of clear consensus within varied disciplines of string teachers regarding shifting (Nelson, 1983), and points to the need for a closer look at pedagogical issues when teaching shifting to violin/viola students.

RECOMMENDATIONS FOR FUTURE RESEARCH

This study attempted to examine attitudes regarding teaching shifting among K-12, collegiate, and private studio string teaching professions in order to understand the similarities and variances among string teachers. There were a number of pedagogical issues that most respondents generally agreed upon: a) Introducing shifting after 1st position is secure; b) 1st position introduced before 3rd position; c) Shifting should be taught in a private studio setting; d) Shifting can be successfully taught in a homogeneous classroom setting; e) Scale studies are useful tools when teaching shifting; f) Ear training should be part of learning to shift; and g) A guide note should be used when locating a new position. It is possible that since many of these issues have been traditionally used while teaching shifting, respondents tended to agree generally with them. If one or two of these items are not available to a teacher, will he/she be able to teach successfully shifting to violin/viola students? Further research is needed to seek more specific details regarding these important issues.

While 78% of respondents agreed that it is best to introduce shifting after 1st position is secure, attitudes were mixed as to exactly when shifting should be introduced. Only 50% of respondents agreed to introduce shifting during the 2nd year of instruction. Depending upon the lesson setting (private studio or classroom), a violin/viola student might not be at the same level of playing ability during the 2nd year of instruction. Respondents were also asked if students experienced difficulty with shifting after the 3rd year of instruction. Response trends from the qualitative data indicated that many students experienced difficulty with shifting after the 3rd

year of instruction due to large class sizes and time constraints within a classroom setting, as well as poor position set up and poor aural skills. Further research is needed to look at levels of 2nd and 3rd year string instruction, specifically when introducing shifting. When comparing the lesson settings (classroom or private studio), what factors enable the string teacher to effectively introduce shifting?

Most respondents generally agreed that first position should be taught before third position. Some respondents mentioned that due to the lack of shifting materials appropriate for young children, a teacher would have a difficult time finding literature in 3rd position. Other pedagogues suggest that learning to play in higher positions can be easier for the young student's small hands (Geringas, 1987). Further research comparing 1st position and 3rd position might address these issues.

Teaching shifting in a private studio setting was strongly agreed upon by respondents (90%). Respondents commented that another advantage when teaching shifting in a private, one on one setting was the ability to tailor instruction to meet the needs of the individual student. Each violin/viola student has a different playing ability level, and in the one on one setting the teacher has the flexibility to diagnose each student and provide the necessary instruction accordingly:

I mostly teach privately, so I'm able to teach shifting when each student is ready, and I can tailor the student's repertoire, etc., to his developing shifting abilities. (#084)

Unfortunately, not all violin/viola students have the opportunity of studying in a private studio setting. As educators, it is important that children receive the necessary tools with which to succeed at their particular subject matter. Teaching

effectively in a classroom setting is just as important as teaching in a private studio setting (Collins, 1962).

Further research is needed to compare/contrast the various classroom settings (private, homogeneous, heterogeneous) to determine which setting is most effective when teaching technical aspects of the violin/viola. A research study involving participants from each classroom settings might give us the necessary information to determine the effectiveness of teaching shifting in each situation.

Many respondents (84%) agreed that students should use a guide note when moving to a new position during the shifting process. Also, ear training and audiation played important roles in teaching shifting effectively. It would be interesting to conduct an experimental study to see if certain pre-shifting exercises combined with ear training could be more effective teaching methods for shifting compared to waiting to teach shifting until the first position is secure.

The role of the thumb had mixed responses from participants. College string teachers (36.9%) tended to somewhat disagree with the importance the thumb played when learning to shift compared to K-12 string teachers (19.6%). Also, string teachers with more teaching experience tended to think similarly to college string teachers regarding the role of the thumb. It is possible that participants with graduate degrees and more teaching experience realized that the thumb is integral to the shifting process. Further research is needed to explore various aspects relating to the role of the thumb.

While comparing significant main effects between primary teaching areas, K-12 string teachers and college/private teachers seem to be polarized regarding certain

aspects of teaching shifting. Is it possible that best practice could be different approaches within the different classroom/studio settings? Additionally, what classroom setting is the most effective setting while teaching shifting (1:1, homogeneous, heterogeneous)? Further research is needed to isolate these differences to see what teaching methods regarding introducing shifting are most effective within each setting. A case study involving successful string pedagogues from each discipline (K-12, collegiate, and private studio) might be an effective way of comparing and contrasting various teaching methods regarding best practice of teaching shifting effectively.

K-12 string teachers expressed an interest in needing more pedagogical literature relating to teaching shifting to violin/viola students. Overall, college and private string teachers were satisfied with shifting literature. At the present time, most of the shifting literature is designed for one-on-one teaching. Some of these materials can be adapted for use in the classroom, but respondents mentioned that many exercises had to be created from familiar pieces and/or scales. It is possible that with further research, a new shifting method book could be developed to assist classroom string teachers when teaching violin/viola students

Respondents had mixed opinions and/or no opinion regarding whether to sit or stand while learning to shift. College and private studio teachers generally disagreed with sitting down (60%, 63%, respectively) while learning to shift. Surprisingly, the majority of K-12 string teachers (62%) had no opinion and/or were undecided regarding sitting down or standing up while learning to shift. It is possible that K-12 string teachers view sitting and standing as equally acceptable postures when learning

how to shift. Further research is needed to focus on the ramifications of a violinist's/violist's posture when learning technical aspects of playing, specifically shifting.

According to some respondents, many violin/viola students express fear when learning how to shift. According to Mishra (1994), it is important for string teachers to discover the source of students' fears about shifting and to learn how these fears can be avoided when teaching violin/viola students. Early instruction in shifting and pre-shifting activities should promote an ease of movement, and help prevent the tendency to develop a learned fear of the upper half of the fingerboard (Klotman, 1988). Future research is needed to pinpoint fears among violin/viola students that are associated with learning how to shift.

Many topics and response trends can be put together sequentially to form a set of "building blocks" that will develop and refine the technical aspects of shifting, as well as solidify a more general technical foundation for the violin/viola student (see Figure 10, p. 180).

Don't use particular method but sequence of steps – building blocks.
(HC#46, Item 35)

Specifically, there is no one best method or most effective method for teaching shifting. One must consider the teaching style and learning styles of the students. In my opinion, a combination of several (methods) is the best approach. (#034, Item 35)

Using pre-shifting exercises/games as a foundation of the "building block", followed by ear training, scales and/or appropriate exercises, kinesthetic motion, rote exercises, demonstration and modeling by the teacher, use of guide note and thumb, one on one instruction (if possible), and using simple, created music can be put

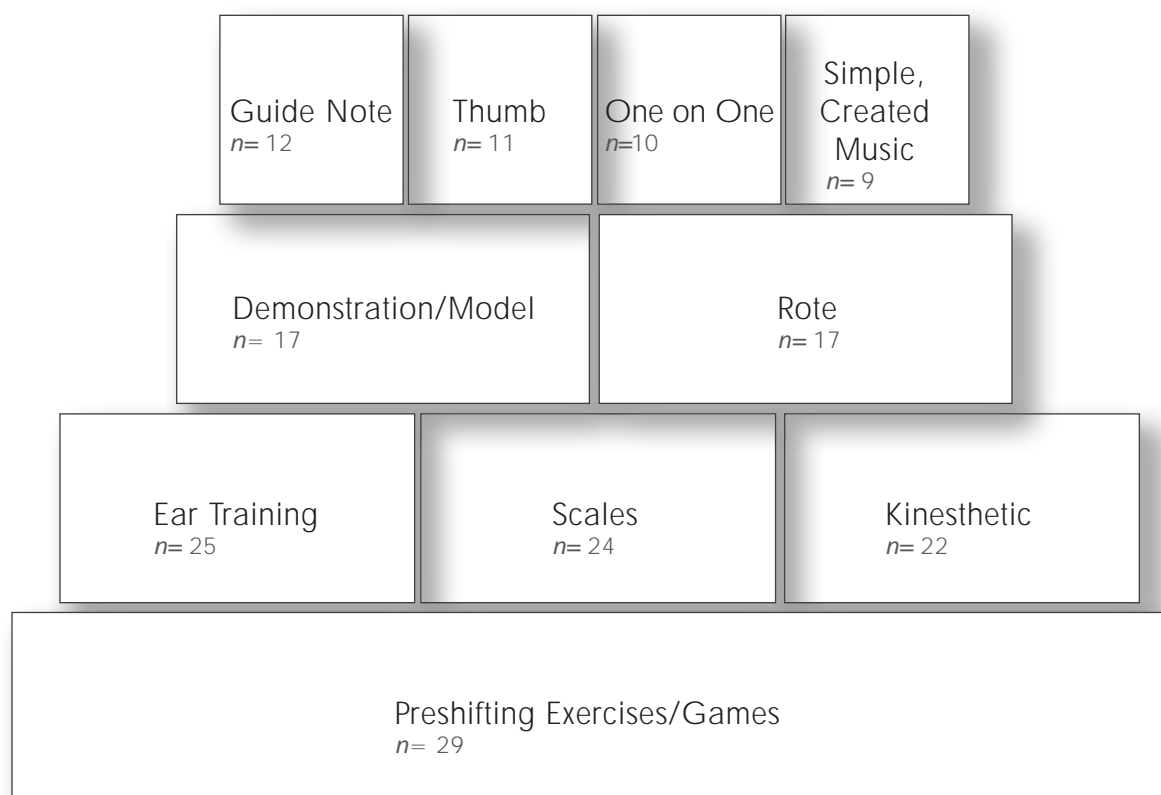


Figure 10: Building Blocks

together in such a way as to form an effective method when teaching shifting. Each level can be used as a springboard to another level. By refining these concepts, each student can develop and refine his/her technical skills relating to shifting, as well as solidify a more general technical foundation for the violin/viola. Due to the mixed responses, it became evident that there was not a common teaching method used by the participants. Even so, many of the concepts were related to one another, and formed a “building block” from which a string teacher can introduce shifting effectively and successfully. Further research is needed to focus on these concepts in a controlled environment with each one being introduced systematically to beginning violin/viola students to see if the sequence listed in Figure 10 is viable.

When teaching public/private school, current trends in string method books have begun to include earlier instruction of pre-shifting and shifting exercises. Regardless of the instructional materials used, it is important that the string teacher understands the complexities associated with teaching shifting to violin/viola students. Further research may aid string teachers in their quest for greater understanding of how they can reach each and every student.

This study confirms a lack of clear consensus within the various disciplines of string teachers regarding shifting and points to the need for a closer look at pedagogical issues when teaching shifting to violin/viola students. With continued research, many of the pedagogical issues mentioned in this study could be examined further to give string teachers a greater understanding of how to effectively teach shifting to violin/viola students.

REFERENCES

- Alleman, E., Cochran, J., Doverspike, J., & Newman, I. (1984). Enriching mentoring relationships. Personnel and Guidance Journal, 62, 329-332.
- Allen, M., Gillespie, R., & Tellejohn-Hayes, P. (1995). Essential elements for strings: A comprehensive string method, Books 2 and 3. Milwaukee, WI: Hal Leonard Corporation.
- Allen, M., Gillespie, R., & Tellejohn-Hayes, P. (2001). Advanced technique for strings: Technique and style studies for string orchestra. Milwaukee, WI: Hal Leonard Publishing.
- Applebaum, S. (1960). Building better strings and orchestras. Rockville Center, NY: Belwin, Inc.
- Applebaum, S. & S. (1972). The way they play: Book 1. Neptune City, NJ; Paganiniana Publications, Inc.
- Applebaum, S. & S. (1973). The way they play: Book 2. Neptune City, NJ: Paganiniana Publications, Inc.
- Auer, L. (1980). Violin playing as I teach it. New York: Dover Publications, Inc.
- Auster, D. (1984). Mentors and protégés: Power-dependent dyads. Sociological Inquiry, 54(2), 132-153.
- Babitz, S. (1947). Principles of extensions in violin fingering. Los Angeles, CA: Delkas Music Publishing Company.
- Baillot, F. (1991). The art of the violin. Evanston, IL: Northwestern University Press.
- Barrett, H. (1978). The viola: Complete guide for teachers and students (2nd ed.). University, AL: The University of Alabama Press.
- Behrend, M. (1982). Modern shifting studies for the violin: Easy to follow exercises for thorough motion training. Bryn Mawr, PA: Theodore Presser Company.
- Bergonzi, L. (1997.) Effects of finger markers and harmonic context on performance of beginning string students. Journal of Research in Music Education, 45, 197-211.

- Bloom, B., ed. (1985). Developing talent in young people. New York: Ballantine Books.
- Blum, D. (1977). Casals and the art of interpretation. London: Heinemann Educational Books Ltd.
- Boney, J. (1969). No string teachers, no strings. Music Educators Journal, 55(8), 63-64.
- Boyden, D. (1965). The history of violin playing from its origins to 1761 and its relationship to the violin and violin music. London: Oxford University Press.
- Boyden, D. (1989). Violin family, In S. Sadie (Ed.) The new Grove dictionary of musical instruments (pp. 1-103). New York, NY: W.W. Norton & Company.
- Bytovetzski, P. (1917). How to master the violin: a practical guide for students and teachers. Boston, MA: Oliver Ditson Company.
- Carabo-Cone, J. (1966). Carabo-Cone concepts for strings. Scarsdale, NY: The Carabo-Cone Method Foundation.
- Carol, N. (1986). Violinistic training – A concertmaster's view. American String Teachers Association, 38 (3), 58-60.
- Carroll, C. (1997). A comprehensive overview of violin/viola left-hand technique as it applies to articulation, intonation, shifting, and vibrato. (Doctoral dissertation, University of Cincinnati, 1997). Dissertation Abstracts International, 58, 1975A.
- Cates, W. (1985). A practical guide to educational research. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Chee, K. (1998). The question of tradition: Steven Staryk – Perspectives of violin playing and music. (Doctoral dissertation, University of Washington, 1998). Dissertation Abstracts International, 59, 763A
- Clinton, J. (1991). An investigation of the self-perceptions certified fine arts teachers have toward their roles as artist and instructional staff member in selected public high school of Oklahoma. (Doctoral dissertation, University of North Texas, 1991). Dissertation Abstracts International.
- Colley, A., Banton, L., & Down, J. (1992). An expert-novice comparison in musical composition. Psychology of Music, 20, 124-137.

- Collins, G. (1962). Violin teaching in class: A handbook for teachers. New York, NY: Oxford University Press.
- Colprit, E. (2000). Observation and analysis of Suzuki string teaching. Journal of Research in Music Education, 48(3), 206-221.
- Colwell, R. (1970). The evaluation of music teaching and learning. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Cook, C. (1957). String teaching and some related topics. Urbana, IL: American String Teachers Associations.
- Cook, C. (1973). Essays of a string teacher; Come, let us rosin together. Jericho, NY: Exposition Press, Inc.
- Costantakos, C. (1998). Demetrios Constantine Dounis: His method in teaching the violin. New York: Peter Lang Publishing.
- Cowden, R. (1972). A comparison of first and third position approaches to violin instruction. Journal of Research in Music Education, 20(4), 505-509.
- Cramer, E. (1936). The basis of artistry in violin playing. Dallas, TX: Southwest Printing Company.
- Dalton, D. (1988). Playing the viola. Oxford: Oxford University Press.
- Deutsch, D. (1999). The Psychology of Music, 2nd edition. La Jolla, CA: Academic Press.
- Dillon, J., & Kriechbaum, C. (1978). How to design and teach a successful school string and orchestra program. San Diego, CA: Kjos West Publisher.
- Dillon, J., Kjelland, J., & O'Reilly, J. (1993). Strictly strings: A comprehensive string method, Books 2 and 3. Van Nuys, CA: Alfred Publishing Co., Inc.
- Dinham, S., & Stritter, F. (1986). Research on professional education. In M.C. Wittrock (Ed.), Handbook of research on teaching (p. 952-970). New York: Macmillan.
- Dolejsai, R. (1939). Modern viola technique. Chicago, IL: The University of Chicago Press.
- Donington, R. (1977). String playing in Baroque music. New York: Charles Scribner's Sons.

- Drake, C., & Palmer, C. (2000). Skill acquisition in music performance: relations between planning and temporal control. Cognition, 74, 1-32.
- Duke, R. (1999). Teacher and student behavior in Suzuki string lessons: Results from the International Research Symposium on talent education. Journal of Research in Music Education, 47(4), 293-307.
- Eberhardt, S. (1919). Violin vibrato: Its mastery and artistic use. New York: Carl Fischer.
- Edwards, A. (1959). Beginning string class method, 4 ed. Dubuque, IA: William C. Brown Publishers.
- Epstein, H. (1987). Music talks: Conversations with musicians. New York: McGraw Hill
- Ericsson, K., Krampe, R., & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. Psychological Review, 100(3), 363-406.
- Ericsson, K., & Lehmann, A. (1996). Expert and exceptional performance: Evidence of maximal adaptation to task constraints. Annual Review of Psychology, 47, 273-305.
- Ethell, R., & McMeniman, M. (2000). Unlocking the knowledge in action of an expert practitioner. Journal of Teacher Education, 51(2), 87-101.
- Farish, M. (1970). Development and trial of techniques for teaching contemporary music to young string students. U.S. Department of Health, Education, and Welfare. Urbana, IL: University of Illinois.
- Flesch, C. (1930). The art of violin playing, Book 2. Cooper Square, NY: Carl Fischer, Inc.
- Flesch, C. (1979). Violin fingering: Its theory and practice. New York: Da Capo Press.
- Foddy, W. (1993). Constructing questions for interview and questionnaires: Theory and practice in social research. Cambridge, UK: Cambridge University Press.
- Galamian, I. (1985). Principles of violin playing and teaching. Englewood Cliffs, NJ: Prentice-Hall, Inc.

- Garam, L (1990). The influence of the spatial-temporal structure of movement on intonation during changes of position in violin playing. Helsinki, Finland: Sibelius-Akatemia.
- Geringas, Y (1987). Shifting: Thirty short studies for young violinists. Quebec, Canada: Frederick Harris Music Co., Limited.
- Geringer, J. & Madsen, C. (1987). An investigation of transfer: Music education and applied instruction. Council of Research in Music Education, 91, 45-49.
- Gholson, S. (1998). Proximal positioning: A strategy of practice in violin pedagogy. Journal of Research in Music Education, 46(4), 535-545.
- Gillespie, R., & Hamann, D. (1999). Career choice among string music education students in American colleges and universities. Journal of Research in Music Education, 47(3), 266-278.
- Gillespie, R., & Hamann, D. (1998). The status of orchestra programs in the public schools. Journal of Research in Music Education, 41, 303-314.
- Green, E. (1966). Teaching stringed instruments in classes. Bloomington, IN: Tichenor Publishing.
- Griffiths, P. (2000). How a teacher can influence a whole life. New York Times, 27-29.
- Gruenberg, E. (1919). Violin teaching and violin study. New York: Carl Fischer.
- Havas, K. (1973). Stage fright: Its causes and cures. London: Bosworth & Co.
- Havas, K. (1961). A new approach in violin playing. London: Bosworth & Co.
- Henkle, T. (1968). The string teacher's handbook. New York: Carl Fischer, Inc.
- Hodges, D. (2000). A virtual panel of expert researchers. Music Educators Journal, 87(2), 40-44, 60.
- Holmes, M. & Webber, R. (1955). Above the first position: A comprehensive and melodic approach to the third, second, fourth, and fifth positions. New York, NY: Carl Fischer, Inc.
- Howe, M., Davidson, J., Moore, D., & Sloboda, J. (1995). Are there early childhood signs of musical ability? Psychology of Music, 23, 162-176.
- Hutton, T. (1963). Improving the school string section. New York: Carl Fischer, Inc.

