Alexander Technique and Body Mapping Principles for the Suzuki Violin Teacher

Emma E. McAlister

University of Wisconsin, Stevens Point

November 2018

Table of Contents

Introduction 4

Part 1: Theories 6
- Shinichi Suzuki 6
- Suzuki Method Principles 7
- F.M. Alexander 10
- Alexander Technique Principles 11
  - Primary Control 11
  - Use 12
  - Inhibition 13
  - Directions 13
  - The Force of Habit 14
  - End Gaining 15
- Body Mapping 17

Part 2: Applications 18
- Activities Exploring Alexander Technique Principles 18
  - Constructive Rest 18
  - Primary Control While Sitting or Standing 19
  - Leaning Forward with Ease 20
  - Bringing the Violin to Playing Position 21
  - Playing with Ease 21
  - Ridding Tension in a Difficult Passage 22
- Activities Exploring Body Mapping 22
  - Kinesthetic Sense 22
  - The Spine 24
  - The Whole Arm 26
  - The Radius and Ulna 28
  - The Hand 30
- Teaching Healthy Movement with Fundamental Skills 31
  - Playing Position Feet 31
  - Left Hand Playing Position 33
  - Left Hand Finger Motion 33
  - Bowing Motion with Twinkle Twinkle Little Star Variations' Rhythms 35
  - Introducing the Bow Hold 35
  - Bowing Motion Maintaining a Relaxed Bow Hold 37
  - Bringing the Violin to Playing Position 37
  - Bringing the Bow to the Kreisler Highway 39

Going to the Frog Motion with the Whole Arm 40
Conclusion 41
Resources 43

Introduction

Violin playing is achieved through complex movements. Violinists depend on their bodies to do repetitive motions, yet many violin teachers do not give enough attention to the movement components of music making. Suzuki violin teachers often start teaching their students at a very young age, and continue to teach them through their high school years. Suzuki violin teachers have a large impact on their students' playing and have the opportunity to make sure that there is ease and freedom in their students' technique.

For many, repetitive motions can take a toll on bodies and cause aches and pains. Statistics from numerous studies indicate that musicians have a significant risk of suffering an injury from playing their instrument. (Bosi, 2017) Why do these pains occur and how can we prevent them? The Alexander Technique and Body Mapping principles offer an explanation of why they occur, and a way to prevent or cure those pains.

In her book, *How to Learn the Alexander Technique*, Barbara Conable (1995) defines the Alexander Technique as follows:

> The Alexander Technique is a simple and practical method for improving ease and freedom of movement, balance, support, flexibility, and coordination. It enhances performance and is therefore a valued tool for actors, dancers, and musicians. Practice of the Technique refines and heightens kinesthetic sensitivity, offering the performer a control which is fluid and lively rather than rigid. It provides a means whereby the use of a part – a voice or an arm or a leg – is improved by improving the use of the whole body. (p. 1)

Body Mapping was discovered by an Alexander Technique and strings teacher, William Conable. Body Mapping was further developed by his wife and fellow Alexander Technique teacher, Barbara Conable. Body Mapping involves accessing one's own mental picture of one's body and correcting any inaccuracies so that they can learn to move "...in the most balanced, fluid, and natural way possible." (Johnson, 2009, pg. 16) Barbara went on to train a group of musicians to continue to teach Body Mapping to other musicians. This group is now called Andover Educators. (Johnson, 2009)

The purpose of this project is to define important principles from both Alexander Technique and Body Mapping and then explain how they relate to violin playing and how they can be used by Suzuki violin teachers. This project does not replace invaluable Alexander Technique lessons, and/or Body Mapping lessons, rather this project emphasizes the importance of being aware of the movement component of violin playing and how such awareness results in playing with freedom of motion and without pain.

Suzuki violin teachers can utilize principles of the Alexander Technique and Body Mapping to help their students remain pain free as well as improve their technique. This project will explain these concepts and how they can be applied when teaching. The exploration activities that apply the Alexander Technique and Body Mapping principles help teachers and students understand the concepts and how they can be used in their playing. When applying the concepts, they will gain awareness of how to use their bodies effectively so they can avoid repetitive motion injuries. First addressed is the Suzuki Method and how its principles create a natural environment where Body Mapping and Alexander Technique principles can be utilized to help students reach their full potential.

Part 1: Theories

Shinichi Suzuki

Shinichi Suzuki began to teach himself to play the violin at the age of 17 after being inspired by a recording of Schubert's *Ave Maria* performed by Mischa Elman. He would listen to recordings and imitate what he heard. A couple of years later he took lessons in Tokyo. At the age of 22 Suzuki moved to Germany where he studied with violinist Karl Klingler. (Starr, W. J., & Starr, C., 1992) When he returned to Japan, he taught violin at the Teikoku and Kunitachi Music Academies. When he was asked to teach a four-year-old, he was at a loss as to how to teach him. Suzuki pondered what approach to take to teach such a young child. This was the impetus that lead to the development of the Suzuki Method. (Suzuki, 2012)

Suzuki realized that children in all parts of the world learn to speak their native tongue with ease, while he had struggled to learn to speak German as an adult. He thought that children could learn music in the same way that they learned to speak. If they started at a young age in an environment where music was frequently heard, and were nurtured by their parents and teacher, they could acquire the language of music. He believed that in these conditions, all children have the talent to learn music. The concept that talent could be nurtured was unusual at the time, as the prevailing belief was that few people were born with musical talent. (Starr, W. J., & Starr, C., 1992)

Dr. Suzuki's teaching method was successful; his students learned to play the violin very well. Teachers from across the world came to Dr. Suzuki to learn his teaching method and he and his students traveled to other countries to perform. Their audiences were amazed at how well such young students could play. The Suzuki Method grew in popularity as teachers and parents

saw the children's acquired skills. Dr. Suzuki believed that through learning music, children would also become compassionate people. (Starr, W. J., & Starr, C., 1992)

Suzuki Method Principles

The Suzuki Method has principles that are integral to its pedagogy. These principles parallel well with Alexander Technique and Body Mapping principles and enable their integration into Suzuki violin lessons.