- Kennell, R. (1989). Three teacher scaffolding strategies in college instrumental applied music instruction. (Doctoral Dissertation, University of Wisconsin, 1989). Dissertation Abstracts International.
- Kievman, L. (1971). Introduction to strings: Programmed instruction for the music educator. Pacific Palisades, CA: Kelton Publications.
- Klotman, R. & Harris, E. (1971). Learning to teach through playing: String techniques and pedagogy. Don Mills, Ontario: Addison-Wesley Publishing Company.
- Klotman, R. (1988). Teaching strings. New York: Schirmer Books.
- Koob, J. (1986). The violin pedagogy of Ivan Galamian. (Doctoral Dissertation, University of Illinois, Urbana-Champaign, 1986). Dissertation Abstracts International.
- Lamb, N. & Cook-Lamb, S. (2002). Guide to teaching strings (7th ed.). New York: McGraw-Hill.
- Leonard, C. (1991). The status of arts education in American public schools. Urbana, IL: National Arts Education Research Center at the University of Illinois.
- Linn, E. (1908). First steps in violin playing. New York: Carl Fischer.
- Littrell, D. (Ed.) (2003). Teaching music through performance in orchestra (Vol. 2). Chicago, IL: GIA Publications, Inc.
- Lorrin, M. (1968). Dictionary of bowing and tonal technics for strings. Miami Beach, FL: Folk World, Inc.
- Mason, J. (1981). Documentary report of the Ann Arbor Symposium. National Symposium on the applications of psychology to the teaching and learning of music. Reston, VA: Music Educators National Conference.
- Music Educators National Conference (1957). The string instruction program in music education. Washington, D.C: Music Educators National Conference.
- Music Educators National Conference (1991). Teaching stringed instruments: a course of study. Reston, VA: Music Educators National Conference.
- Menuhin, Y. (1971). Six lessons with Yehudi Menuhin. London: W.W. Norton & Company.

- Menuhin, Y. & Primrose, W. (1976). Violin and viola. New York: Schirmer Books.
- Mishra, J. (1994). Are we teaching our string students to fear? Teaching Music, 2(3), 42-43.
- Mozart, L. (1951). A treatise on the fundamental of principles of violin playing. London: Oxford University Press.
- Mowery, W. (1993). An investigation of the relationship between selected personality variables and retention of students in the string orchestra program.(Doctoral Dissertation, Ohio State University, 1993). Dissertation Abstracts International.
- Neill-Van Cura, K. (1995). The applied music studio: A model of a master teacher (Dorothy DeLay, violin). (Doctoral Dissertation, Baylor University, 1995). Dissertation Abstracts International, 56, 07a.
- Nelson, D. (1983). String teaching and performance: A review of research findings. Council for Research in Music Education, 74, 39-46.
- Nelson, D. (1985). Trends in the aesthetic responses of children to the musical experience. Journal of Research in Music Education, 33(3), 193-203.
- Nelson, S. (1972). The violin and viola. London: Ernest Benn Limited
- Neumann, F. (1969). Violin left hand technique: A survey of related literature. Urbana, IL: American String Teachers Association.
- Newton, L. & Young, T. (1948). The book of the school orchestra. London: Oxford University Press.
- Oddo, V. (1995). Playing and teaching the strings. Belmont, CA: Wadsworth Publishing Company.
- Pernecky, J. (1963). Basic guide to violin playing. Chicago, IL: M.M. Cole Publishing Company.
- Polnauer, F. (1964). Senso-motor study and its application to violin playing. Urbana, IL: American String Teachers Association.
- Quick, J. (1977). Violin pedagogy of Imre Waldbauer (Doctoral Dissertation, University of Iowa, 1977). Dissertation Abstracts International, 38, 04a.

- Richter, C. (1945). Success in teaching school orchestras and bands. Minneapolis, MN: Paul A. Schmitt Music Company.
- Rolland, P. (1959). Basic principles of violin playing. A report prepared for the MENC committee on string instruction in the schools. Washington, D.C.: Music Educators National Conference.
- Rolland, P. (1974). Action studies: Developmental and remedial techniques. Urbana, IL: Illinois String Research Associates.
- Rolland, P. (2000). The teaching of action in string playing: Developmental and remedial techniques, 2nd ed. Urbana, IL: Illinois String Research Associates.
- Rothrock, C. (1971). Training the high school orchestra. W. Nyack, NY: Parker Publishing Company Inc.
- Sadie, S. (Ed.). (1980). The new Grove dictionary of musical instruments: Violin family. (3rd ed.). New York: WW Norton & Company.
- Sadie, S. (Ed.). (2001). The new Grove dictionary of music and musicians (2nd ed., Vols. 1-20). New York: Grove's Dictionaries, Inc.
- Salzberg, C. & Salzberg, R. (1981). Praise and corrective feedback in the remediation of incorrect left-hand positions of elementary string players. Journal of Research in Music Educations, 29(2), 125-133.
- Schlosberg, T. (1987). A study of beginning level violin education of Ivan Galamian, Kato Havas, and Shinichi Suzuki as compared to the Carl Flesch method. (Doctoral Dissertation, University of New Jersey, Rutgers, 1987). Dissertation Abstracts International.
- Stoeving, P. (1914). The elements of violin playing. New York: Bosworth & Co.
- Szende, O. & Nemessuri, M. (1971). The physiology of violin playing. London: Collet's Publishers Ltd.
- Szigeti, J. (1964). A violinist's notebook. London: Gerald Duckworth & Company, Ltd.
- Tertis, L. (1974). My viola and I: A complete autobiography. London: Elek Books Limited.
- Vigdorchik, I. (1989). Violin playing: A physiological approach. New York: Nataly Vigdorchik

- Wechsberg, J. (1973). The glory of the violin. New York: The Viking Press.
- Wentworth, C. (1977). A program for teaching musicianship in the first year of class string instruction (Doctoral dissertation, Washington University, 1977). Dissertation Abstracts International, 42, C6.
- Whistler, H. & Hummel, H. (1955). Elementary scales and bowings for strings: Violin. Chicago, IL: Rubank, Inc.
- Whistler, H. (1944). Introducing the positions. Chicago, IL: Rubank, Inc.
- Whone, H. (1972). The simplicity of playing the violin. London: Victor Gollancz Ltd.
- Yampolosky, I. (1967). The principles of violin fingering. London: Oxford University Press.
- Zweig, M. (2004). String pedagogy. Unpublished manuscript. Bloomington, IN.

Appendix A:

IRB Application

IRB Approval Letter

INSTITUTIONAL REVIEW BOARD APPLICATION FORM UNIVERSITY OF OKLAHOMA-NORMAN CAMPUS AND IRB AFFILIATES Handwritten and/or incomplete forms will be returned to you P#:

use only

PROJECT TITLE: String teachers' attitudes regarding violin/viola shifting.

PART I. INVESTIGATOR INFORMATION

PRINCIPAL INVESTIGATOR

☐ Dr. ☐ Mr. ☒ Ms. ☐ Professor

Name: Beth A. Sievers

Highest Degree Completed: MM, Violin Performance

Investigator Status: ☐ Faculty ☒ Graduate Student ☐ Undergraduate ☐ Staff ☐ Other

E-mail Address: bsievers@ou.edu

Daytime Phone: 292-1120

College/Department : Music

Campus Mailing Address: 500 W. Boyd, Catlett Music Center

Home Mailing Address: 4104 Crystal Ct., Norman, OK 73072

CO-INVESTIGATOR (if applicable)

☐ Dr. ☐ Mr. ☐ Ms. ☐ Professor

Name:

Highest Degree Completed:

Investigator Status: ☐ Faculty ☐ Graduate Student ☐ Undergraduate ☐ Staff ☐ Other

E-mail Address:

Daytime Phone:

College/Department :

Campus Mailing Address:

Home Mailing Address:

COLLABORATOR (if applicable)

☐ Dr. ☐ Mr. ☐ Ms. ☐ Professor

Name:

Highest Degree Completed:

Investigator Status: ☐ Faculty ☐ Graduate Student ☐ Undergraduate ☐ Staff ☐ Other

E-mail Address:

Daytime Phone:

College/Department :

Campus Mailing Address:

Home Mailing Address:

FACULTY SPONSOR (if applicable)

☐ Dr. ☐ Mr. ☐ Ms. ☒ Professor

Name: Nancy H. Barry, Ph.D.

Highest Degree Completed: Ph.D.

Campus: ☒ OU-NC ☐ OU-Tulsa (non-medical) ☐ Cameron University

E-mail Address: barrynh@ou.edu

Daytime Phone: 325-4146

College/Department : Music

Campus Mailing Address: 500 W. Boyd, Catlett Music Center

Home Mailing Address: 4009 Worthington Dr., Norman, OK 73072

Check all of the appropriate boxes for funding sources for this research. Include pending funding source(s).

☐ Extramural ☐ OU-NC Research Council ☐ College ☐ Department

☐ Other:

P.I. of Grant or Contract:

Sponsor:

Contract/Grant No. (if available)

Contract/Grant Title:

Please provide one complete copy of the proposal submitted to the sponsor with this application.

INVESTIGATOR'S ASSURANCE

- I certify that the information provided in this application is complete and correct.
- I understand that as Principal Investigator, I have the responsibility for the conduct of the study, the ethical performance of the project and the protection of the rights and welfare of human subjects.
- I agree to comply with all OU-NC IRB policies and procedures, as well as with all applicable federal, state and local laws regarding the protection of human subjects in research.
- I will ensure that this study is performed by qualified personnel adhering to the OU-NC IRB approved protocol.
- I will not modify the approved protocol or consent materials without first submitting for review and approval by the OU-NC IRB an amendment to the approved protocol.
- I agree to obtain legally effective informed consent from the research participants as applicable to this research and as prescribed in the approved protocol.
- I will promptly report significant adverse events to the OU-NC IRB, in writing.
- I will adhere to all requirements for continuing review.
- I will advise the OU-NC IRB of any change of address or contact information as long as this protocol remains active.

Principal Investigator

Date (mm/dd/yyyy)

Beth A. Sievers

12/19/03

Co-Principal Investigator

Date (mm/dd/yyyy)

Co-Principal Investigator

Date (mm/dd/yyyy)

Collaborator

Date (mm/dd/yyyy)

FACULTY SPONSOR'S ASSURANCE

By my signature as sponsor on this research application, I certify that the student or guest investigator is knowledgeable about the regulations and policies governing research with human subjects and has sufficient training and experience to conduct this particular study in accordance with the research protocol. Additionally,

- I hereby confirm that I have thoroughly reviewed this IRB application, including the protocol narrative, and deem it ready for submission.
- I agree to meet with the investigator on a regular basis to monitor study progress.
- I agree to be available, personally, to assist the investigator in solving problems, should they arise during the course of the study.
- I assure that the investigator will promptly report significant adverse events and will adhere to all requirements for continuing review.
- If I will be unavailable, e.g. sabbatical leave, vacation, or resignation, I will arrange for an alternate faculty sponsor to assume responsibility during my absence, and I will advise the OU-NC IRB, in writing, of such changes.
- The research is appropriate in design.

Faculty Sponsor Nancy H. Barry

Date 12/19/03

Note: To act as faculty sponsor you must be a member of the OU-NC, OU-Tulsa (non-medical), or Cameron University faculty. The faculty sponsor is considered the responsible party for legal and ethical performance of the project.

PART II. Research Proposal

On a separate sheet provide a brief abstract of the study including the purpose of the research.

Project Period (mm/dd/yyyy): Upon approval _____ to 1/1/05

Note: Start date cannot be prior to approval.

Does this application replace/continue a previously approved OU-NC IRB project?

☐ Yes ☒ No

If yes, please list the IRB number of the project. _____

Does this application replace/continue a study approved by another institution's IRB?

☐ Yes ☒ No

If yes, please provide the following:

Name of the Institution _____

Date Approved (if available) _____

IRB Number (if available) _____

Does the proposed study require approval by other Institutional Review Boards?

☐ Yes ☒ No

If so, has approval been obtained? ☐ Yes ☐ No **Note:** If other locations are involved, letters of approval from those

entities must be submitted to the IRB before final approval can be granted.

Does the proposed project involve cancer-related research and/or the OU Cancer Center? ☐ Yes ☒ No

If so, has the appropriate Scientific Review Board reviewed and approved the research? ☐ Yes ☒ No

Note: The OU-NC IRB will not issue approval for any cancer-related study involving human subjects without first receiving notice of approval from the Scientific Review Board.

If this research will result in a thesis or dissertation, please check the appropriate box. ☐ Thesis ☒ Dissertation

STUDY POPULATION:

Age Range: 18 to 64 (include low/high age range)

Gender: ☐ Males ☐ Females ☒ Both

Source of Subjects: ASTA, MENC, NASM
as a string teacher

Special Qualifications: Anyone identified

Anticipated Number of Participants: 500

Estimate the Maximum Number of Participants Needed: 700

Criteria for Exclusion from Participation: Persons under the age of 18 not identified as a string teacher.

Study Sites: ☒ OU-NC ☐ OUHSC ☐ OU-Tulsa

☐ Cameron University Other: _____

SPECIAL GROUPS:

Please check any groups included in the study.

- ☐ *Children (under 18 years) ☐ *Mentally Impaired
☐ *Pregnant Women ☐ *Cognitively Impaired
☐ *Elderly (65 & older) ☐ **Prisoners
☐ *Fetuses ☐ *Native American Tribes and/or Tribal Organizations
☐ *Students enrolled in a class in which the instructor is the investigator

SPECIAL ISSUES

Check the items listed below that apply to this research project:

- ☐ Radiation-producing machines (list each)
☐ IACUC
☐ Recombinant DNA

Note: This information will be forwarded to the appropriate University personnel and/or committee(s).

CONFLICT OF INTEREST

Is there any potential or perceived conflict of interest between the researcher, sponsor and/or University of Oklahoma associated with this study?

- ☐ Yes** ☒ No

If yes, please explain on a separate sheet to be attached to this application. Additional information may be needed by the full Board.

For projects involving only analysis of existing data, documents, records, and/or biological specimens, go to Part IV of this application.

PART III. PROTOCOL

Please respond to each item. Incomplete forms will be returned to you.

1. Describe the recruitment procedures. Attach a copy of any material used to recruit subjects (e.g., informed consent forms, advertisement, flyers, telephone scripts, verbal recruitment scripts, cover letters, etc.).

I will obtain e-mail addresses from MENC by purchasing them from the organization. I will visit websites obtained from NASM and ASTA in order to obtain public domain e-mail addresses. The survey will be sent via e-mail to members of the ASTA, NASM, and MENC having identified themselves as violin/viola teachers, including college professors, college music education professors with an emphasis on strings, private studio teachers, and public school string educators. A cover letter (see attached) will state the purpose of and the need for the study, present instructions for completing the questionnaire, give the approximate time required, and assure the subjects of complete confidentiality. The questionnaire will be included below the cover letter text and not require a separate attachment. A master list with names and e-mail addresses will be kept in order to keep track of the responses. Once the surveys have been returned, the master list and any identifying e-mail addresses or names on the returned surveys will be removed and destroyed to assure complete confidentiality. A consent form (see consent form – hard copy version) will be attached to the questionnaire when I distribute the hard copies to the ASTA conference in March, 2004. The cover letter states that participants can return the surveys directly to me or place them in drop-off boxes located in the lobby near the registration table. The boxes will be labeled "Shifting Surveys".

1. Describe the research and provide detailed information about all study procedures, including a step-by-step description of the procedures you plan to use with your subjects. Provide the approximate duration of subject

participation for each procedure. If data collection instruments will be used, indicate the time necessary to complete them, the frequency of administration, and the setting in which they will be administered, such as telephone, mail, or face-to-face interview. (You must submit a copy of each study instrument, including all questionnaires, surveys, protocols for interviews, etc. Provide reference(s)/citation(s), if appropriate.

Note: Exploration of sensitive or private topics does not qualify for exempt status.

Note: You must retain data for three years beyond the completion of the study.

The questionnaire will consist of three sections: Personal information, pedagogical issues pertaining to shifting, and open—ended responses. Question types will include six-point Likert scales, ranking, listing, and open-ended questions. The questionnaire will take approximately 15 minutes to complete. The subject's participation is voluntary, and the information provided is strictly confidential. The subjects will be informed that by returning the questionnaire, they are agreeing to participate in the study.

The questionnaire will be sent in the body of the e-mail directly below the cover letter (not as an attachment). Participants will be asked to complete the survey located directly below the cover letter, and hit "REPLY" in order to return the completed survey to me. I will keep a master list of returned e-mail surveys in order to send follow-up reminders to participants. I will cut off any identifying materials such as names, e-mail addresses, in order to assure complete confidentiality.

At one-week and three-week intervals after the initial e-mailing of the questionnaire, subjects who have not responded will be sent follow-up reminders via e-mail. Approximately one month after the initial e-mailing, non-respondents will be sent a post card requesting their participation in the study. Subjects will have the opportunity of obtaining a hard copy of the questionnaire if a request is made. I will attend the ASTA convention on March 11-15th in order to distribute follow-up hard copies of the questionnaire (including the hard copy consent form). The participants will be asked to return the surveys directly to me or place them in drop-off boxes located in the lobby by the registration table. The returned convention surveys will be coded in order to not generalize the findings to the general population, but to convention populations. A closing date will be determined for the return of surveys; any responses received after that date will not be included in the study.

- | | | |
|--|-------------------------------|--|
| 2. Will data be recorded by audiotape? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Will data be recorded by videotape? | <input type="checkbox"/> Yes* | <input checked="" type="checkbox"/> No |
| Will photographs be taken? | <input type="checkbox"/> Yes* | <input checked="" type="checkbox"/> No |

Please explain how the disposition of the tapes/photographs/negatives will be handled. Indicate if the tapes/photographs/negatives will be erased or destroyed after transcription/development at the conclusion of the study. If you wish to retain the tapes/photographs/negatives beyond transcription/development, you must provide justification. Subjects must be informed of the disposition of the tapes/photographs/negatives via the informed consent form.

3. Please clarify how subjects will be identified in study records/taped responses.
N/A
4. Will the study subjects be identifiable by name or through demographic data?
☒ Yes ☐ No

If "Yes" is checked, please answer questions 5a. and 5b.

If "No" is checked, please go to question #6.

5a. Describe how the confidentiality of the subject's identity will be maintained. A master list with names and e-mail addresses will be kept in order to keep track of the responses. Once the surveys have been returned, the master list and any identifying e-mail addresses or names on the returned surveys will be removed and destroyed to assure complete confidentiality.

5b. Describe how subject identifiers will be maintained or destroyed after the study is completed.

I will destroy and remove any names and/or e-mail addresses in order to assure complete confidentiality. The records attained from this study will be kept in a locked filing cabinet in my office. The materials will be accessible only to me.

5. **Informed Consent:** Please attach, as an appendix, an informed consent document to this application. If subject participation is anonymous, an information sheet or cover letter that contains all required elements of informed consent is recommended. If subject participation is not anonymous, you must attach a consent form to this application. See Attached
6. Request for Waiver from Informed Consent: Provide a written justification for a waiver of informed consent according to Section 46.116 of 45 CFR 46. Waiver of informed consent requires full Board review. Are you requesting a waiver of informed consent? ☐ Yes* ☒ No

If yes, please explain.

7. Will participants encounter the possibility of stress or psychological, social, physical or legal risks that are greater than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests? ☐ Yes** ☒ No

If yes, explain.

8. Will medical clearance or a medical screening be necessary for participants to participate because of tissue or blood sampling, administration of substances such as food or drugs, or physical exercise conditioning? ☐ Yes* ☒ No

If yes, explain how clearance will be obtained. If a screening instrument will be used, please attach a copy to the application.

1. Will the subjects be deceived or misled in any way? ☐ Yes* ☒ No

If yes, provide a justification and attach a debriefing plan to this application.

9. Will information be requested from the participants that might be considered personal or sensitive? ☐ Yes* ☒ No

If yes, explain what measures will be taken to protect participants from harm resulting from such disclosure.

10. Will the subjects be presented with materials that might be considered to be offensive, threatening or degrading or which might evoke an emotional response? ☐ Yes* ☒ No

If yes, explain the measures that will be taken to intervene or minimize harm.

11. Will any compensation or inducements, i.e. course credit, be offered to the subjects for their participation? ☐ Yes ☒ No

If yes, describe those inducements and include a statement in the informed consent document explaining how compensation will be handled in the event the participant withdraws from the study.

12. Will any record of the subject's participation in this study be made available to his or her supervisor, teacher, or employer? ☐ Yes* ☒ No

If yes, please explain.

13. Describe the benefits that might accrue to either the participants or to society from participation in this project.

The results of this study will be useful to string educators who wish to develop a standardized curriculum for teaching shifting, as well as to individuals interested in writing materials pertaining to shifting.

14. Describe the potential risks to subjects that may result from participating in this project.

Note: Risks to subjects must be reasonable in relation to the anticipated benefits.

This study poses no risk beyond those ordinarily encountered in daily life

IV. PART USE OF EXISTING DATA, DOCUMENT, RECORDS AND/OR BIOLOGICAL SPECIMENS. N/A

PART V: REQUEST FOR EXEMPT STATUS

Please refer to the attached list of [Exempt Criteria](#) and indicate the specific number that you feel applies to your study.

I request this application be considered for Exempt Status as outlined in the following section of the Exempt Criteria.

<input type="checkbox"/> 1a	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3a	<input type="checkbox"/> 4	<input type="checkbox"/> 5a	<input type="checkbox"/> 6a
<input type="checkbox"/> 1b		<input type="checkbox"/> 3b		<input type="checkbox"/> 5b	<input type="checkbox"/> 6b
				<input type="checkbox"/> 5c	
				<input type="checkbox"/> 5d	

*** IF YOU CHECKED A SECTION MARKED WITH AN *, YOUR APPLICATION DOES NOT QUALIFY FOR EXEMPT STATUS.**

**** IF YOU CHECKED A RESPONSE MARKED WITH **, YOUR APPLICATION WILL MOST LIKELY REQUIRE FULL BOARD REVIEW.**

Checklist for Institutional Review Board Application Submission:

- ☐ Application Form with Signatures
- ☐ Protocol
- ☐ Solicitation Announcements/Recruitment Flyers
- ☐ Data Collection Instruments/Research Questions/Questionnaires/Surveys
- ☐ Informed Consent Documents
 - ☐ Parental/Legal Guardian Permission Form
 - ☐ Child Assent Form
- ☐ Approval from Study Sites
 - ☐ Tribal Council Approval
- ☐ Medical Screening Instrument
- ☐ Proposal and/or Contract or Grant
- ☐ Debriefing Plan

Submit to:

Office of Human Research Participant Protection
 660 Parrington Oval
 Evans Hall, Room 316
 Norman, OK 73019
 405-325-8110

Number of Copies to be Submitted:

Exempt	3
Expedited	3
Full Board	20



The University of Oklahoma

OFFICE OF HUMAN RESEARCH PARTICIPANT PROTECTION

February 17, 2004

Ms. Beth A. Sievers
Music
CMC 138
CAMPUS MAIL

Dear Ms. Sievers:

Your research application, "Survey of string teachers' attitudes regarding violin/viola shifting" has been reviewed according to the policies of the Institutional Review Board and found to be exempt from the requirements for full board review. Your project is approved under the regulations of the University of Oklahoma - Norman campus Policies and Procedures for the Protection of Human Subjects in Research Activities.

Should you wish to deviate from the described protocol, you must notify this office, in writing, noting any changes or revisions in the protocol and/or informed consent document, and obtain prior approval. Changes may include but are not limited to adding data collection sites, adding or removing investigators, revising the research protocol, and changing the subject selection criteria. A copy of the approved informed consent document(s) is attached for your use.

Should you have any questions, please contact me at 325-8110 or irb@ou.edu.

Cordially,

E. Laurette Taylor, Ph.D.
Chair

Institutional Review Board -- Norman Campus (FWA #00003191)

FY2004-202

cc: Dr. Nancy H. Barry, Music

Appendix B:
Survey Questionnaire
(Revised Version)

SURVEY QUESTIONNAIRE

A SURVEY OF STRING TEACHERS' ATTITUDES REGARDING VIOLIN/VIOLA SHIFTING

This study examines the left hand technique of shifting with violin/viola string students. For the purposes of this study, shifting is defined as the process of moving the left hand from one position to another. Please answer each question with the most appropriate response. It is anticipated that completion of this questionnaire should only take 15 minutes of your time.

Section I: Personal Information

1. Primary instrument: (please specify) _____
2. Education: (circle number of highest degree)
 - 1) High School diploma or equivalency
 - 2) Bachelor's degree
 - 3) Master's degree
 - 4) Doctoral degree
 - 5) Artist Diploma or certificate
3. Focus of highest degree: (circle number)
 - 1) String Performance
 - 2) String Music education
 - 3) String pedagogy
 - 4) Other (please specify) _____
4. How many years have you studied your major instrument? _____
5. Years of experience as a violin/viola performer (amateur or professional): _____
6. Primary teaching: (circle one)
 - 1) Elementary School String Music Teacher
 - 2) Middle School/Junior High School String Music Teacher
 - 3) High School String Music Teacher
 - 4) College Music Education Teacher
 - 5) College String Pedagogy Teacher
 - 6) College Studio Teacher – Undergraduate level only
 - 7) College Studio Teacher – Undergraduate and Graduate levels
 - 8) Private Studio String Teacher
 - 9) Suzuki Method (strings)
 - 10) Other (specify) _____
7. Additional teaching: (circle one)
 - 1) Elementary School String Music Teacher
 - 2) Middle School/Junior High School String Music Teacher
 - 3) High School String Music Teacher
 - 4) College Music Education Teacher
 - 5) College String Pedagogy Teacher
 - 6) College Studio Teacher – Undergraduate level only
 - 7) College Studio Teacher – Undergraduate and Graduate levels
 - 8) Private Studio String Teacher
 - 9) Suzuki Method (strings)
 - 10) Other (specify) _____
 - 11) Not applicable

8. In what state are you currently teaching? _____
9. Years of experience as a string teacher. _____
10. Age: (circle number)
- | | |
|----------------|----------------|
| 1) 25 or below | 4) 46-55 |
| 2) 26-35 | 5) 56-65 |
| 3) 36-45 | 6) 66 or older |

Section II: Pedagogical Issues: Shifting

The following section seeks to determine your level of agreement concerning pedagogical techniques of shifting among violin and viola students. Please circle the most appropriate response.

Key: SA = *Strongly Agree*; A = *Agree*; U = *Undecided*; D = *Disagree*; SD = *Strongly Disagree*; NA = *Not Applicable*

11. Pre-shifting exercises should be incorporated into the first year of violin/viola instruction.	SA	A	U	D	SD	NA
12. Shifting exercises should be introduced after first position is secure.	SA	A	U	D	SD	NA
13. Third position should be taught before first position is taught.	SA	A	U	D	SD	NA
14. Secondary level violin/viola students have difficulty shifting.	SA	A	U	D	SD	NA
15. Shifting should be introduced during the second year of violin/viola instruction.	SA	A	U	D	SD	NA
16. My beginner violin/viola students do not have difficulty with shifting.	SA	A	U	D	SD	NA
17. My secondary violin/viola students do not have difficulty with shifting.	SA	A	U	D	SD	NA
18. Third position should be taught after first position is taught.	SA	A	U	D	SD	NA
19. Second and third positions should be taught at the same time.	SA	A	U	D	SD	NA
20. Shifting should be introduced from the very beginning to avoid the "set in concrete" left hand.	SA	A	U	D	SD	NA
21. Shifting should be introduced to beginning violin/viola students by using movement exercises.	SA	A	U	D	SD	NA
22. Shifting should be incorporated into scale studies.	SA	A	U	D	SD	NA
23. Shifting should be introduced when the orchestra/solo literature requires the violin/viola student to shift.	SA	A	U	D	SD	NA
24. More pedagogical literature is needed to prepare violin/viola students for shifting.	SA	A	U	D	SD	NA
25. When violin/viola students prepare a piece that requires shifting, the method of practice should involve only the piece of music (no auxiliary shifting methods).	SA	A	U	D	SD	NA
26. Movement of the left arm should be discussed in relationship to the shifting of the left hand.	SA	A	U	D	SD	NA
27. Ear training should be part of learning to shift.	SA	A	U	D	SD	NA
28. Shifting is an aid for learning the geography of the violin/viola fingerboard.	SA	A	U	D	SD	NA
29. Violinists/violists learn to shift at the same time as cellists/bassists.	SA	A	U	D	SD	NA
30. One-octave scales on the same string are useful when learning to shift.	SA	A	U	D	SD	NA
31. The thumb should play an important role when leading the shift.	SA	A	U	D	SD	NA

32. A guide note should be used when locating a new position.	SA A U D SD NA
33. Shifting should be taught to prepare for solo/ensemble literature.	SA A U D SD NA
34. Violin/viola students experience frustration when shifting.	SA A U D SD NA
35. Finger tapes should be used when introducing shifting.	SA A U D SD NA
36. Violin/viola students should be able to hear the pitch in their minds before attempting to shift.	SA A U D SD NA
37. Silent practice while moving the left hand is a good technique for shifting.	SA A U D SD NA
38. It is difficult to teach shifting in a group setting.	SA A U D SD NA
39. Shifting is better taught in a heterogeneous string classroom (one teacher, multiple students, mixed string instruments).	SA A U D SD NA
40. There is not enough time to monitor shifting with each violin/viola student during one class period.	SA A U D SD NA
41. A systematic approach to introducing shifting would be useful for string teachers.	SA A U D SD NA
42. Violinists/violists learn to shift later than cellists/bassists.	SA A U D SD NA
43. Violin/viola students should sit down when they learn to shift.	SA A U D SD NA
44. There is a lack of materials for teaching shifting to beginning violin/viola students.	SA A U D SD NA
45. Shifting is better taught in a private studio (one on one).	SA A U D SD NA
46. Shifting is better taught in a homogeneous string classroom (one teacher, multiple students, all on same instrument).	SA A U D SD NA
47. Violin/viola students should stand up when they learn to shift.	SA A U D SD NA

Key: SA =Strongly Agree; A = Agree; U = Undecided; D = Disagree; SD = Strongly Disagree; NA = Not Applicable

Section III: Open-ended Responses

Please use the space provided to answer the following open-ended questions. List what you think is the best approach to teaching shifting to violin/viola students.

48. What specific etudes/exercises are the most effective when introducing shifting to violin/viola students?

49. What is the most effective teaching method when introducing shifting to violin/viola students?

50. What are the advantages of introducing shifting early in a violinist's/violist's curriculum?

51. What are the disadvantages of introducing shifting early in a violinist's/violist's curriculum?

Please use the back of this page to make any additional comments regarding teaching shifting to violin/viola students.

Thank you for your participation!

Appendix C:
Survey Questionnaire
(Modified Version)

SURVEY QUESTIONNAIRE

A SURVEY OF STRING TEACHERS' ATTITUDES REGARDING VIOLIN/VIOLA SHIFTING

This study examines the left hand technique of shifting with violin/viola string students. For the purposes of this study, shifting is defined as the process of moving the left hand from one position to another. Please answer each question with the most appropriate response. It is anticipated that completion of this questionnaire should only take 15 minutes of your time.

Section I: Personal Information

1. Primary instrument: (please specify) _____
2. Education: (circle number of highest degree)
 - 1) High School diploma or equivalency
 - 2) Bachelor's degree
 - 3) Master's degree
 - 4) Doctoral degree
 - 5) Artist Diploma or certificate
3. Focus of highest degree: (circle number)
 - 1) String Performance
 - 2) String Music education
 - 3) String pedagogy
 - 4) Other (please specify) _____
4. How many years have you actively studied your major instrument? _____
5. Years of experience as a violin/viola performer (amateur or professional): _____
6. Primary teaching: (circle one)
 - 1) Elementary School String Music Teacher
 - 2) Middle School/Junior High School String Music Teacher
 - 3) High School String Music Teacher
 - 4) College Music Education Teacher
 - 5) College String Pedagogy Teacher
 - 6) College Studio Teacher – Undergraduate level only
 - 7) College Studio Teacher – Undergraduate and Graduate levels
 - 8) Private Studio String Teacher
 - 9) Suzuki Method (strings)
 - 10) Other (specify) _____
7. Additional teaching: (circle one)
 - 1) Elementary School String Music Teacher
 - 2) Middle School/Junior High School String Music Teacher
 - 3) High School String Music Teacher
 - 4) College Music Education Teacher
 - 5) College String Pedagogy Teacher
 - 6) College Studio Teacher – Undergraduate level only
 - 7) College Studio Teacher – Undergraduate and Graduate levels
 - 8) Private Studio String Teacher
 - 9) Suzuki Method (strings)
 - 10) Other (specify) _____
 - 11) Not applicable

8. In what state are you currently teaching? _____
9. Years of experience as a string teacher. _____
10. Age: (circle number)
- | | |
|----------------|----------------|
| 1) 25 or below | 4) 46-55 |
| 2) 26-35 | 5) 56-65 |
| 3) 36-45 | 6) 66 or older |

Section II: Pedagogical Issues: Shifting

The following section seeks to determine your level of agreement concerning pedagogical techniques of shifting among violin and viola students. On a continuum of 1 through 5 [1 = strongly disagree (SD); 5 = strongly agree (SA)], please indicate your attitude towards the following statements:

	SD					SA
11. Pre-shifting exercises should be incorporated into the first year of violin/viola instruction.	1	2	3	4	5	NA
12. Shifting exercises should be introduced after first position is secure.	1	2	3	4	5	NA
13. Third position should be taught before first position is taught.	1	2	3	4	5	NA
14. Shifting can be taught successfully in a private studio (one on one).	1	2	3	4	5	NA
15. Shifting should be introduced during the second year of violin/viola instruction.	1	2	3	4	5	NA
16. Violin/viola students beyond the third year of instruction do not have difficulty with shifting.	1	2	3	4	5	NA
17. Shifting should be introduced from the very beginning to avoid the "set in concrete" left hand	1	2	3	4	5	NA
18. Scale studies are a useful tool when learning to shift.	1	2	3	4	5	NA
19. Violin/viola students should sit down when they learn to shift.	1	2	3	4	5	NA
20. Ear training should be part of learning to shift.	1	2	3	4	5	NA
21. Violinists/violists should learn to shift at the same time as cellists/bassists.	1	2	3	4	5	NA
22. One-octave scales on the same string are useful when learning to shift.	1	2	3	4	5	NA
23. The thumb should play an important role in leading the shift.	1	2	3	4	5	NA
24. A guide note should be used when locating a new position	1	2	3	4	5	NA
25. Finger tapes should be used when introducing shifting.	1	2	3	4	5	NA
26. When teaching shifting, there are certain factors that do not allow me to teach as I feel best.	1	2	3	4	5	NA
27. Shifting can be taught successfully in a heterogeneous string classroom (one teacher, multiple students, mixed string instruments).	1	2	3	4	5	NA
28. Third position should be taught after first position is taught	1	2	3	4	5	NA
29. Violinists/violists learn to shift later than cellists/bassists.	1	2	3	4	5	NA
30. Violin/viola students beyond the third year of instruction have difficulty shifting.	1	2	3	4	5	NA
31. More pedagogical literature is needed to prepare violin/viola students for shifting.	1	2	3	4	5	NA
32. Shifting can be taught successfully in a homogeneous string classroom (one teacher, multiple students, all on the same instrument).	1	2	3	4	5	NA
33. Violin/viola students should stand up when they learn to shift.	1	2	3	4	5	NA

Section III: Open-ended Responses

Please use the space provided to answer the following open-ended questions. List what you think is the best approach to teaching shifting to violin/viola students.

34. What specific etudes/exercises are the most effective when introducing shifting to violin/viola students?

35. What is the most effective teaching method when introducing shifting to violin/viola students?

36. What are the advantages of introducing shifting early in a violinist's/violist's curriculum?

37. What are the disadvantages of introducing shifting early in a violinist's/violist's curriculum?

38. What are violinists/violists learning in the classroom while cellists/bassists learn to shift?

39. What factors enable or constrain your teaching of shifting?

Please use the back of this page to make any additional comments regarding teaching shifting to violin/viola students.

Thank you for your participation!

Appendix D:
Cover Letter to String Educators
(E-mail Version)

STRING TEACHERS' ATTITUDES REGARDING VIOLIN/VIOLA SHIFTING ANONYMOUS QUESTIONNAIRE

Dear String Teacher/Performer:

I am a graduate student under the direction of Professor Nancy Barry in the School of Music at the University of Oklahoma-Norman Campus. I invite you to participate in a research study being conducted under the auspices of the University of Oklahoma-Norman Campus. Results of this study will form the basis of a doctoral dissertation: *Survey of String Teachers' Attitudes Regarding Violin/Viola Shifting*.

As an expert in string education, whether you are active as a performer, studio teacher, string educator, or a combination thereof, your assistance in this project would be invaluable. Since the pedagogy of shifting is seldom studied, the questionnaire is my own design. For the purposes of this study, shifting techniques are defined as any teaching method you and/or your students undertake while studying shifting.

Your Survey details are as follows:

Title:	String Teachers Attitudes Regarding Shifting
Description:	This study examines the left hand technique of shifting with violin/viola students.
Start Date:	September 30, 2004
Expires:	November 30, 2004
Survey Key:	aaa60
Survey location:	http://webapps.ou.edu/Survey/Default.cfm?SurveyKey=aaa60
Authentication:	Anonymous
Pin Number:	No need for Pin number for this type of authentication

The survey will take about 15 minutes to complete. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time. This questionnaire is anonymous. The results of the study may be published, but your name will not be linked to responses in publications that are released from the study.

Please be aware that filling out this on-line survey implies your consent to participate. To participate, you must be 18 years of age or older.

If you are interested in receiving a report on the results of this study or have any questions, please e-mail me at bsievers@ou.edu, or contact Dr. Nancy Barry at (405) 325-4146. Questions about your rights as a research participant or concerns about the project should be directed to the Institutional Review Board at the University of Oklahoma-Norman Campus at (405) 325-8110 or irb@ou.edu.

Your consideration is greatly appreciated.

Sincerely,
Beth A. Sievers

Appendix E:
Cover Letter to String Educators
(Hard Copy Version)

**STRING TEACHERS' ATTITUDES REGARDING VIOLIN/VIOLA
SHIFTING
CONFIDENTIAL QUESTIONNAIRE
INFORMATION FORM**

Dear String Teacher/Performer

I am a graduate student under the direction of Professor Nancy Barry in the School of Music at the University of Oklahoma-Norman Campus. I invite you to participate in a research study being conducted under the auspices of the University of Oklahoma-Norman Campus. Results of this study will form the basis of a doctoral dissertation: *Survey of String Teachers' Attitudes Regarding Violin/Viola Shifting*.

As an expert in string education, whether you are active as a performer, studio teacher, string educator, or a combination thereof, your assistance in this project would be invaluable. Since the pedagogy of shifting is seldom studied, the enclosed questionnaire is my own design. For the purposes of this study, shifting techniques are defined as any teaching method you and/or your students undertake while studying shifting.

The survey will take about 15 minutes to complete. Your involvement in the study is strictly voluntary, and you may choose not to participate or to stop at any time. Since the study is completely confidential, however, once you have submitted a completed questionnaire, it is impossible to withdraw it. All information you provide will be kept strictly confidential.

No risks beyond those present in normal every day life are anticipated in this study.

Please be aware that returning this questionnaire implies your consent to participate. To participate, you must be 18 years of age or older.

You may return the completed questionnaires to me directly or place them in designated boxes located in the lobby near the registration table. Each box will be labeled "Shifting Questionnaires".

If you are interested in receiving a report on the results of this study or have any questions, please e-mail me at bsievers@ou.edu, or contact Dr. Nancy Barry at (405) 325-4146. Questions about your rights as a research participant or concerns about the project should be directed to the Institutional Review Board at the University of Oklahoma-Norman Campus at (405) 325-8110 or irb@ou.edu.

Thank you for your help.
Sincerely,

Beth A. Sievers

Appendix F:
Follow Up E-Mail
To String Educators

FOLLOW-UP E-MAIL TO STRING EDUCATORS

November 22, 2004

Dear String Educator;

Last week a questionnaire requesting information on the attitudes regarding violin/viola shifting was sent to you via e-mail. If you have already completed and returned the on-line survey, please accept my thanks. If you have not yet had an opportunity to answer and return the survey, please take the time to do so now. The deadline is November 30th, 2004. Your response is important to the study. The results will be the basis for a doctoral dissertation at the University of Oklahoma regarding best practices in teaching shifting to violin/viola students.

If you did not receive the URL address for the questionnaire, please e-mail me at bsievers@ou.edu or call me collect at (405) 292-1120, and I will mail you a hard copy of the questionnaire immediately. Your time and response are greatly appreciated.

Sincerely,

Beth A. Sievers
Director, Sooner String Project
String Pedagogy Instructor
University of Oklahoma
500 W. Boyd
Norman, OK 73069

Appendix G:
Responses to Open-ended
Questions

Question 34: What specific etudes/exercises are the most effective when introducing shifting to violin/viola students?

- 002 – “In my private studio, I always use the Whistler Introducing the Positions Books for violin and viola. I also use scales, particularly the Hrimaly book and its shifting studies. In public school teaching (heterogeneous classes) I used some excerpts of Whistler but more method books (Essential Elements) paired with exercises I made up myself and scales”
- 003 – “The shifting exercises in the Suzuki books.”
- 005 – “Arm swing action while moving whole hand up fingerboard.”
- 006 – “In my private studio_ I always use the Whistler Introducing the Positions Books for violin and viola. I also use scales_ particularly the Hrimaly book and its shifting studies.”
- 007 – “Sirens between positions_ scales_ matching pitches with open strings.”
- 009 – “Any that have been tried and proven successful. Many already exist.”
- 010 – “Tracing a diagonal with thumb while shifting.”
- 011 – “I use one octave_ one string scales and simple orchestra materials or modify their text book to include shifting fingerings.”
- 012 – “Essential Techniques for Strings_ Whistler Shifting Etudes_ scales.”
- 013 – “It varies from student to student.”
- 014 – “Sevcik.”
- 016 – “I use the Essential Elements Books in a heterogeneous classroom.”
- 017 – “I use a pattern of shifting practice that I learned in Jr. High_ but that I've never seen written. It leads through all possible starting/ending finger combinations for any shifting position.”
- 018 – “Introducing the Positions.”
- 021 – “I design my own which I find are more efficient and effective than most method books.”
- 023 – “Sevcik”
- 026 – “Kievman_ Yost_ Kreutzer.”
- 028 – “Shifting to specific harmonics”
- 029 – “Yost shifting exercises.”
- 030 – “Whistler: Introducing the Positions.”
- 031 – “Early Wohlfahrt and Mazas etudes involving 3rd position. They train hearing the same pitch in both 1st and 3rd position.”
- 032 – “Non-published, homemade studies get their eyes away from the music so they can concentrate on the kinesthetic, aural, and visual”
- 033 – “Russian Method (compilations) is the best; Yost_ some Sevcik_ some Whistler.”
- 034 – “Scales.”
- 035 – “Mimi Zweig's Pedagogy.com exercises.”
- 036 – “I teach the shifting motion in fun slides_ and vibrato exercises.”
- 037 – “Paul Rolland's shuttle exercise.”
- 038 – “Whistler books remain excellent.”
- 039 – “isolating shifts on each string_ isolating the left arm's role in the shift. Also_

- teach shifting from the beginning by placing a "high dot" over the harmonic note on the A string and tapping_ then slide down to first position."
- 040 – "Harmonic slides are useful in order to teach light finger/thumb pressure when shifting."
- 041 – "Pre-shifting motions."
- 042 – "Sevcik_ Applebaum."
- 043 – "Scales_ Broken Thirds."
- 044 – "Scales."
- 045 – "Introducing the Positions_ Wohlfahrt_ Kreutzer [sic]."
- 046 – "Lots of Rolland-stly preshifting exercises."
- 047 – "(for violin): scales_ Kreutzer_ Hrimaly_ the blue Carl Flesch scale book. I believe you can also use easier pieces originally meant for first-position playing_ and use them for playing in other positions."
- 048 – "playing 0-1-2-3_ then 0-1-2-1(3rd position)."
- 049 – "Sevcik"
- 050 – "Introducing the positions."
- 053 – "Introducing The Positions series has worked well for me after I teach the most basic shifting techniques on my own."
- 055 – "Not sure."
- 056 – "Make sure that the instrument is balanced and that the left hand is free. Separate the shifting motion_ playing in the position and reading music in position and reading treble clef in positions. Early exercises to free the left arm and hand are of prime importance. Use of harmonics is an easy way to get free motion. EG [sic] Twinkle theme—play the octave harmonic for the second one of each repeated note. This can also be done with Perpetual Motion from Suzuki Book 1. Playing familiar first position pieces in other positions, no shifting after starting and playing by ear, will give experience with how it feels. Playing familiar pieces with some parts in 3rd position – eg. Handel Bouree in Suzuki Book 2 with the first phrase in third position every time it comes in the piece—the remainder of the piece in first position—gives experience moving from first to third and back."
- 057 – "Scales."
- 058 – "Introducing the Positions."
- 059 – "entire hand movement with shifts from first finger in first position to whatever position but set pitch with the first finger."
- 060 – "Simple songs in position. Best if the student has previously played them in first position."
- 062 – "Sliding on the same finger from first to third position: 1 to 1_ 2 to 2_ and 3 3."
- 063 – "The exercises in the Applebaum String Builder series (Book 3) are effective."
- 064 – "I begin with "sirens" and "pizzicato glissandi" within the 1st or 2nd lesson to help students feel comfortable moving around the instrument."
- 065 – "Sevcik_ exercises that I have written and include in my pedagogy."
- 066 – "Scales 2 octaves_ arpeggios (D major for violas_ e minor/Major for violins)."
- 067 – "Glissando_ 1-string scales_ octave shifts on one string. Whistler Introducing the positions."

- 068 – “Shifting taps_ sliding between strings_ sliding chords_ one finger scales_ shifting to/from harmonics_ etc.”
- 070 – “Knowledge of the harmonic. Shifting to harmonics.”
- 071 – “Bornoff: Patterns in Positions Section 1 Harmonic exercises. (Watered down in Essential Elements book 3_ ex 21-3).”
- 072 – “Shifting to harmonics is a good introduction.”
- 073 – “Essential Elements series - Intermediate Techniques and then Advanced Techniques. This series is outstanding.”
- 074 – “I am partial to the Essential Technique Book from the Essential Elements Series.”
- 075 – “Yost-- Exercises for the Change of Position.”
- 076 – “2 Octave scale of C major and D Major.”
- 077 – “Scales.”
- 078 – “I use an exercise where they play f# then a in first position_ then follow it with f# in first_ shifting to third to play a with the first finger - repeat on all strings (of course the notes change on the other strings).”
- 079 – “Yost Change of Position.”
- 080 – “Scales and pieces; Wohlfahrt etudes.”
- 081 – “Immediate reward and ear training by playing music the student knows in new positions. A mistake made is immediately heard by the untrained ear of an early learner.”
- 082 – “1. Major scales.”
- 084 – “Your questions are too vague. For example_ some specific 3rd year students have trouble with shifting_ many do not_ but your answers didn't allow me to say that! Also_ there are lots of great printed books for teaching shifting for violin_ but those same books are not available for viola, but your survey didn't allow me to make those distinctions. As for this question: given that question 35 is almost the same, do you mean method books or exercises? For books, I use the Holmes/Weber Above the First Position a lot, as well as the Geringas Shifting Studies, and Suzuki position etudes, and sometimes Yost exercises. No matter what materials I use, first we do some playing by ear in position (probably 2 8ve scales), then we do some shifting on an open string, then we learn to slide on the same finger (slurring first, because it keeps the hand more relaxed), then we learn to do shifts with a change of finger by learning to use a guide finger. We do most or all of this in exercises before . . .{sic}”
- 085 – “Scale work.”
- 086 – “pitch matching.”
- 087 – “1) scales.”
- 088 – “Vomit-Shifting to a pre-determined note (by playing a drone) and sliding up and back to the starting note.”
- 089 – “Replacement fingerings (1-3_ for example).”
- 090 – “One finger scales_ ear training for interval recognition.”
- 091 – “Essential Elements for Strings Book 3 and 4.”
- 092 – “I don't know that it is still in Print_ but I had great success with Samuel Applebaum's "Eliminate the Fear of Shifting" The Title is only close.”

- 093 – “Sevcik.”
- 094 – “The Suzuki exercises in each book.”
- 095 – “Scale based etudes.”
- 096 – “I like to use the Essential Elements by Gillespie in my High School. I can successfully teach in the homogeneous setting_ although the skills taught in any one specific exercise are not always the same skills- for instance_ the viola section skill can be.”
- 097 – “Scales.”
- 098 – “1 string scales_ multiple octave scales_ one string melodic exercises.”
- 099 – “I use the exercises given in whatever class instructional book I'm using. Currently Essential Elements for Strings 2000 DVD version.”
- 100 – “Introduction to the Positions – Rubank.”
- 101 – “Paul Rolland-type pre-shifting exercises.”
- 102 – “Scales (or scale-like patterns).”
- 103 – “Whistler_ Introducing the positions and later_ Sevcik_ Shifting the Position.”
- 104 – “Mazas_ Sevcik.”
- 105 – “Scales.”
- 106 – “Muller Rusch Bk 3.”
- 107 – “sliding up and down fingerbd. in rest position_ silent shifts with every finger_ matching harmonics_playing simple melodies in different pos.[sic]”
- 108 – “Scales.”
- 109 – “1. Starting with the 2nd finger begin sliding up the fingerboard taking the thumb with the fingers. 2.Each time make the slide smaller and smaller until you go into 3rd position. 3. Then practice going from just first to third position. 4. Repeat with other . . .”
- 110 – “High mark plucking.”
- 111 – “Not sure.”
- 112 – “Harvey Whistler Introducing the Positions.”
- 114 – “Wohlfahrt Book 2.”
- 116 – “One octave scales on adjacent strings.”
- 119 – “In orchestral setting: use of a method book in middle school (All for Strings as needed when encountered in grade-appropriate literature; as needed for middle school competition/audition scale requirements.”
- 120 – “1st finger sliding on one string = ‘meow.’”
- 121 – “Mueller Rush book 3.”
- 122 – “Scale line shifts.”
- 123 – “Initially_ glissando harmonics_ then notes of the scale in first position alternating with the octave harmonic.”
- 124 – “Overlapping positions; octave shifts.”
- 125 – “As a string educator who has taught heterogeneous classes_ I typically use the Essential Techniques books in conjunction with some literature that we are studying.”
- 126 – “Depends on the teaching situation.”

- 128 – “Preparatory hand exercises.”
- 129 – “Whistler (Violin).”
- 130 – “Single-Finger_ shifting exercises 1st through 4th positions.”
- 131 – “Pre-shifting slides.”
- 135 – “Yost.”
- 136 – “Sevcik.”
- 137 – “Large motor exercises without pitch specificity. Exercises designed to ensure freedom and mobility of the thumb. Exercises emphasizing release of finger weight on string and rhythmic coordination with the right hand.”
- 138 – “Do not know_ other than 1 octave scales on 1 string.”
- 139 – “Warm ups I have created based on Paul Rolland's work (and others).”
- 140 – “Schradieck.”
- 141 – “Whistler_ Sevcik.”
- 142 – “Wohlfahrt_ book 2 or 60 studies.”
- 143 – “I use Essential Techniques from the Essential Elements series.”
- 144 – “Play E# G on D string. Slide 1st finger up to G.”
- 145 – “Whistler. Applebaum String Builder_ Wohlfahrt.”
- 146 – “Depends on ability level.”
- 147 – “Essential Techniques. “
- 148 – “Yost.”
- 149 – “Scales.”
- 153 – “Repetition of shift_ in both an up a down direction. "Polishing" the instrument-to make sure thumb is loose.”
- 154 – “Paul Rolland's Shuttle Game_ many of the exercises in Phyllis Young's book_ (violin/viola--establishing a balanced instrument position that allows the left hand to be free).”
- 156 – “Louis Kievman's book worked well for me.”
- 157 – “Shifting to and from harmonics.”
- 158 – “Essential Elements_ Book 3: helpful in teaching shifting to heterogeneous groups.”
- 159 – “Scales.”
- 160 – “Scales.”
- 161 – “Shuttling with no fingers down; polishing the string; taking turns having each finger glide up and down on the string.”
- 162 – “Whistler Bk has worked for years...It IS the teacher that causes success!!!”
- 163 – “Teaching that the thumb and fingers move together_ the wrist does not bend and the elbow closes to produce the shift.”
- 165 – “Scales and various exercises. I use the green Essential Techniques book. The exercises are pretty good.”
- 166 – “The basics: Rote teach.”
- 167 – “Scales.”
- 168 – “Rolland motion studies_ Kreutzer_ Kayser_ etc..”
- 169 – “Exercises.”
- 172 – “Scales and Arpeggios_ Kreutzer #11_ Yost_ Dounis_ etc.”

- 173 – “Dounis_ Yost.”
- 174 – “Riding the rails or gliding the finger lightly on the string to “unweight” {si it. Watching the thumb to be sure it moves properly. Reading exercises distracts from the technique involved and hinders the ear training necessary. Rote teaching is necessary.”
- 175 – “Two octave D major scale-violin_ two octave G major scale-viol.”
- 176 – “Matching pitches with singing and with fingering drills_ matching open strings; moving forearm as a unit prior to holding the violin_ transferring this motion to instrument; maintaining posture of hand and finger arching during the shift; slow motion harmonic.”
- 177 – “All For Strings Book 3 has great shifting exercises for heterogeneous classes.”
- 178 – “Songs students already know by ear.”
- 179 – “Rote exercises_ Whistler-Introduction to the Positions 3rd and 5th.”
- 180 – “German book by Schloeder - Band II Vol.1 is the most successful book. I use it privately with violin students. Otherwise in class settings - Essential Elements series.”
- 181 – “Physical motion of shifting with eyes watching hand/thumb placement.”
- 182 – “Essential Technique (Allen/Gillespie et al.) does a good job of introducing reading in III position and beyond in the heterogeneous class.”
- 183 – “Any recognized method series (i.e. Essential Elements).”
- 184 – “Whistler.”
- 185 – “Sliding slowly from one note to the other.”
- 186 – “Whistler - Introducing the Positions.”
- 188 – “Harmonics and open string.”
- 189 – “I usually teach more literature-based at first.”
- 191 – “I use Whistler Books for beginners, Kreutzer Nos. 10,11,12; Carl Flesch Scale System.”
- 192 – “Muller Rusch Bk 3.”
- 193 – “I use a combo of Mimi Zweig and ITP. ITP (Whistler) proceeds too quickly. Most of my students need more work on each string. (Laronex also progresses too fast) A book is needed for younger/slower students that not only addresses those issues, but is melodic and pleasing musically - maybe with a harmonic line the teacher plays”
- 195 – “One finger scales; happy birthday on one finger.”
- 196 – “Using one finger to play different tunes on one string; scales.”
- 198 – “I use Wohlfahrt book II to set the position in the hand.”
- 199 – “Private studio - Paulsen, Studies in the Positions.”
- 200 – “Adults: Whistler, Sitt Etudes; High school - Mueller Rusch Vol 3-5; Doflein Vol 5 Playing in higher position; Elementary - Paulsen, use own exercises on well known children songs; Fischbach: Artistry in Strings.”
- HC1 – “I use Whistler books for beginners; Kreutzer Nos. 10, 11 & 12; Carl Flesch Scale System.”
- HC2 – “Mueller Rusch Bk. III. I’m not sure if you want specific page numbers or what.”

- HC3 – “I use a combo of Mimi Zweig and ITP {sic}. ITP (Whistler) proceeds too quickly. Most of my students need more work on each string. Larouex also progresses too fast. A book is needed for younger/slower students that not only addresses these issues, but is melodic and pleasing musically, maybe with a harmonic line the teacher plays.”
- HC5 – “One finger scales and scales ending in higher position. Also, scale-like patterns.”
- HC6 – “Using 1 finger to play different tunes on 1 string; scales.”
- HC8 – “I use Wohlfahrt Book II to set the position in the hand.”
- HC9 – “Private studio: Paulsen, Studies in the Positions.”
- HC10 – “Adults: Whistler, Sitt Etudes; High, Junior high: Mueller Rusch String Method, Volume 3-5; Doflein: Volume 5, Playing in Higher Positions; Elementary, Paulsen, Studies in the Positions, use own exercises on well known children’s songs, Gerald Fischbach: Artistry in Strings.”
- HC11 – “Scales”
- HC12 – “Whistler, Mueller Rusch”
- HC13 – “Yost”
- HC14 – “Schradieck, scales, etudes (Mazas, Kreutzer)”
- HC15 – “MR {sic}”
- HC16 – “1) Scales: One finger scales; 2) Mueller Rusch Book III & IV”
- HC18 – “Large movements up and down the neck.”
- HC19 – “Sevcik, Shifting and Prep Scale Studies; self-written exercises shifting using various intervals.”
- HC20 – “Class teaching: Michael Allen’s “Warm-ups for String Orchestra” (2 lines using harmonics); Mueller Rusch Book III”
- HC21 – “Mueller Rusch Book III; Any book that repeats over and over.”
- HC22 – “I haven’t taught shifting in many years, and then only a few times.”
- HC23 – “Every student is different. I tend to emphasize shifting with first finger whenever possible to anchor hand position. Whistler exercises good for beginners [sic].”
- HC24 – “H. Whistler, Introducing the Positions; Geringas: Shifting Studies; Flor: The Positions.”
- HC25 – “Kayser and Kreutzer”
- HC26 – “Mazas, Dont, Sevcik, Schradieck, Scales.”
- HC27 – “Rote exercises. Shifting Posture, Mueller Rusch Bk 3”
- HC28 – “Yost, after learning the basic shifting motion.”
- HC29 – “Slide from 1st finger in 1st position to 1st finger in 3rd position, then back. Aim for the correct pitch, suing your ear or a tuner. Then use 2 to 2, 3 to 3, 4 to 4, 1 to 2, 1 to 3, 1 to 4, 2 to 1, 2 to 3, 2 to 4, 3 to 1, 3 to 2, 3 to 4, 4 to 1, 4 to 2, 4 to 3.”
- HC30 – “Sliding up and down the string without using sheet music, perhaps using mirror.”
- HC31 – “Whistler, Introducing the Positions. One string scales by rote.”
- HC32 – “I don’t use written exercises. 1) Slow slides in and out; 2) Sound effects.”
- HC33 – “Scales, thirds.”
- HC34 – “Mazas, Wohlfahrt”

- HC35 – “Yost”
- HC36 – “3rd position work: I like Doflein or Intro to Shifting by Whistler.”
- HC37 – I teach 2-octave scales all beginning on the g string as in the Flesch Scale System moving chromatically up the g string and remaining in one position.
Ex: G, A-flat and A, B-flat and B in first position; C in second position; D in third position, etc.
- HC38 – “Whistler, Introducing the Positions, Bk 1 & 2”
- HC39 – “Whistler, Introducing the Positions; Rote exercises, String Builder, III”
- HC40 – “Prepare by hearing pitch in 1st position first, then go to 3rd position.”
- HC41 – “Using ear away from music. One finger scales; scales ending in higher positions; pieces that use 3rd position for several notes, ie. Twinkle or Old MacDonald.”
- HC42 – “Rolland shuttle; Flesch scales, Sevcik Op. 8”
- HC43 – “Introduction to the Positions, H. Whistler”
- HC44 – “If students are in 6th grade or younger I use the ABC’s of Violin, Book 3. There is a good section on 3rd position. Later, Wohlfahrt, Book II is good, a little dry, but effective.”
- HC45 – “Most of the exercises in the various methods {sic} can serve well after the introductory exercises that get them up and back.”
- HC46 – “Grasshopper jumps, Harmonic series exercises: Emphasize freedom of movement 1st position to end of fingerboard; teaches release of weight and no weight while shift in progress.”

Question 35: What is the most effective teaching method when introducing shifting to violin/viola students?

- 002 – “I believe exploring the instrument is valuable (including) making sirens, finding harmonics, etc.”
- 003 – “Suzuki books”
- 005 – “Do not have a most effective method.”
- 006 – “This depends greatly on the students themselves and whether it is a group setting or a private lesson.
- 009 – “The method best known to the teacher.”
- 010 – “I improvise most of my exercises_ with Yost shifting passage for more advanced students.”
- 011 – “Persistence”
- 012 – “Using the portamento in the shift_ using the 1st finger as the landmark going up and both the 1st and whichever finger the player is on going down.”
- 013 – “It varies”
- 016 – “Aural training/modeling.”
- 017 – “Focusing on the finger position_ not jumping_ and consistency.”
- 018 – “Introducing the Positions {Whistler}”
- 020 – “I advocate heavy use of scales in class on a daily basis- all students learn all octave major scales to 3 flats and 3 sharps by the end of their 2nd year on their instrument. Knowledge of playing in the keys is then incorporated into lessons . . .”
- 021 – “Whatever method is used_ make sure the finger glides along the string with n pressure and a light thumb”
- 023 – “In ten words or less?”
- 025 - "I'm not sure if you're after a printed method or a technique here. For printed methods_ I like "Above the First Position" and Whistler "Introducing the Positions"
- 026 – “Yost”
- 028 – “Shifting to a harmonic”
- 029 – “Varies from student to student and depends on age. I rarely teach beginners_ so my approach to shifting is often remedial. When working with elementary-age children (beginners or near-beginners) I try to add shifting into something they are already working on”
- 030 - "1) introducing vibrato_ 2)basic mechanics first (sliding)_ 2)shifting with "guide notes" (sliding on the exiting finger)_ 3) etudes IN a position_ 4) etudes which incorporate multiple positions_ 5) other types of shifts"
- 031 – “Repeated shifts of 1-1_ 1-2_ 1-3_ 1-4_ 2-1_ 2-2_ etc. to practice shifting to the 3rd position on the last finger of the old (first) position_ and moving the whole hand_ including the thumb_ at the same time.”
- 033 – “Do you want the whole concept here? It would take too long.”
- 034 – “Tunneling_ sliding to a specific pitch provided by the teacher (on one string)_placing toilet paper under the strings and sliding it up and down the finger board. Specifically_ there is no one best method or most

- effective method for teaching shifting. One must consider the teaching style and learning styles of the students. In my opinion, a combination of several is the best approach.”
- 035 – “All of the etudes/exercises listed in #34 are helpful. I teach each student as his/her needs dictate.”
- 036 – “Intro the positions, by Harvey Whistler”
- 037 – “Individual teacher /student interaction”
- 038 – “Whistler”
- 040 – “I'm not sure a synopsis is possible -- it's a multi-pronged approach. The thumb is extraordinarily important -- it should move_ lightly_ at the same time and in the same relationship to the fingers up until the 4th position. Then it gradually moves under”
- 041 – “It's the teacher who introduces it_ not the method”
- 042 – “Applebaum”
- 044 – “Early prep of violin hold and free motion of arm”
- 045 – “Scales”
- 046 – “Lots of pre-shifting exercises: L.H. pizzicato_ sliding_ matching harmonics_ one octave scales.”
- 047 – “Variation in teaching methods_ as well as constant repetition of taught concepts. Of course_ willingness to show an example as well as support and praise are also vital to the student's learning process.”
- 048 – “I have used Sitt etudes_ Suzuki Book 1_ Wohlfahrt_ the First Etude Album by Harvey Whistler_ any easy shifts that can be incorporated into the current concerto or piece.”
- 049 - "Most important is to make a difference between shifting for the purpose of "transportation" and shifting as a tool of expression."
- 050 – “Preparation.”
- 053 - "Having a "match note" be it an open string_ another instrument_ or the voice."
- 054 – “Violin: Above the First Position”
- 055 – “Quicksteps to Note Reading in Third Position”
- 056 – “I use a lot of rote exercises and then have the students play familiar pieces with added position work. They are quite familiar with playing in third position and have some experience in second position when I use a method. I use A Tune a Day Book 3.”
- 057 – “I'm still trying to figure this one out. So far_ it's a lot of repetition and patience.”
- 058 – “Using guide shifts”
- 059 – “Head needs to hold the instrument not the left hand - make sure the shoulder rest and instrument position is correct and the student can physically hold th instrument - young violin viola student have a difficult time with this unless the shoulder rest . . .”
- 060 - Listen_ listen_ listen”
- 062 – “Hitting the violin body with the left hand as you enter 3rd position is a kinesthetic tool that I use that works for all my violin students in shifting from 1st to 3rd positions.”

- 064 – “I use 2-octave D major scales in my heterogeneous string classes_ requiring violists to shift to 3rd position for the 2nd 8ve.”
- 065 - "Maintaining hand frame (position) by keeping thumb aligned with first of second finger; using ear training and visualization; keeping thumb and fingers loose by introducing shifting with a ""harmonic-level"" finger weight until shifting is secure.”
- 066 – “Scales”
- 067 – “Continuity from lesson to lesson.”
- 068 – “Question too vague.”
- 070 - “Learning to move from one end of the fingerboard to the other.”
- 071 - "I find using harmonics to get the hand in motion introduces the large shifting motion_ as well as establishing how to come "back" to 1st position, quickly followed by finger patterns with one finger and then 1-finger 1-string 1-octave scales. (see Bornoff)”
- 073 – “Intermediate Techniques”
- 074 – “I allow 4 beats for them to shift; as they get more comfortable with intonation_etc. I have them decrease the time from one position to the next (3 beats_ 2_ 1_ 1/2...) until they are shifting fluidly.”
- 075 – “Etudes and Shifting Method Book (such as Yost)_ combined with scales.
- 076 – “For violin players, I simply start the students on C and D scales in 3rd position. After they master the techniques and in fairly good intonation_ I have them start the scales on the 1st position and shift up to 3rd position on A string. Same method for viola.”
- 077 – “The overshift: going to the new position with the old finger_ then applying the new finger.”
- 078 – “Not sure”
- 079 – “Pre-exercises for freedom of movement throughout the length of the fingerboard are very important from the very beginning of the student’s experience.”
- 080 – “ I introduce shifting as a means to not having to play fourth finger. Students don't like fourth finger so I give them a reason to learn to shift and because it does make some pieces easier to play.”
- 081 – Use of GUIDE NOTES”
- 082 – “scales & Rolland technique”
- 084 – “See above.”
- 088 – “Introduction in a casual method and more importantly EAR TRAINING!!!! You must know where you are going.”
- 089 – “scale studies”
- 091 – “I tell my kids to think about the key that they are in and that determines their positions. The first finger goes to the note in that key. For example_ in D major on your D string...1st position - 1st finger on E_ 2nd position - 1st finger on F#_ 3rd position – 1st finger on G.”
- 092 – “I feel that until the student can shift with position and pitch accuracy All shifting exercises etc.{should} be done in front of the teacher.”
- 093 - Teacher as model”
- 095 – “I still like Mueller Rusch”

- 096 – “See above.”
- 097 – “Scales”
- 098 – “Not sure”
- 099 – “Whatever works”
- 100 – “Whatever works for each student - I don't think any one method is the best”
- 101 – “The teacher is what makes any method effective”
- 102 – “Pitch matching”
- 103 – “First_ to include many warm-up activities that prepare the hand for shifting_ and then including extra notes that are first played_ then felt.”
- 104 – “One to three One to one...one to two and one to one etc. My method”
- 105 – “The use of landmarks: when shifting to third, a very slight brush of the wrist/base of the palm against the rib of the instrument is helpful. This brush of hand is not continued as the student plays the third position passage. When shifting to fifth, the thumb lands in the curve of the neck as the landmark. When shifting back to first, the landmark is that the thumb barely feels the curve at the end of the neck.”
- 107 – “Paul Rolland”
- 108 – “First finger and thumb always move together.”
- 109 – “Sevcik books”
- 110 – “Introducing the Positions”
- 111 – “Introducing the Positions”
- 112 – “First_ the teacher has to understand what a good shift is. Then they need to be able to explain it to the student. Scales are good_ but almost any literature will do.”
- 113 – “Use of guide notes”
- 114 – “see above”
- 116 – “see above”
- 117 – “1. Lightly sliding up & down the fingerboard.”
- 118 – “The motion should be soft and silky and then you can teach a specific location.”
- 119 – “I don't think the method is particularly important. Explanation_ modeling_ and selecting first experiences that students can perform with a high degree of success is much more important than a particular method.”
- 120 – “teacher demonstration”
- 123 – “I think I liked Mueller Rusch's book 3 the best. Now I use Essential Techniques (green book) with my classes.”
- 124 – “depends on the student and the teacher”
- 125 – “I have students practice playing a note in the first position and then glissando up to the next note. Gradually_ the glissando is minimized.”
- 126 – “Depends on the teaching situation”
- 127 - “Often times when I first introduce it_ I don't even tell them what it is. I just ask them to replace their third finger with their first finger. Then I have them check their thumb position and go back down into “regular position.”
- 128 – “Though there are numerous newer method books, the old Mueller-Rusch Book III still works well.”
- 129 - “One finger slide/gliss after third finger first position”

- 130 – “release and lead ascending shifts with the thumb using biceps muscle / release and lead descending shifts with the base of index finger using triceps”
- 131 – “repetition_ practice_ aiming for perfection”
- 135 – “good teacher”
- 136 – “Release_ glide_ replace”
- 138 – “see answer to 34”
- 139 – “The book isn't as important as the principles: whole arm/hand/thumb together_ release tension during shift_ harmonic fingers_ timed to a pulse_ breath_ free motions_ etc.”
- 140 – “Rolland”
- 141 – “Regardless of etudes used or when introducing shifting_ an emphasis on release of tension during the shift (both from thumb and fingers) and proper hand/arm angle.”
- 142 – “A Tune a Day_ Book 3”
- 143 – “I use Essential Technique from the Essential Elements series.”
- 144 – “Rote exercises”
- 145 – “Whistler”
- 146 – “There are many effective methods!”
- 147 – “Teaching them (violin/viola students) that the movement is a ‘whole-arm’ movement and not a finger movement. Everything moves from shoulder to fingertips.”
- 148 – “sliding the fingers slowly to the next position and using your ears to find the arrival note.”
- 149 – “make sure left hand is not supporting the instrument”
- 154 – “Shuttle Game_ shifting to harmonics_ using guide notes_ ear training exercises”
- 155 – “As a wind player teaching strings_ I need more training on teaching shifting. Right now_ shifting is a haphazard skill that a few of my students master for specific literature.”
- 156 – “Personal, one on one, demonstration with correct pitch presented by teacher”
- 159 – “scales_ then simple melodies(in position) that they know.”
- 160 – “Sliding into the note_ then speeding up the slide.”
- 161 – “Introducing the Positions by Whistler”
- 162 – “Secure literature that the student really wishes to play and stand back to offer suggestions for expedient technique.”
- 163 – “Whistler_ Introducing the Positions_ Book I.”
- 165 – “Keeping it simple and relating it to what was taught in the past.”
- 166 – “I use Whistler with private students.”
- 167 – “move the left hand as a unit.”
- 168 – “Question is unclear...I'm assuming you mean school class method...”
- 169 – “unsure”
- 170 – “I use major scales to teach introduce shifting because it makes sense more sense to my younger students. I teach shifting right at the beginning of the 2nd year of playing for violin_ viola_ & cello. I use major scales to teach introduce shifting because it makes sense more sense to my younger

- students. I teach shifting right at the beginning of the 2nd year of playing for violin_ viola_ & cello.
- 172 - "one that incorporates the notion of physical balance and consistent listening. Calibration of shifting should be with the ear not the hand. I say_ "Steer with your Ear!"
- 174 – “Rote exercises daily in class with many repetitions.”
- 175 – “persistence”
- 176 – “play it in first position and sing the notes first before any attempt to shift”
- 177 – “Sirens -- moving up and down the fingerboard without much care for what the notes sound like. This encourages students to be free without having to worry about being precise.”
- 178 – “Listening_ visual examples.”
- 179 – “imitation_ double checking with open strings_ matching pitch”
- 180 – “Essential Elements”
- 181 – “see above”
- 182 – “Call-and-response echoing works well for the ear-training component. Rote instruction must precede reading. Harmonic glissandos can help to relax the left hand.”
- 183 - "Ear training must come first so that the student recognizes accurate pitch. I use the metaphor of "gliding up" to create a smaller instrument (a mental picture for the student)."
- 184 – “Whistler”
- 186 – “I don't know that there is one most effective teaching method - some of that depends on an individual student.”
- 188 – “Introducing the Positions by Whistler”
- 189 - "One string scales_ one string "Twinkle"
- 191 – “After learning a tune in first position then play it in third. Play 3rd finger with the finger matching the open string. Note how it feels to be in third position and replace it with 1st”
- 192 – “Mueller Rusch Book 3”
- 193 - To play the interval to be shifted in first position when possible to prepare the ear. To shift slowly with finger in very light contact with string while moving to target note”
- 195 – “Essential Elements; Strictly Strings”
- 196 – “don't tell them it's hard”
- 197 – “Emphasizing the half-step increases security of the left hand; use of the "elevator" auxiliary note in the key of the bar, using the harmony as a guide, helps security for longer shifts beyond the half-step.”
- 198 – “play the first 4 notes of a scale and shift to the 4th and then back”
- 199 – “Elementary students - See Rolland, The Teaching of Action in String Playing”
- 200 – “Rolland Teaching Action in String Playing”
- HC1 – “After learning a tune in 1st position then play it in 3rd. Play 3rd finger then replace it with 1st finger matching the open string. Note how it feels to be in 3rd position.”
- HC2 – “If you mean which book, then I like Mueller Rusch Book III.”

- HC3 – “To play the intervals to be shifted in first position when possible to prepare the ear. To shift slowly with finger in very light contact with string while moving to target note {sic}.”
- HC5 – “Essential Elements, Strictly Strings”
- HC6 – “Don’t tell them it’s hard!”
- HC7 – “Emphasizing the half-step increases security of the left hand. Use of the “elevator” auxiliary note in the key of the bar, using the harmony as a guide, helps security for longer shifts beyond the half-step.”
- HC8 – “Play the 1st 4 notes of a scale and shift to the 4th and then back”
- HC9 – “Elementary students: see Rolland, The Teaching of Action in String Playing.”
- HC10 – “See Rolland, Teaching of Action in String Playing.”
- HC11 – “scales”
- HC12 – “Auxiliary shifting”
- HC13 – Teach the student to learn to listen to the sound (interval) of the arrival note before doing the shifting. Sometimes making the student sing the interval is very helpful.”
- HC14 – “Starting in the first position and sliding up. Shifts from 1st to 3rd using a guide note.”
- HC15 – “Tetrachord drills (with ear training).”
- HC16 – “Mueller Rusch Book III & IV”
- HC17 – “I believe scales and arpeggios are essential for the development of shifting., At the beginning of shifting instruction, I prefer to use scales that begin in first position, go to third and so on so that the students can use the open strings as a control of error.”
- HC18 – “I am still looking for it.”
- HC19 – 1 on 1 is obviously most beneficial. I often would have students just glide up and down, making sure thumb didn’t grab or drag and that it was relaxed.”
- HC20 – “Sliding – elevator motion; Rote – Double talk; Singing – prior to and during playing.”
- HC21 – “Mueller Rusch Book III”
- HC22 – “Ear training, use of guide notes”
- HC23 – “see #34”
- HC24 – “Use of technical book in conjunction with pieces requiring shifts. Teaching that there are 3 kinds of shifts: 1) same finger, 2) old finger leads, and 3) new finger leads. Thumb precedes rest of hand and importance of “intermediate” note. Singing is very important to secure the student’s idea of pitch in their head before it is executed.”
- HC25 – “One-octave scales on one string”
- HC26 – “Shifting from 1st to 3rd position and others using the guide note”
- HC27 – “Same as above {#34}”
- HC28 – “Learn motion without any specific pitches, loose thumb, relaxed hand, open/close from elbow to shift. Add specific pitches to shifts, keep motion as smooth and relaxed as possible.”
- HC29 – “As a warm-up, slide the hand the entire length of the fingerboard.”
- HC30 – “see above {#34}”

- HC31 – “Hand moves as a unit”
- HC32 – “Artistry in Strings, Viva Vibrato”
- HC33 – “Rolland”
- HC34 – “Essential Elements for Strings, green book”
- HC35 – “Yost, Galamian”
- HC36 – “Use of harmonics, and sliding”
- HC37 – “Reading exercises distracts from the technique involved and hinders the ear training necessary. Rote teaching is necessary.”
- HC38 – “Practice without the thumb and with guiding notes, shift with the finger of the note before the shift and then play new note. Practice 1) without thumb and with guide note; 2) without thumb and without guide note; 3) with thumb and with guide note; and 4) with thumb and without guide note.”
- HC39 – “Rote, repetition, method books”
- HC40 – “Using the whole arm rather than just the wrist to lead shifting; avoiding leading with the wrist on descending shifts, but rather with the back of the hand to avoid hyper-extending the wrist muscles and tendons and taking the hand out of frame.”
- HC41 – “Avoid having the shift read. (Keep) away from printed music as long as left hand is stable, it depends on age and comfort level exactly what I do{sic}”
- HC42 – “Rolland shuttle – wrist bend”
- HC43 – “Teacher demonstration”
- HC44 – “First I like them to look upon shifting as an exciting new adventure. Secondly, we learn to shift correctly without any music. Then we do a two octave D scale shifting on the A string to learn finger spacing. When that is set, we move to the printed page.”
- HC45 – “Building on pre-shifting games and exercises to find a specific note; shifting to and between harmonics for freedom; using a same finger approach to shift up and back.”
- HC46 – “Don’t use particular method but sequence of steps – building blocks.”

Question 36: What are the advantages of introducing shifting early in a violinist's/violist's curriculum?

- 002 – “Not setting up a psychological block about “up there.”
- 003 – “Loosens the hand and keeps it flexible”
- 004 – “Better left hand position which leads to better fourth finger and an easier time learning vibrato.”
- 005 – “Certainly it will keep the left hand more fluid but to shift accurately demands an excellent ear for intonation.”
- 006 – “A lack of fear about new notes/positions perhaps? An ease of movement from one position to another. An appreciation for what higher level techniques there are to be mastered on the instrument. Possibly a slightly wider range of appropriate repertoire.”
- 007 - "avoiding that "set in stone" hand in first position"
- 008 – “EXCITEMENT OF TEACHING NEW AND HIGH NOTES”
- 009 – “More than teaching any technique earlier_ the issue is teacher expectations.”
- 010 – “more freedom of motion in all joints_ including shoulder joint”
- 011 - Oh please! If you don't want that left hand to lock up_ you MUST do this! I tell them they are behind the bassists and cellists because they had to shift almost immediately. The earlier all these concepts are taught the freer the left hand becomes.”
- 012 – “Students more readily accept that shifting is a natural part of playing their instrument and that it is crucial to allowing them to become a better player.”
- 013 – “It helps with pitch control”
- 014 – “They learn to keep their left hands firm_ but free to avoid pressing too hard with the thumb. It is also good for the ear.”
- 015 – “The main advantage is that the earlier shifting is introduced the less difficulty younger students have in understanding and playing shifts from one position to another.”
- 016 – “Free left hand_ vibrato precursors.”
- 017 - "Helps to develop a flexible left hand. Not being stuck in one position/afraid of shifting_ since it's so "hard"."
- 018 – “depends on the student”
- 019 – “Students to not develop a “fear of heights.”
- 020 – “Keeps the student from getting too rooted in 1st position. The earlier a student begins shifting_ the more comfortable they will be in upper positions and therefore_ will be more open to more difficult repertoire.”
- 021 – “None. first position and its extensions must be secure_ both in hand position and intonation.”
- 022 – “Reinforcing the need for a curved 4th hand shape with a relaxed wrist in the new position as well as the old.”
- 023 – “Freedom of motion”
- 024 – “Introduce early the concept that the same note can be played with different fingers in different circumstances.”

- 025 - "Knowing right away that there are worlds above 1st position; keeping the hand from "concrete" position; reinforcing the need for a secure instrument hold without the left hand"
- 026 - "Teach them to hear."
- 028 - "A teacher should open the entire fingerboard to a pupil as early as possible to avoid limitations"
- 029 - "Prevents "locking in" to first position."
- 030 - "Eliminates fear"
- 031 - "It establishes flexibility in the left hand"
- 033 - "Not too early. First one has to know positions."
- 034 - "Tone and literature"
- 035 - "Freedom of arm motion is learned from the start. There is less tension if the freedom is learned early."
- 036 - "Freedom of left hand_ enforces balanced instrument hold_ ear training_ awareness of the fingerboard"
- 037 - "Ease of shifting_ confidence in many positions_ relaxed left hand_ no squeeze thumb"
- 038 - "Opening the mind to better fingerings_ loosening the hand_ improving aural skills"
- 039 - "Better left hand position_ better left arm position."
- 040 - "I prefer not to. It's OK to start sliding around_ but most students in the early stages don't do things carefully_ so you may do more harm than good."
- 041 - "Ease of motion_ feeling of naturalness"
- 042 - "Students are not as fixed in the first position mode."
- 043 - "It keeps the students from settling into a "Permanent" place in first position with the left hand."
- 044 - "Freedom of left arm"
- 045 - "Proper hand position"
- 046 - "Frees up left hand in general; helps students to be more flexible. Helps the ear_ helps with fingerboard geography"
- 047 - "I feel they understand how the notes and scales connect better. I think it also provides a sense of confidence_ as well as a knowledge of how to really play."
- 048 - "Less fear of the fingerboard as the player develops. Geographic knowledge and confidence is essential in becoming a versatile string player_ fluid hand motion developed early leads to SUCH more relaxed playing later on."
- 049 - "Integration as a natural part of playing the violin."
- 050 - "Many will not have significant problems after 3 years of playing."
- 053 - "They will be more confident with it - it will feel more natural and a lot less "scary" when they see all the ledger lines. You can introduce more advanced music a little sooner as well."
- 054 - "More flexibility of movement along fingerboard; less fear of shifting... kids don't get "stuck" in first position"
- 055 - "Keeps the left hand from "locking in"; forces student to think about half steps and whole steps_ pitch_ and note names instead of fingerings."

- 056 – “When shifting is done well the entire viola set up has to be well organized. Doing it early emphasizes that and also puts a premium on ear training.”
- 057 - "It would increase comfortability {sic} in moving from one position to another. It would avoid a "concrete left hand." It would help students overcome that "hill" when they get to that point in their curriculum."
- 058 – “Students are less fearful”
- 059 - “The position of the instrument is correct and the left hand is relaxed.”
- 060 – “None. Proper hand position must be established first.”
- 062 – “I only introduce shifting when 1st position is solid in intonation and technique.”
- 063 – “Advantages might be better intonation and a better listening ear_ as well as an ease in locating the third position in difficult music as they get older.”
- 064 – “Why be scared of playing someplace new on the instrument? That's what happens when kids are feeling like they have to stick to 1st position all the time. I feel the same way about introducing 4th finger_ too. What's the big deal? It's just another finger.”
- 065 - "By doing so the student does not develop any "phobia" or fear of shifting and will develop a better sense of pitch and interval recognition."
- 066 – “Improved ear training_ better left hand position_ vibrato comes easier”
- 067 – “Ear development_ facility on the fingerboard_ quicker technical development.”
- 068 – “Frees left-hand tension and promotes ear training early in higher positions”
- 069 – To encourage mobility, i.e. elbow swing, which of course emanates from the shoulder joint; to further the knowledge of fingerboard geography by analyzing exact distance of shift, and defining a two whole-step shift as opposed to a one and ½ step shift.”
- 070 – “Avoids excessive tension and fear of shifting.”
- 071 – “The student explores what is beyond the initial range of the instrument quickly_ hand does not get locked into any one place and will hopefully move freely.”
- 072 - "It keeps the "fear factor" of high positions at bay. But rather than teaching shifting early or later_ I teach shifting when the student is ready. Meaning_ their hand position and intonation are secure so they can start moving around.”
- 073 – “They are not afraid of moving their hand. I introduce third position in 6th grade. By 7th grade these students are again introduced to shifting and my students feel very comfortable.”
- 074 – “It helps with their ear-training and with their sense of independence. I find the kids that shift earlier tend to be the ones that want to go out and pursue their own interests out side of my class. (outside orchestras and literature...)”
- 075 - "Lack of psychological impediment. Ability to move to more complex literature sooner and without the perception of its being "difficult"."
- 076 – “None”
- 077 – “How early? Much depends on the pupils’ adaptability or talent. The first position must be established solidly before shifting is attempted.”

- 078 – “Less apprehension”
- 079 – “I would think one should be careful and make sure that the technique is well established first IN POSITION [sic].”
- 080 – “Third position becomes much easier for the students to use if you introduce it as early as you can. It also makes other positions easier to understand.”
- 081 – “SENSATION OF MOVEMENT”
- 082 – “Good left wrist position”
- 083 – “I think I would agree that it helps keep the student from becoming “married” to 1st position.”
- 084 – “I’m really not a believer in super early shifting. I suppose the advantages are to keep the left hand loose and moving_ but I can accomplish that with pre-shifting exercises and careful work on posture. I don’t want my students shifting until their basic skills are learned.”
- 086 – “Ease of left hand movement.”
- 087 – “If it is introduced early_ students aren’t scared to try it. It becomes something that they incorporate naturally into their technique.”
- 088 - “Unafraid of “going up there”.”
- 089 – “Better grasp of fingerboard”
- 090 – “More flexible left hand_ more attention to ear training”
- 091 – “More music available to them to play”
- 092 – “None until good Intonation is established.”
- 093 – “Greater relaxation of left hand”
- 094 – “Introducing it too early (before good form and intonation in 1st position are secure) causes many later problems.”
- 095 – “Get them used to the idea, ie. their mind is not set that shift is hard.”
- 096 – “Comfort factor - less fear of shifting.”
- 097 – “Decreases fear of moving the left hand”
- 098 – “It relaxes the left hand and expands the range of their instrument.”
- 099 – “They learn that their hand position is flexible and not glued into position.”
- 100 – “They become more comfortable out of first position”
- 101 – “Letting students know their left hand will need to move_ promotes freedom of movement even in 1st position and helps with establishing good elbow alignment”
- 102 - “Will hopefully be more “open” to the idea_ and will also learn it sooner/become better at doing shifting.”
- 103 - “They’re gaining skill and confidence early on a skill they’ll use often once they’re at a certain point in their playing.”
- 104 – “To learn early to not be afraid of shifting. Guiding ear to hear the note before you play.”
- 105 – “Less fearful when taught earlier”
- 106 – “Fluidity”
- 107 – “No mental block_ not glued to one position_ motion in both hands”
- 108 – “Not to begin until first position is set...advantage is that the student will be comfortable and not have a mental block.”
- 109 – “Their left hand is free and not clamped on to the instrument.”

- 110 – “Their left hand will be more flexible. Shifting will not be a scary thing_ but a natural next step to take once first position is in tune.”
- 111 – “It is important to have the student comfortable at each step_ but letting him/her learn to shift (without sacrificing intonation) helps keep them loose and interested.”
- 112 – “Keeps hand more relaxed”
- 113 – “Developing confidence”
- 114 – “Preparation for High school orchestra”
- 115 – “Less fear of higher positions”
- 116 - "There is not a sense of over-dependence in playing only in 1st position. They are more willing to try something new. The "upper position fear-factor" is not an issue_ or at least less of an issue."
- 117 – “I think things like glissandos are ok in the first year. It helps the student become comfortable with the instrument, lets them explore the variety of sounds they can make, and helps to loosen the hand. The teacher must be careful, however, not to introduce something like that until the child has a firm grasp of first position and appropriate hand position and placement.”
- 118 – “Beginners (sixth graders) think everything is easy and fun. Shifting by late in sixth grade or early in seventh is important to help students have more confidence as they develop”.
- 119 – “No concept that shifting is an “advanced” technique”
- 120 - “They are not scared to shift_ but the hand shape must be solid first”
- 121 - “More confidence when sight reading student orchestra pieces that involve higher position work.”
- 124 – “Left hand not locked in one position; range extended; builds a more flexible technique for a variety of musical situations.”
- 125 – “Students do not become locked into first position.”
- 126 – “Greater knowledge of the fingerboard”
- 127 – “Introducing shifting early in the student's playing career helps them to think outside of the box. Too often I've found that students are dead set that a certain note is played with a first finger or a third finger. They don't think about the possibility.”
- 128 – “If he/she is comfortable in first position_ it shows that you can use more of the fingerboard and play some parts easier in 3rd than in 1st position.”
- 129 – “Flexibility_ better ear”
- 130 – “Fewer psychological hang-ups”
- 131 – “Learning more of the fingerboard to make passages easier.”
- 135 – “Early start is always good.”
- 136 – “Too early can add too many more factors to deal learn.”
- 137 – “Freedom from being locked in a position_ emphasis on balance of the instrument_ healthy approach to finger action - role of thumb_ elbow under the instrument”
- 138 – “Shifting should be introduced when 1st position intonation is secure. That point varies according to the amount of practicing the student does.”
- 139 – “Sets gross motor_ puts shift into a larger perspective_ frees the motions_ lessens fear_ also helps pre-vibrato motions”

- 140 – “Freedom_ flexibility”
- 141 – “Relaxation_ fluidity_ ease in all positions as opposed to one”
- 142 – “They adapt to it with more flexibility before first position is set in stone.”
- 143 – “Less likely to get stuck in 1st position.”
- 144 – “Helps develop an understanding of fingerboard geography”
- 145 – “None if the shifting starts too soon.”
- 146 - "They do not get "stuck" in first position. The thumb begins to move right away."
- 147 – “It reduces tension in the thumb and improves listening skills. It also makes shifting and playing a note multiple ways more natural to the students.”
- 148 – “They may develop a more relaxed left hand and more facility. But then again they may develop bad habits if not taught properly or if they practice poorly.”
- 149 – “They are locked into 1st position.”
- 151 – “It gives you time to give them a solid base for when they have difficult shifting patterns in the repertoire.”
- 153 – “The student is flexible about moving their hand around.”
- 154 – “Release of LH tension_ freedom of movement_ instrument hold/posture”
- 155 – “Get them used to the idea_ ie. their mind is not set that shifting is hard.”
- 156 – “Better extended use of one string. Extended range of notes”
- 157 – “Avoiding the fear factor”
- 158 – “Students are more comfortable leaving 1st position_ helps with ear training_ prevents students from holding the instrument with the left hand.”
- 159 – “Flexibility”
- 160 – “The students must rely on their ears more than a visual spot such as tape to stay in tune_ and they won't relate a specific note on a staff to a finger number.”
- 161 – “They are less likely to be "stuck" in first position and are less likely to fear shifting when their repertoire requires it."
- 162 - "The word "early" negates this statement's value...Obviously some students will attain greater prowess in a shorter time. This is an advantage !!"
- 163 – “I do not believe shifting should be taught until a fundamental understanding of first position and proper playing techniques is completely understood.”
- 165 – “Gives them more range on the instrument_ get more practice_ students are not set in their ways so it's easier for them to think in alternate positions_ lots of music written for beginners is actually easier to play in third... esp. when in the key of C.”
- 166 – “Freedom of motion_ relaxed playing is the core. It aids in this type of teaching”
- 167 – “Removes the 'fear' factor - they don't get so set in first position that they can't ever do anything different.”
- 168 – “Increases flexibility_ eliminates fear of shifting later on_ allows for extended range_ esp. in C major.”
- 171 – “I have used two different method books - one where the students have to shift in the beginning and one where they do not shift until the second book - and beginners at the 6th grade level can shift early.”

- 172 – “Early elimination of fear of higher positions. Suppleness and flexibility of left hand (no locking thumb) intuitively encouraged as a constant in violin playing.”
- 173 – “Reduces fear_ increases flexibility”
- 174 – “Flexibility_ good hand shape_ relaxed hand_ ear training_ increased understanding of the fingering system (whole and half steps)”
- 175 – “Familiarity of the geography of the instrument”
- 176 - "We hope to keep them flexible_ able to accept any new idea and not resistant to new skills. We must avoid the first position as a "end all crutch".”
- 177 – “They learn to be flexible before they are set into a position_ then unable to move.”
- 178 – “Avoids the concrete positioning of first {position}.”
- 179 – “They are not locked into one position”
- 180 – “When to introduce shifting depends on the individual student and cannot be tied down to a certain time. When the student can play all the notes in 1st position is when I like to introduce 3rd {position}.”
- 181 – “No advantages in my experience.....”
- 182 – “Increased comfort with the fingerboard. Potential connections between vibrato and shifting motion. Relaxation of the left hand.”
- 183 - "No concept that shifting is an "advanced" technique"
- 185 – “Familiarity”
- 186 – “When introduced early there is no fear of shifting - it's just another fun thing to do.”
- 187 - To be comfortable all over the instrument and not get stuck in one position.”
- 188 – “relaxed motion”
- 189 - "Not "set in stone"_ feels more "normal."
- 190 – “Gets them used to the idea of moving the hand before the fear factor sets in.”
- 191 – “Flexibility”
- 192 – “Practicing”
- 193 – “Familiarity with the idea that one can play in many positions on the instrument.”
- 194 – “Loose left hand”
- 195 – “They don't get stuck in first position”
- 196 – “Left hand not set in stone; doesn't make it seem "hard".”
- 197 – Shifting becomes part of the everyday practice of playing, not something “new” and “hard.”
- 198 – “It isn't such a shock to the student and seems normal”
- 199 – “Creates a sense of accomplishment.”
- 200 – “Flexibility of arm motion - keeping hand shape steady and relaxed. For later, vibrato easier introduced”
- HC1 – “Flexibility”
- HC2 – “I guess it’s one more thing for them to be practicing on.”
- HC3 – “Familiarity with the idea that one can play in many positions on the instrument”

- HC4 – “The earlier all these concepts are taught the freer the left hand becomes and the better the instrument hold becomes. Use of a good shoulder rest is also mandatory at this time – sponges just don’t cut it!”
- HC5 – “They don’t get stuck in first position”
- HC6 – “Left hand not set in stone; Doesn’t make it seem “hard”.”
- HC7 – “Sets the foundation for work to come.”
- HC8 – “It isn’t such a shock to the student and seems normal”
- HC10 – “Flexibility of arm motion – keeping hand shape steady and relaxed. For later, vibrato easier introduced.”
- HC11 – “Good habits early”
- HC12 – “Relaxed left hand, broader range and facility”
- HC13 – “May improve the intonation”
- HC14 – “There are absolutely no advantages to introducing shifting before the student is completely confident in the 1st position.”
- HC15 – “Freer left hand”
- HC16 – “Avoids the “hand set in concrete” position.”
- HC17 – “Attitude they can DO IT!”
- HC18 – “The students are more flexible and not fearful of higher positions.”
- HC19 – “Students not intimidated by thought that shifting is a major hurdle to overcome. Perceived that it is just a part of playing the instrument and utilizing a greater range of notes {sic}.”
- HC20 – “They don’t “glue” themselves in 1st position. This can help with the “death grip” problem.”
- HC21 – “They listen to pitches.”
- HC22 – “More flexibility; greater familiarity with the variety of fingering possibilities and choices.”
- HC23 – “LH not locked/more flexible; Having to learn notes by names, not numbers; Having to listen to intonation.”
- HC24 – “Reduces fear of moving hand to unknown lands.”
- HC25 – “The ability to play more interesting literature.”
- HC26 – “Shifting must be introduced after a student is very confident in the 1st position.”
- HC27 – “Depends on what “early” means. I don’t do shifting really early, possibly at the 3rd year level when 1st position is solid, but to get the hand unlocked and thumb loosened could be an advantage.”
- HC28 – “Shifting is more natural and less scary.”
- HC29 – “Lack of fear of the fingerboard.”
- HC30 – “Helps the student to keep from clutching the instrument.”
- HC31 – “Students learn not to be afraid of the higher reaches of the fingerboard.”
- HC32 – “1) Ear training; 2) Mobility; 3) Prevention of concrete”
- HC33 – “Flexibility”
- HC34 – “They are not afraid or intimidated at that point.”
- HC35 – “Better facility earlier”
- HC36 – “Positions are better”

- HC37 – “I teach shifting when the student is ready. Meaning, their hand position and intonation are secure so they can start moving around. So for some students, I’ll introduce it fairly early, and for others I will wait.”
- HC38 – “Can help keep students loose.”
- HC39 – “Students are not “stuck” in one position; feel more comfortable (at ease) with the instrument; they know the importance of the thumb and hand moving as one; able to loosen hand for pre-vibrato exercises.”
- HC40 – “Keeping hand relaxed”
- HC41 – “They don’t get locked in physically and are not afraid of positions/shifting.”
- HC42 – “Not-specific shifting exercises promote flexibility.”
- HC43 – “Helps build confidence.”
- HC44 – “I don’t do this, but it would avoid fear and maybe reinforce good left hand position.”
- HC45 – “Students can develop more fluidity and be less apt to be “rooted to the spot” in first position if encouraged to move the hand earlier.”
- HC46 – “More flexible left hand; less fear when need to shift in the repertoire; confidence of knowing where to go and how to get there.”

Question 37: What are the disadvantages of introducing shifting early in a violinist's/violist's curriculum?

- 002 – “May destabilize hand shape in certain individuals.”
- 003 – “I don't see any disadvantages.”
- 005 – “If the student does not have a good ear and the first position is not a natural home_ there will be numerous intonation concerns in all positions.”
- 006 – Less stable left hand position_ worse intonation_ more confusion of notes and note names_ less coordination with the bow.”
- 007 – “Intonation may not be set yet”
- 008 – “I don't see any.”
- 009 – “I am aware of none.”
- 010 – “None_ difficulties arise only when pitch recognition is substandard”
- 011 – “None”
- 012 – “Too much too soon can scare students away from playing the violin or the viola. They might feel overwhelmed by all the techniques that are being pushed on them at the beginning when they are struggling with learning the basic playing techniques.”
- 013 – “None”
- 014 – “It may be physically awkward and lead to some frustration on the player's end.”
- 015 – “None”
- 016 – “Finger patterns may not yet be clear.”
- 017 – “Sometimes the security in first position isn't fully developed - if a student can't consistently find the notes in first position_ it's sometimes too cumbersome to shift.”
- 018 – “None”
- 020 – “In larger classes_ some students are going to be more ready than others to begin shifting. Finding the time to introduce shifting without overly confusing less-ready students is very difficult.”
- 021 – “Hand position, intonation is not secure”
- 023 – “None”
- 025 – “If a student's pitch is weak_ they could wander even more; some may be overwhelmed with uncertainty as to where to play notes. Overall_ I think it has more advantages then disadvantages.”
- 026 – “None”
- 028 – “None”
- 029 – “None that I know of. In a group situation_ however_ the slower learners may be overwhelmed by too many concepts at one time_ but this just highlights the necessity of allowing students to progress at their own pace.”
- 030 - "Destabilizes sense of "place" on the fingerboard."
- 031 – “Chance that the student will not learn to play accurately in tune.”
- 033 – “Students play out of tune since they do not know the positions yet.”
- 034 – “Are you asking this for the classroom or private studio setting?”

- 035 – “Students with less natural ability_ especially in pitch recognition_ may have more difficulty learning shifting early. For these students_ pitch may be compromised.”
- 036 – “Chance of losing the framework of the hand”
- 037 – “None”
- 038 – “Poor intonation and technique”
- 039 – “None”
- 040 – “In my experience students who have learned shifting too early rarely play well in tune -- in any position.”
- 041 – “Maybe not establishing a good left hand shape first”
- 042 – “None”
- 043 – “It can be confusing to the students who are not SOLID in their knowledge of first position.”
- 044 – “If violin position is not set and hand is not shaped then the student clings to the side and loses hand form etc.”
- 045 – “Tense left hand”
- 046 – “None_ if it's done well.”
- 047 – “It has a high possibility of confusing the student_ and of shaking whatever elementary foundation of first-position they had to begin with. If they lose that foundation_ it will consume too much time trying to review and re-teach it.”
- 048 – “None”
- 049 – “Overload of information and attention to too many details.”
- 050 – “Some students tense up as they learn shifting and you have to undo that tension as you go along.”
- 053 – “None as long as it's done well.”
- 054 – “Intonation problems; muscle memory is not solidified in first position... the whole steps in first position are smaller than those in third; confusion over fingering.”
- 055 - “Poor hand position may result if the student is not able to hold the instrument on the shoulder_ something which takes my beginners a long time to perfect. We spend most of the first year of instruction on the lookout for “waitress/waiter wrist”.”
- 056 – “If the instrument placement is not well organized and/or the ear is not well developed things get bad really fast.”
- 057 – “It would detract from establishing a solid grasp of basic left hand techniques often learned in first position. It would put more emphasis on and require almost more attention to some more basic and essential techniques that beginners NEED.”
- 058 – “Pitch distance (half and whole steps) becomes closer while traveling up the fingerboard. I prefer establishing pitch in first position--establishing muscle memory--before having to readjust to upper position distances.”
- 059 - In large classes it is difficult to make sure the student can hold the instrument with the head - not a problem with cellists and bass players - many students buy inexpensive shoulder rests and the cheaper instruments have very heavy

- scrolls - again hard.”
- 061 – “Teaching students to play out of tune”
- 062 – “Intonation problems”
- 063 – “The third position should definitely not be introduced early if the student is not secure in playing in first position-it will cause bad intonation.”
- 064 – “I don't believe that there are any.”
- 065 – “If the student does not have some good_ rudimentary aural skills_ and if the hand frame is not yet well established then teaching shifting could be very problematic.”
- 066 – “Difficulty with intonation is augmented_ problems with half / whole step differences.”
- 067 – “If the left hand position isn't set in first position the hand position will not develop correctly.”
- 068 – “Answered in question no. 36”
- 069 – “Too early and possibly will not form solid enough hand position.”
- 070 – “There are none.”
- 071 – “The student may be overwhelmed with the amount of new material. Too many options on how to play any given material can frustrate a borderline student.”
- 073 – “If a student does not have a good ear and is not successful in first position_ the student will not play in tune in third position”
- 074 – “If a kid has bad ear_ they are going to sound even worse in the upper positions.”
- 075 – “Poor posture and form. Lack of trained ear.”
- 076 – “I believe that beginners need to feel secure on the 1st position. Introducing shifting in the beginning will make all the basic techniques suffer_ such as posture_ tone production_ intonation_ note reading_ rhythm security_ etc...”
- 077 - "Without a solid "feel" of the first position_ higher positions can be very troubling. After all_ many shifts go back to the first position."
- 078 – “Confusion over where to play the notes (depends on age of student)”
- 079 – “I prefer students to be comfortable with first position before introducing third position. I only introduce shifting once students have demonstrated good playing position of the left hand and have appropriate bow control. I would prefer to wait to introduce difficult concepts until students are successful with the basics.”
- 080 – “Sometimes_ the students become totally lost in trying to understand why they need to learn to shift.”
- 082 – “Confusion in note reading & fingering”
- 084 – “Presenting too much material too soon can lead to neglect of fundamental posture set-up and basic technique. Also_ if the student does lots of playing out of tune_ he learns to hear out of tune_ and that's difficult to correct later.”
- 085 – “Overwhelming to students in my area of the country.”
- 086 – “Not having left hand set”
- 087 – “If they are asked to shift to specific locations before they have a foundation of understanding in 1st position_ they become confused.”

- 088 – “String players are at a disadvantage as there is no pitch center. So they have nothing to base their shifting on”
- 089 – “Not stable enough to go beyond basic position (first)”
- 090 – “None”
- 091 – “Confusion”
- 092 – “Students feel range is more important than intonation”
- 093 – “None”
- 095 – “Lack of security”
- 096 – “Less bright students_ or those who practice less_ can get very confused.”
- 097 – “I suppose it might confuse some players.”
- 098 – “They may not have the 1st position solidly in tune causing everything to be out of tune.”
- 099 – “I don't know that there are any.”
- 100 – “Sometimes - not a good first position set”
- 101 – “If actual shifting (like reading from printed music) is introduced before the student is secure with pitch names in one position_ it could be confusing. No disadvantages to introducing pre-shifting exercises.”
- 102 - "Could become a "roadblock" (frustrating)."
- 103 – “None”
- 104 – “Intonation”
- 106 – “Confusion”
- 107 – “If foundation is not well set- can be confusing.”
- 108 – “Student must be completely comfortable holding the instrument.”
- 109 – “If first position is not set_ intonation will be sacrificed”
- 110 – “I don't see any problem with introducing pre-shifting exercises_ but if shifting is introduced before the student can completely hold the violin properly, and is pretty solid in first position it will create more problems with intonation [sic]”
- 111 – “The first position might not be as secure.”
- 112 – “It doesn't work well if the student doesn't yet have a sense of pitch_ a mental picture of where notes can be found on the fingerboard_ or an awareness of whole steps and half steps.”
- 113 – “Can be too much information at once - students may not develop fluency in any position if too many are introduced at once.”
- 114 – “None”
- 115 – “Lack of proper posture”
- 116 – “Damage to accurate intonation in first position”
- 117 – “Too early would lead to confusion for some of the kids. Repetition leads to a sense of achievement and security for them.”
- 119 – “None_ if students are properly instructed_ supervised and assessed.”
- 120 – “Confusion with the notes of 1st Position”
- 121 – “Hand position can be unstable and cause many other problems.
- 122 – “Insecurity in 1st position and then throwing 3rd position at them tends to confuse the students”.
- 124 – “None as long as the student is bright.”
- 125 – “Sometimes intonation is affected in a bad way.”

- 126 – “Lack of solid knowledge of fingerboard geography”
- 127 – “If the first position is not set_ student's will not have the ear for the notes. If they cannot hear that they are out of tune_ shifting can be deadly”
- 128 – “If a student is not comfortable in first position_ he/she can be frustrated trying another position”
- 129 – “No set Whole/half step intervals.”
- 130 – “If done before student is at ease with balance of instrument on shoulder/collarbone_ the chin-gripping results is counter productive.”
- 131 – “Confused map of the fingerboard. Aversion to shifting.”
- 134 – “Poor intonation for insecure players.”
- 136 – “Distraction from solidifying good technique from the start_ including the bow hand.”
- 138 – “If student intonation is not secure in 1st position_ it won't be secure in any other position either.”
- 139 – “None if it is done properly. Pre-shifting work with indiscriminate pitches and harmonics can be done while setting the frame in 1st position”
- 140 – “Lack of stability in first position”
- 141 – “Difficulty with note reading”
- 142 – “Good intonation in first position needs a lot of reinforcing_ with half and whole steps becoming memorized kinesthetically.”
- 143 – “Student is not secure and playing in tune in 1st position.”
- 145 – “Messses up the intonation so that the student accepts mediocre intonation or gets very frustrated.”
- 146 – “They must have a solid pitch foundation or else they will simply be lost.”
- 147 – “Time. Students can only absorb so much information at a time. There are many things for them to learn at first. Teaching shifting early would put off another important concept. It's all about prioritizing.”
- 148 - "Too much to think about too soon. They may not develop a good left hand "shape" as quickly if they are trying to negotiate shifts."
- 149 – “Too many things for the student to think about. They feel overwhelmed.”
- 153 - There are few songs that require shifting- so the student may perceive shifting as irrelevant.”
- 154 – “Ear training skills may not be developed enough_ LH position may not be correct and secure.”
- 156 – “Not having 1 position set correctly in stone. Poor ear training.”
- 157 – “None”
- 159 – “None”
- 160 – “Too much information to take in at once.”
- 161 – “None_ if it is done carefully and not too much at one time to interfere with the hand set up in first position.”
- 162 – “In a class situation_ some failure or difficulty may discourage an under achieving student from continuing.”
- 163 – “There is much to risk in the way of proper left hand positioning and development_ as well as developing concrete muscle-memories for first position that are necessary in the early stages of string playing.”

- 165 – “Not sure. It might be hard for some people who haven't really thought about how to teach it to do. It is definitely hard to find good books that teach shifting with food exercises. Private teachers can use Sevcik_ Kreutzer_ Dont_ and a number of other etudes.”
- 166 – “Can't think of any!”
- 167 – “May not have well enough developed 'ears' to play in tune much less shift and play in tune.”
- 168 - "Presupposing that 1st position "block" hand position is in place and that ear training is aligned_ there are no disadvantages."
- 172 – “Less talented students may be saddled by too many variables colliding at once.”
- 173 – “None?”
- 174 – “My students come to me in their 3rd year of playing and most haven't shifted before. This is not a problem.”
- 175 – “Not having a good grasp of where the fingers need to be to be in tune”
- 176 – “Pitch and hand position could suffer”
- 177 – “Frustration to students who might feel overwhelmed with too many notes to remember”
- 178 – “Can cause confusion_ must accompany ear training (listening).”
- 179 – “If they are not set in their intonation in first_ it can really set the student back to where it is extremely difficult to fix intonation problems”
- 180 – “Hand is not at home in 1st position and student loses ability to find their way.”
- 181 – “see #36”
- 182 – “If shifting / position work is not balanced with the study of finger patterns within a position_ students' muscle memory could suffer. Some young students become confused by the different ways to play each note (although this can be overcome with time)”.
- 183 – “1. May be physically unready”
- 184 – “If a student doesn't have a solid foundation of 1st pos._ they won't be ok in another.”
- 185 – “Poor intonation and a feeling of being lost on the fingerboard (mapping problems).”
- 186 – “They never get comfortable in first position - I've had a number of students like this.”
- 187 – “Not having the left hand set.”
- 188 – “Pitch”
- 189 – “May confuse students who haven't yet got a handle on first position.”
- 191 – “Student may not be comfortable with the instrument”
- 192 – “Have to fit in what they have to know by the end of the year”
- 193 – “One shouldn't focus on shifting until correct formation of left hand is solidly established.”
- 195 – “Too early and they don't have the reference of first position firmly under their grasp.”
- 196 – “Preciseness of tuning”
- 198 – “Good intonation seems to suffer”
- 200 – “Spacing the fingers might be difficult- ear training not advanced enough”

- HC1 – “Student may not be comfortable with the instrument.”
- HC2 – “I’m not sure there are disadvantages. It’s a matter of trying to fit it in with what they “have” to know by the end of the 1st year.”
- HC3 – “One shouldn’t focus on shifting until correct formation of left hand is solidly established.”
- HC5 – “Too early and they don’t have the reference of 1st position firmly under their grasp.”
- HC6 – “Preciseness of tuning.”
- HC8 – “Good intonation seems to suffer.”
- HC10 – “Spacing the fingers might be difficult; ear training not advanced enough.”
- HC11 – “If the teacher is not teaching properly, the student will not have a good framework in his hand.”
- HC12 – “None. I feel shifting early is good.”
- HC13 – “Contributing not to develop a secure knowledge or position of the hand in first position.”
- HC14 – “Bad intonation.”
- HC15 – “Don’t know any.”
- HC16 – “Poor intonation in any position.”
- HC18 – “Students do not establish a solid hand position.”
- HC19 – “In a weaker player, it might be preferable to establish a solid 1st position before introducing shifting.”
- HC20 – “They are not secure in any position.”
- HC21 – “Not learning concept of listening and become visual when shifting.”
- HC22 – “May cause confusion if introduced before student is familiar with the location of pitches on fingerboard.”
- HC23 – “Intonation not solid; LH shape not secure.”
- HC24 – “I don’t think there are any disadvantages provided that the student learns to shift properly and accurately and that the student has first formed a secure hand position in 1st position.”
- HC25 – “Faulty intonation and lack of security in lower positions.”
- HC26 – “Bad intonation.”
- HC27 – “First position not solid; fishing for notes, learning to shift incorrectly early will reinforce mistakes; hard to fix that.”
- HC28 – “Hand position may not be solid enough. Shifting too early can make this (and intonation) worse.”
- HC29 – “None”
- HC30 – “They may not get a solid feeling of “home” position.”
- HC31 – “None”
- HC32 – “None”
- HC33 – “None”
- HC34 – “The student may not have mastered the first position yet.”
- HC35 – “None”
- HC36 – “I don’t feel there are any.”
- HC37 – “Instrument hold and fatigue.”
- HC38 – “If they don’t have a strong sense of pitch, they lose their point of reference.”
- HC40 – “Student’s lose hand frame and intonation.”

- HC41 – “I can’t think of any unless they are not comfortable and they are confused by new material.”
- HC42 – “There are no disadvantages.”
- HC44 – “It could cause confusion in leveling of the chin and shoulder are not set as the unit which holds the violin then it could cause strain and sloppy shifts.”
- HC45 – “If the techniques are not well-established in first position, students could delay their development.”
- HC46 – “If left hand posture not set and knowledge of whole step; half step relationship understood, secure intonation, then problem of destination note or departure note being out of tune occurs {sic}.”

Question 38: What are violinists/violists learning in the classroom while cellists/bassists learn to shift?

- 003 – “At a beginning level (4th and 5th grade) the students are learning the same note on their instrument”
- 005 – “N/A”
- 006 – “They learn the same new notes_ but usually don't have to shift in order to play them. This can also work the other way around_ but due to the size of the instrument_ cellists/bassists end up learning a touch of shifting first.”
- 007 – “Intonation”
- 009 – “Whatever they are supposed to or at least how bassists and cellists learn to shift.”
- 011 – “4th finger if you look at the text books only. I always modify”
- 012 – “Intonation_ bowing styles_ musicianship (dynamics_ etc.)_ other techniques.”
- 013 – “Shifting”
- 014 – “I have never taught in a classroom.”
- 015 – “Practicing shifting LH only while working with vc/db”
- 016 – “Often they are shifting as well.”
- 017 – “N/A”
- 020 – “How to shift.”
- 021 – “There's plenty to learn: strengthening the 4th finger_ knowing when to use independent fingering and when to block_ when to retain a finger while placing another.”
- 023 – “Don't understand the question”
- 025 – “Happily_ I don't have to deal with this! Usually the newer method books deal with this_ having them play on the e or C strings at this time.”
- 026 – “?”
- 028 – “Relaxation”
- 029 – “I've never worked in a mixed classroom situation.”
- 030 – “(don't know)”
- 031 – “Hopefully the same thing”
- 033 – “Do not know_ I teach violin professionally only.”
- 034 – “Repetition of basic fundamentals such as left hand pitch manipulation and right hand bowing movements.”
- 035 – “N/A”
- 036 – “I don't know”
- 038 – “No idea--I don't teach classroom strings”
- 039 – “I don't know...this is a scary questions!”
- 041 – “Other chromatic alteration strategies and techniques”
- 042 – “Solidifying first position.”
- 045 – “Don't ever teach that way.”
- 046 – “Learning 4th finger_ chromatic alterations”
- 047 – “Higher notes (still in first position) that are not available to cello or bass in the same position. Also fourth finger_ and perhaps fourth finger extensions.”
- 048 – “Not applicable_ since I only teach violin students”
- 049 – “Play in first position and chew gum?”

- 050 – “Good question!”
- 053 – “My lessons are by instrument so I am not able to answer this question.”
- 054 – “They are learning notes which do not require them to shift yet.”
- 055 – “I don't teach lessons in a mixed setting.”
- 056 – “I do only studio teaching”
- 057 – “Depends on the classroom environment established by the teacher. In our school district_ those students are separated.”
- 058 – “Key signatures_ pitch_ hand position_ bowing variations”
- 059 – “Use of all the fingers especially the fourth finger and knowing the relationship of fingers to each other based on the key signatures”
- 062 – “N/A”
- 063 – “Not Applicable to my situation”
- 064 – “Using their 4th fingers.”
- 065 – “N/A”
- 066 – “N/A”
- 067 – “Shifting would make sense.”
- 068 – “Question too variable and vague”
- 070 – “Refining intonation and framing the left hand. Serving as models.”
- 071 – “4th finger in method books. I used Essential Elements (when I had beginners). About halfway through the method book_ while the fourth finger was being reinforced in a piece and when to use it for vn/va_ I rewrote fingerings into cellos/bass books. . .”
- 073 – “They are learning the same notes_ but are in first position.”
- 074 – “I generally have them shifting at the same time. I don't really get too many Bassists_ so I can't really comment on them.”
- 076 – “They should not be in the same classroom for that lesson to begin with.”
- 077 - “Probably nothing much. Each instrument has a different “feel” and should be studied on its own.”
- 078 – “I haven't taught heterogeneous classes_ so it hasn't been a problem for me.”
- 080 – “I am fortunate to have separate classes for the first year of string playing. The cellists/bassists learn to shift the end of the first year and the violins and violas learn the end of the second year.”
- 082 – “I always try to teach it separately_ unless it's glissandos”
- 084 – “I mostly don't teach mixed classes. Violinists/violists could certainly try out shifting in those circumstances. Everything about mixed classroom teaching is a compromise_ so in those circumstances_ shifting may often end up being taught before all what”
- 086 – “Book 1's - 4th fingers”
- 087 – “1) Reviewing pitches in positions that they already know”
- 088 – “They can learn the foundation of shifting as shifting is made possible via ear training-one note bass players learn to shift on either the first or second scale tring {sic}players learn (G_D)
- 089 – “N/A”
- 090 – “N/A”
- 091 – “They are working on using the 4th finger_ and helping the cellist and bassists with their notes by playing them in first position as a reference note.”

- 092 – “Shifting by Cellist and bassist should not affect Violin or Viola players any more than having different fingerings or strings.”
- 093 – “Other finger patterns”
- 094 – “Usually 4th finger and the e string”
- 095 – “Sometimes use of 4th finger”
- 097 – “Finger placement (hi 2_ lo2_ etc.)”
- 098 – “Shifting to the same notes that the basses and cellos are shifting to.”
- 099 – “Again_ whatever is in the book at that particular spot. Usually_ it's something that is a little more technically demanding”
- 100 – “Low first fingers and high third fingers”
- 101 – “In my beginning classes_ violins and violas learn to use 4th finger in first position while cellos and basses shift.”
- 102 – “Continuing to play their 1st position notes in tune_ and learning that THEY (violinists/violists) will soon be learning to do the same thing (they should pay attention).”
- 103 – “I teach private studio violin only”
- 104 – “To listen”
- 105 – “4th finger”
- 106 – “4th finger_ E string notes_ C string notes”
- 107 – “Rhythms, rudimentary vibrato.”
- 108 – “Good hand position.”
- 109 – “They can learn how to lead with their thumb and the slide of the wrist.”
- 110 – “My low strings go to another teacher_ so I don't know.”
- 111 – “They are reviewing first position material or are doing pre-shifting exercises.”
- 112 – “Let's hope they are learning something!!”
- 113 – “All students can benefit from learning the process of gliding on the string to release tension and move along the fingerboard - therefore_ all students can participate to a degree”
- 114 – “Developing better intonation”
- 115 – “intonation_ vibrato_ patience”
- 116 – “Practicing other shifting and vibrato exercises”
- 117 – “The same notes but in first position. This enables the cellists/bassists to hear the note they are shifting to more clearly.”
- 119 – “Fourth finger_ in All for Strings book II”
- 121 – “Pre-shifting exercises.”
- 123 – “They are practicing a phrase or improvising or writing notes.”
- 124 – “More advanced aspects of phrasing_ since they more often have the melody; intonation; rhythm; vibrato; bow distribution.”
- 125 – “At first_ violinists and violists are learning to use their 4th finger.”
- 126 – “There is always some technical aspect of the instrument to work on while the teacher is focused on another section.”
- 128 – “The same exercise (in first position) on their instrument. Cellos and basses can usually shift earlier in string orchestra pieces.”
- 129 – “In the method we use (Essential elements) they are reviewing interval fundamentals”
- 130 – “No information”

- 131 – “The same notes. Cellists and Bassists are shifting to play the same notes that violinists play in one position.”
- 132 – “Probably not much usually. It would be great to have them try extensions and shifting drills right along with the lower strings. Or get them to try playing in different octaves by ear even if they don’t know the notes yet.”
- 134 – “Do not mix”
- 135 – “Music”
- 136 – “DNA”
- 138 - "They learn that the position of the left hand is not "set in concrete"."
- 139 – “Should be learning to shift_ too.”
- 140 – “Fourth finger”
- 141 – “No basis for answering this question”
- 142 – “Sometimes they have more elaborate bowing problems.”
- 143 – “Better intonation in 1st position.”
- 145 – “Depends on the method books used.”
- 146 – “Many things if the class is taught right”
- 147 – “4th finger.”
- 148 – “N/A”
- 149 – “Improving 1st position playing”
- 154 – “Depends upon the method book!”
- 155 – “Use of the fourth finger.”
- 156 – “Ear training_ and helping via octave work to play the notes that the cello and bass players are shifting to.”
- 157 – “They should be learning to shift as well”
- 158 – “They can be learning to shift as well”
- 159 – “Same note on THEIR INSTR.”
- 160 – “Teaching cellists/bassists to shift should not be done during full orchestra time”
- 161 – “Reinforcing their first position skills and posture_ hopefully doing some early shifting exercises”
- 162 – “Ridiculous question!”
- 163 – “Usually the scales in which the low strings must shift are quite simple for violin/viola students to do in first position. Typically they are also learning how to deal with the high/low 2 differentiation_ which can be difficult.”
- 164 – “The different formations of the left hand into intervals of whole and half steps.”
- 165 – “First position and 4th finger. Basses and Cellos have to learn to shift earlier because they don't have as much range with their hands as violins/violas.”
- 166 – “An appreciation for difficulty of other instruments! Also that there are options.”
- 167 – “The teaching materials I use have exercises for the violins/violas to do while the others are shifting. I don't spend copious amounts of time so the others are not left hanging.”
- 168 – “Basses should learn to shift in first weeks as part of the process of learning D major scale; all other instruments are likewise learning their notes of D major scale. Basses will continue to shift as all others learn new notes.”

- 169 – “They are also learning to shift or they are reviewing previously learned notes/fingerings--sometimes they do pre-shifting exercises or limited beginning shifting”
- 172 – “How cellists/bassists learn to shift.”
- 173 – “Not applicable to my experience”
- 174 – “Preparatory vibrato exercises_ other technique building exercises without the bow_ or silent practice.”
- 175 – “To get their fingers in first position really well in tune”
- 176 – “Great use of the 4th finger is a must”
- 177 - "Good question! They should be practicing shifting as well_ or at least "sirens"."
- 178 – “Flexibility of the hand/wrist through observation.”
- 179 – “Generally they have a theory assignment or they are working on long bows to hold out notes for the low strings”
- 180 – “See Essential Elements”
- 181 – “They are practicing extensions of the 1st and 3rd fingers. Everyone is working on the same scale or piece...just with different fingerings.....”
- 182 – “It depends on the level. In my classroom_ basses learn to shift first_ as part of learning the D scale (late in first year)_ while Vn/Va/Vc learn their A string notes. Cellos learn later on_ as violins and violas are learning 4th finger notes.”
- 183 – “Continuing development of mastery of their own instrument”
- 184 – “Other notes in 1st pos”
- 186 – “I am never in this kind of situation.”
- 187 – “High/low 2nd finger”
- 188 – “Scales in first position”
- 189 – “Frequently teach all at the same time. If not, vln/vla are waiting while quick notes to vcl/cb.”
- 191 – “N/A”
- 192 – “4th finger”
- 193 – “N/A”
- 195 – “Continuing first position”
- 196 – “I teach shifting all at the same time”
- 198 – “N/A”
- 199 – “*Detache* bow arm, relaxed and effortless.”
- HC1 – “N/A”
- HC2 – “I teach them 4th finger. It works perfect with the shifts on cello/bass.”
- HC3 – “N/A”
- HC4 – “Reviewing pitches in positions that they already know; the concept that there are notes outside of first position.”
- HC5 – “Continuing 1st position”
- HC6 – “I teach shifting all at the same time.”
- HC8 – “N/A”
- HC11 – “I don’t know.”
- HC12 – “I try and teach all students to shift at the same time.”
- HC13 – “N/A”

- HC14 – “N/A”
- HC15 – “Learn to listen and learn techniques from others sections.”
- HC16 – “In Mueller Rusch, they shift right along with the cellists and bassists.”
- HC18 – “I teach shifting in a sectional once a week.”
- HC19 – “N/A”
- HC20 – “Shifting motion”
- HC21 – “4th finger”
- HC22 – “Have not tried this.”
- HC23 – “N/A. I don’t teach low strings.”
- HC25 – “The ability to make constructive criticism and ear training {sic}.”
- HC26 – “N/A”
- HC27 – “Shifting also; scale exercises, tone production.”
- HC28 – “New finger patterns, ex: low 2, high 3, low 4, etc. that cellists/bassists don’t use.”
- HC29 – “The word and concept of shifting and that basses are special because they have to shift so early.”
- HC30 – “?”
- HC31 – “The motions of shifting”
- HC32 – “Listen and watch- very valuable”
- HC33 – “Basses shift first, vlms, vlns, vc’s later, all together”
- HC34 – “Counting exercises”
- HC35 – “?”
- HC36 – “Reinforcing reading skills and vibrato work”
- HC38 – “I don’t teach in a mixed classroom”
- HC39 – “Vibrato (pre) shadow-shift (not actually placing fingers on specific notes, they can also play harmonics series up and down the string to get ready to shift)”
- HC40 – “?”
- HC41 – “I prefer to teach all at once if possible, i.e. one finger scales. I guess some people have them do writing/theory.”
- HC42 – “They can do shuttle, left hand pizz., practice 4th finger, etc.”
- HC43 – “Bowings and double stops”
- HC44 – “N/A”
- HC45 – “Some 4th finger and non D major finger patterns”

Question 39: What factors enable or constrain your teaching of shifting?

- 003 – “N/A”
- 005 – “?”
- 006 – “In public school_ it was extremely difficult to give the hands-on help needed to each of my 300+ students. I also found very little existing literature to help the students learn to shift (outside of a performance piece) that was suitable for heterogeneous classes.”
- 007 – “Heterogeneous classes_ student practice”
- 009 – “My own abilities or lack thereof.”
- 010 – “Poor or incorrect hand position_ any tendency to pinch in a horizontal or vertical manner with fingers or hand”
- 011 – “None”
- 012 – “Our orchestra program is set up so that I see each student once a week for a 10-minute private lesson. This really helps in teaching shifting.”
- 015 – “This question is ambiguous_ but my responsibility to teach shifting makes it necessary to motivate the student to want to learn to shift confidently.”
- 016 – “Classes of 30-40 students.”
- 017 – “What my students are doing in school orchestra. We're part of a Suzuki program_so I often have to prepare students for what their groups are doing_ rather than being able to focus on specific techniques.”
- 018 – “Student's pitch”
- 020 – “Class size- ability to give each student individual attention.”
- 021 – “Shifting is taught best one on one. It can also be taught in a homogeneous class but with less effectiveness.”
- 023 – “Talent”
- 025 – “Teaching one-on-one enables it. Left hand tension constrains it.”
- 026 – “Bad training before they come to me”
- 028 – “Proper posture and relaxation can constrain progress”
- 029 – “The only significant constraint is established bad habits and/or an unwillingness to practice exercises/etudes/scales.”
- 030 – “1) Student reluctance to utilize positions other than first position_ mostly arising from either laziness or fear”
- 031 – “Only if the student has learned to hold on to the neck of the instrument so tightly that they have trouble moving up in position.”
- 033 – “Enable: willingness to learn on the part of the student; lots of time (if necessary) on the part of the student_ good coordination; good brain.”
- 035 – “Good natural sense of pitch is really helpful. Students with less sense of pitch take more time and care.”
- 036 – “As a private teacher it is important to group my students so they can learn from and observe each other. I need them to see others succeeding.”
- 037 – “Time”
- 038 – “Public school performance expectations that exceed students' abilities so that one must teach to the concert/contest”
- 039 – “Limited exercises.”
- 040 – “Proper shoulder rest/chinrest setup.”

- 042 – “Too many in one class”
- 043 – “Class sizes are often way too large to facilitate effective shifting lessons.”
- 044 – “Set up of student”
- 045 – “Student not taking the time to focus on their technique.”
- 046 – “Enable: my own ability to shift correctly; a good sequence of skills and exercises”
- 047 – “Not much- just that some students can really grasp the concept_ and others are left behind_ not ever understanding anything.”
- 048 – “My own personal history of lessons_ many Suzuki workshops_ many years of my own trial and error_ a lifetime of orchestral playing_ many years of seeing what works with students-I have not felt constrained about the teaching of shifting.”
- 050 – “Student maturity affects the rate that I push it. Students that are still struggling with basic left hand technique will be given smaller steps and more exercises in preparing {shifting}.”
- 051 – “If I had more time with my students I would be able to start them earlier on shifting.”
- 053 – “I am constrained by my lesson size and how often I see my students. On average a group of 5 three times a month.”
- 054 – “Time limit on lessons in public school_ lack of good repertoire for violists”
- 055 – “20 minute individual instruction -- sometimes it's enough time to cover it_ sometimes it's not.”
- 056 – “I am an eclectic Suzuki teacher who uses lots of rote learning and brings in lots of additional materials. As a studio teacher my care in assigning appropriate materials to each individual and my insistence on good quality before I increase the difficult. . .”
- 057 – “Not every student has access to private lessons due to monetary limitations. Also_ not every student (cello and bass students) have an instrument at home which limits practicing. Also_ demographics of the student population play a key role. . .”
- 058 – “Only when student can not play with a relaxed and proper position....or hear the pitches. Other than that_ I find it very easy to teach position.”
- 059 – “Not enough class time_ students learning note reading and having several different fingerings to play the same note”
- 060 – “A lack of rehearsal time”
- 062 – “Student's abilities”
- 063 – “The student's ability”
- 064 – “I used to feel constrained by the need to teach concert repertoire. Now I feel that it is far more important to teach technique and draw the concert repertoire from the new technique.”
- 065 – “Tension; lack of aural skills; incorrect hand frame.”
- 066 – “Strings are secondary - I use scales on my violin and cello to teach and demonstrate (3rd A to 1st A_ repeated_ etc...)”
- 067 – “Left and right arm tension. Poor instrument setup. Everything else can pretty much be adjusted.”

- 068 – “Competencies should be determined and met before formal shifting is taught_ e.g. well established body position_ instrument position_ left-hand shape_ in lower positions_ coordination of left and right hand_ accurate and consistent intonation in lower positions.”
- 069 – “Whether left thumb is relaxed_ whether the student can easily hold violin without supporting it w/ left hand.”
- 070 – “Heterogeneous groupings affect efficiency of teaching shifting.”
- 071 – “Enable: Pull out lessons to reinforce and refine the introduction of shifting_ usually taught through 2 octave scales_ in the orchestra rehearsal.”
- 073 – “The size of the class would definitely impact my ability to teach shifting. My classes are not too large_ so I don't have much difficulty.”
- 074 – “How often I see the kids:”
- 075 – “Physical aptitude of the student. Ear of the student. Motivation of the student.”
- 076 – “Students who have really bad posture especially the bending of the left wrist. Students who does not use their ears while practicing will spend the longest time to master the shifting.”
- 077 – “Talent--of the lack of talent. Also whether the student desires to practice or he/she watches the clock!”
- 078 – “Good shoulder rests help a lot. Lack of practice on the part of some students makes it difficult to learn the skill.”
- 080 – “Concerts always interrupt_ but usually don't have too much to stop the learning. My 2nd year students go to a string clinic that I can stress that others will know how to shift and they need to learn how also.”
- 081 – “LARGE HETEROGENEOUS CLASSES”
- 082 – “In public schools there isn't adequate time or necessarily homogeneous groupings. I believe that private instruction has a much better_ & quicker_ success rate.”
- 084 – “I mostly teach privately_ so I'm able to teach shifting when each student is ready_ and I can tailor the student's repertoire_ etc. to his developing shifting abilities.”
- 085 – “Dedication to practice. Willingness to make mistakes and learn from them.”
- 086 – “Constrain now? - 45 in the orchestra classes”
- 087 – “It is hard to teach shifting in large_ mixed classes. Each student has individual problems that must be addressed if he is going to be successful_ and when the class is large_ some problems have to be overlooked.”
- 088 – “I only have one 30 minute group lesson/week.”
- 089 – “Flexibility_ loose thumb_ replacement fingerings enable teaching”
- 090 – “N/A”
- 091 – “Different levels of playing in the same class. I introduce shifting in the D major scale for violins...end of first year or beginning of second year of playing.”
- 093 – “Technical aspects of music under study”
- 094 – “Time”
- 095 – “The amount of re-teaching of the basics I have to do in the beginning of the school year to old and new students.”

- 096 – “Lack of time.”
- 097 – “Time”
- 098 – “Time varied materials and extreme low level of feeders.”
- 099 – “Large classes and minimal class time (30 minutes once every 6 day cycle)”
- 100 – “Time with the students”
- 101 – “The earliest stages of reading music in a different position are difficult to coordinate among instruments in a heterogeneous setting.”
- 102 – “TIME_ number of students’ present_ mixture of instruments_ motor skill abilities of the students.”
- 103 – “I am enabled by teaching private studio violin.”
- 104 – “Enable - the readiness of the student”
- 105 – “Time”
- 106 – “Time_ lack of preparation at the feeder school”
- 107 – “Students eager to learn are interested in trying new things_ physical set up is relaxed and w/o tension_ good tone is present. Good aural skills are present.”
- 108 – “Students’ inability to hold the instrument properly. Proper position enables this.”
- 109 – “When the student is ready”
- 110 – “**Holding the violin properly. Student isn't secure with intonation_ in first position.”
- 111 – “One on one studio time enables me to take the time to teaching shifting properly.”
- 112 – “Mostly the student's interest and/or talent (or lack of talent and interest)”
- 113 – “The primary limiting factor is time: only one 30-minute meeting per week for the first two years.”
- 114 – “None”
- 115 – “None”
- 117 – “Enable: fewer students so I can get around to them more often.”
- 119 - “I now teach high school. Some of my ninth graders have never shifted_ and we have to have a "crash course" to catch them up with where they should be.”
- 121 – “Multi-levels in one class”
- 122 – “Incorrect left hand position and poor bow arm and bow hold.”
- 123 – “For first and second year students I have to remember to add it to my plans since it doesn't come up much in the books we use. It also requires more individual attention when one risks losing the focus of a large_ young class.”
- 124 – “Student's ability level--- especially ear training_ coordination_ and position.”
- 125 – “Relaxed and reliable posture will allow shifting to occur more easily and accurately.”
- 126 – “Class size”
- 127 – “Very inquisitive students who want to know the who_ what_ why's of a subject can get flustered with thinking outside the box to shift.”
- 128 – “Individual students' abilities.”
- 129 – “Not enough scheduled class time”

- 130 - "Shifting is most successful_ and successfully taught_ when all other factors of the large muscular structure are well balanced and free. Consequently_ I don't deal with teaching or "re-teaching" shifting until the student has successfully incorporated an. . ."
- 131 - "Constrain - Orchestra concert and music. Performances of the ensemble."
- 134 - "Seeing public school students so infrequently for lessons"
- 135 - "Lack of standard size of violas"
- 136 - "Students' original set-up"
- 138 - "Student's degree of secure intonation in 1st position."
- 139 - "None"
- 140 - "None"
- 141 - "I don't teach beginners_ so the constraints I work against are students who have had poor or no instruction on proper shifting in the past and yet are attempting to play advanced repertoire"
- 142 - "The fact that you have to concentrate on just one person or section to really get it right."
- 143 - "Having students who know how to shift who can help their fellow classmates is a real plus."
- 145 - "Trying to teach it too soon. If the student cannot play in tune in 1st position_ then it is a disaster."
- 146 - "None"
- 147 - "Time."
- 148 - "If a student has a bad left hand set up_ "shape"_ then this hinders ability to shift well."
- 149 - "Students supporting instrument with left hand"
- 150 - "How often I see the kids: At the elementary school, I see them once a week; at the middle school, I see them two or three times a week; at the high school I see them every day. I will have my beginning high school players shifting within 10 months from then they started. I really need things to be the opposite. It would be nice to see the little ones more often."
- 153 - "A students' poor posture."
- 154 - "Inherent difference in the easy/difficulty of holding a violin or viola vs. cello or bass"
- 155 - "I don't know enough about it yet."
- 156 - "Students who would rather gliss. past the note they are trying to reach. Students who try to shift too fast."
- 158 - "Preparation for concerts- pressure to prepare music to perform"
- 159 - "The biggest enemy to shifting is tension in the thumb and shoulder. The misconception that there is a certain position that must be maintained by clamping down on the chin rest. Many students actually pull down on the instrument when they shift. Encouraging them to push up helps counteract this. William Primrose advocated it for violin, and it works well for violin too."
- 160 - "Time factors"
- 161 - "Bad habits (transfer students_ etc.)"

- 162 – “Students' previous teacher_ previous experience_ physical problems_ general preparation of the student.”
- 163 – “The particular student's ability level is the key to deciding when to introduce shifting.”
- 165 – “Materials... but it's better now that I've done it a few years. I've created a bunch of my own studies too.”
- 166 – “Individual intonation is a problem especially in group settings because there are always students who just can't find the pitch. They either overshoot or undershoot and it is frustrating for them and others (including the teacher). But we must continue to. . .”
- 167 – “Class size generally is the biggest factor in 'enabling' or 'constraining”
- 168 – “Strange question. Too big a question. Obviously_ the student's motivation_ ears_ whether a private/homogeneous/heterogeneous setting_ size of class_ frequency of instruction_ and one hundred other factors influence teaching shifting_ either enabling or constraining.”
- 170 – “I have used two different method books - one where the students have to shift in the beginning and one where they do not shift until the second book - and beginners at the 6th grade level can shift early. The problem with introducing the concept this early is. . .”
- 172 – “Teaching shifting is integral to teaching string playing. Nothing constrains my teaching of shifting per se (or of any other integral function of violin playing). Shifting is simply one of the many technical hurdles over which a teacher must bring the students.”
- 173 - I don't know about a method for very young students that are interesting enough. The stuff for college age is good.”
- 174 - "It is part of the warm-up drill at each rehearsal. Students master the skill through daily "guided practice" (by rote)"
- 175 – “Lack of instructional time and lack of practice time on the part of students”
- 176 – “As a HS teacher_ the lack of any exposure to shifting in MS”
- 177 – “Only the heterogeneous classroom situation_ since the positions/notes don't always match up. Again_ I appreciate All-For-Strings Book 3 for this reason (it's not the most fun book in the world_ but the shifting ideas are great)”
- 178 – “Poor elementary/beginning lessons.”
- 179 – “How many kids in a class and the musical background of the student matching pitch. Also how focused the class is as a whole.”
- 180 – “Some classes progress at a homogenous rate. In others_ some students are ready to shift long before others. Privately is much easier!”
- 181 – “I wait to see if the student has a secure basic position and has a good ability to play in tune in 1st position.”
- 182 – “Enable: good resources on drilling shifting in heterogeneous setting.
Constrain: class size -- getting around to every student to examine their shifting motion / accuracy.”
- 183 – “Students not being ready (either in technique or developmentally) to move to more involved playing techniques.”
- 184 – “Having smaller classes that are more homogeneous”

- 185 – “Student willingness to practice and not jump ahead”
- 186 – “I’m always enabled - never constrained”
- 187 – “I am not as comfortable on the violin/viola as on the cello.”
- 188 – “Note reading skills of students”
- 189 – “Lots of students in heterogeneous setting can make life difficult.”
- 190 – “Enabled by the student’s curiosity.”
- 191 – “A students' inability to match a pitch. Every student is different. Readiness is important. After learning the security of first position a student must be able to hear and match pitches. Leaving fingers down (especially the first finger) whenever possible is a must for good intonation.”
- 192 – “Possibly time or my own want to have them shift”
- 193 – “The child's personality, degree of parental support and parental knowledge of music.”
- 194 – “Violin set-up/ dedication to practices”
- 195 – “I think the kids need more ear training”
- 197 – “Constrain - Tin ear of student; lack of ear training”
- 200 – “Enable - children which sing a lot, good hand positions, students who like to work details and are patient to listen carefully every single time; Constrain - young children with small hands are not able to work on lower strings in high position, children who can't hear pitches before the shifts.”
- HC1 – “A student’s inability to match a pitch.”
- HC2 – “Possibly time or my own want to have them shift.”
- HC3 – “The child’s personality, degree of parental support and parental knowledge of music.”
- HC4 – “Violin set-up; dedication to practice.”
- HC5 – “I think the kids need more ear training.”
- HC7 – “Tin ear of student; lack of ear training.”
- HC10 – “Enable: Children which sin a lot, good hand positions, students who like to work details and are patient to listen carefully every single time.
Constrain: Young children with small hands are not able to work on lower strings in high positions. Children who can’t hear pitches before the shifts.”
- HC11 – “Nothing”
- HC12 – “Time, discipline in classroom setting.”
- HC13 – “Having a student that playing {sic} in first position plays out of tune.”
- HC14 – “Tightness of left hand, not enough confidence in the 1st position.”
- HC15 – “Lazy student’s posture.”
- HC16 – “It is frustrating to try to get around to all the hands in a class setting.”
- HC17 – “WIDE VARIATION IN PREVIOUS LESSON EXPERIENCE”
- HC18 – “Time”
- HC19 – “Biggest constraint is a student’s inability to hear the pitches or intervals when shifting.”
- HC20 – “In a class, there is little specialized instruction.”
- HC21 – “Different strings on different instruments, not being able to check positions while shifting.”
- HC22 – “Number of students; requirements of curriculum; capabilities of students”

- HC23 – “Students have orchestra music that is too hard for them, thus we spend valuable lesson time learning how to get through that music rather than sticking to basics. If students have a solid technique then they should be able to teach themselves most of their ensemble music.”
- HC25 – “N/A:
- HC26 – “Correct position of the left hand is very important. The greatest obstacle is too much tension in the area between the thumb and 1st finger of the left hand”
- HC27 – “Willingness of the student to practice technique correctly and implement.”
- HC28 – “Tension, lack of ear training”
- HC29 – “Enable: music choice, Constrain: thumb gripping neck”
- HC30 – “Comfort of the student holding their instrument”
- HC31 – “Students’ prior experience and teaching; pitch awareness”
- HC32 – 1) Teach it early, don’t insist on perfection; 2) Put it into your standard literature, on non-challenging pieces; 3) Keep coming back to it differently – have specific parameters.”
- HC33 – “Nothing”
- HC34 – “Students’ attitudes (positive and negative)”
- HC35 – “Ability levels”
- HC36 – “My background”
- HC38 – “A good left hand position with fingers over the fingerboard is very helpful. The wrist bent inward inhibits clean shifting. Clutching the violin with the left hand also is a negative.”
- HC39 – “1) Knowing the mechanics, what moves (EVERYTHING); 2) Knowing how to coordinate bow and hand (shifting movement); 3) Knowing the importance of keeping the bow moving while shifting; 4) Knowing that you loosen the “grip” before you shift.”
- HC40 – “Ability to listen; flexible left hand/arm”
- HC42 – “None in private teaching. Time in classroom teaching.”
- HC44 – “Students who come to me with poor left hand positions and poor tone, but have played quite a while make it difficult to teach positions. They want to move to more advanced music, but are not in good technical shape to shift.”
- HC45 – “Multiple developmental levels in the same class; individual differences and abilities”
- HC46 – “Large heterogeneous classes: sometimes it’s not possible to check every student every day. If students miss a lesson, bad habits can go unchecked.”