The first Suzuki Method principle discussed is Every Child Can Learn. Just like every child can learn their native language with ease, every child can learn to play the violin (or other musical instruments). Music ability can be cultivated in any child with the proper training; it is not an inborn talent. (Starr, 2000) Both Alexander Technique and Body Mapping can be used to help every student to use their body efficiently and with ease. Those who seem to be "naturals" at playing the violin are using their body efficiently already, while others who do not play with ease can learn through Alexander Technique and Body Mapping to do so. (Johnson, 2009)

Another Suzuki principle that creates an environment where it is advantageous for Alexander Technique and Body Mapping principles to be utilized is the principle to begin early. Starting to learn from a young age is advantageous for developing muscle coordination and mental processes. (About the Suzuki Method, n.d.) This principle ties into the Alexander Technique and Body Mapping concept that all children start off with good and natural use of their body. It is through external forces, such as mimicking an adult with poor use or common misconceptions about the body that result in one's use becoming unnatural. One example would be the ambiguous concept of the shoulder. When asked to point to the shoulder, one might point

to the shoulder blade, the upper humerus, or the trapezius muscles. There is no anatomical unit called a "shoulder." This can cause confusion about how to naturally use that region of the body. To avoid picking up bad habits, it is important to start to learn from a young age how the body is constructed and should be used. Tuning into one's kinesthetic sense is beneficial for violin students so that they can play with natural movements and with ease. (Johnson, 2009)

Suzuki lessons are delivered by the teacher to the student and parent, often referred to as the "Suzuki Triangle." The Suzuki Triangle is comprised of the student, parent, and teacher. Each person in the triangle is important for creating a successful environment for the student to learn the violin. Parents are expected to help the student practice at home, attend lessons, and encourage the student throughout the entire process. (About the Suzuki Method, n.d.) It can be challenging to know if one's own movements are efficient. (Gelb, 1994) Teachers and parents can promote healthy movement by encouraging the student to be more aware of their movements and give feedback about their movements in the lesson as well as at home.

The Suzuki Method emphasizes that listening to the Suzuki repertoire is extremely advantageous for students. Listening creates an aural model for the student to work toward. (Starr, 2000) The Alexander Technique and Body Mapping also state that observing those who move with ease and use their bodies efficiently and naturally is advantageous for the student. Surrounding oneself with good music will have a positive influence on one's playing. Similarly, observing those who move with ease and surrounding oneself with accurate depictions of the body, will positively influence one's movements. (Johnson, 2009)

The next Suzuki Method principle is Delayed Reading. Just as children learn to speak before they learn to read, Suzuki teachers prioritize learning how to play their instrument well

before learning how to read music. Reaching a basic competence on their instrument before reading enables the focus to remain on quality of tone and technique. (About the Suzuki Method, n.d.) This principle easily enables the focus to also be on ease of movement in the early stages of learning the violin. The teacher and parent can help the student learn to move with ease with the violin and bow before the distraction of reading notes from the page.

Learning from other children is another Suzuki Method principle. Typically, weekly or biweekly group classes are scheduled for this purpose. (About the Suzuki Method, n.d.) Besides working on repertoire, group classes could be a wonderful forum for students to engage in activities that focus on the movement component of playing the violin and learn about Alexander Technique and Body Mapping.

Lastly, reviewing previously learned material also enables a prioritization of natural movement. Suzuki students do not discard a piece of music once they learn it, rather they continue to review it so that they can focus on improving their ability without worrying about learning new notes. Playing a piece that is known well frees up the mental energy to focus on other techniques or skills. (About the Suzuki Method, n.d.) One of those skills could be focusing on the body's movement to achieve a sense of ease and freedom.

F.M. Alexander

Frederick Matthias Alexander was an actor in the late 19th century who suffered from a failing voice. His voice would get hoarse while on stage during recitals. It got to the point that his recurring failing voice was threatening his career. Doctors were little help, so Alexander started examining how he conducted himself on stage. For nearly ten years, he used mirrors so that he could closely examine what he did with his body while he used his voice. He discovered he had a tendency to pull his head backward and down. This led to lifting his chest and hollowing his back. These tendencies resulted in a depression of his larynx and an audible sucking in of his breath. To resolve these issues caused by unconscious reflexes, he tried the conscious decision to let his head move forward and up. However, he found that when trying to move his head forward and up while looking in the mirror, he sometimes did the opposite. He also discovered that what felt right was not a reliable guide to fix his habit; rather what felt right was often falling back into the old habit. Instead, one has to learn how to direct actions without using the old mental signals. Alexander was successful in improving his health through this long process and went on to teach many students his technique. His students were able to improve at a much faster rate than he did when he used his hands on his students' body to guide their awareness to efficient movement. As Alexander made his discoveries, his fame as an actor and demand for his teaching increased. To meet the demand, he established an Alexander Technique Training Course for Teachers. (Gelb, 1994)

Alexander Technique Principles

There are a number of Alexander Technique principles that improve efficient use of the body when playing the violin. This section will describe these principles and discuss why they are useful.

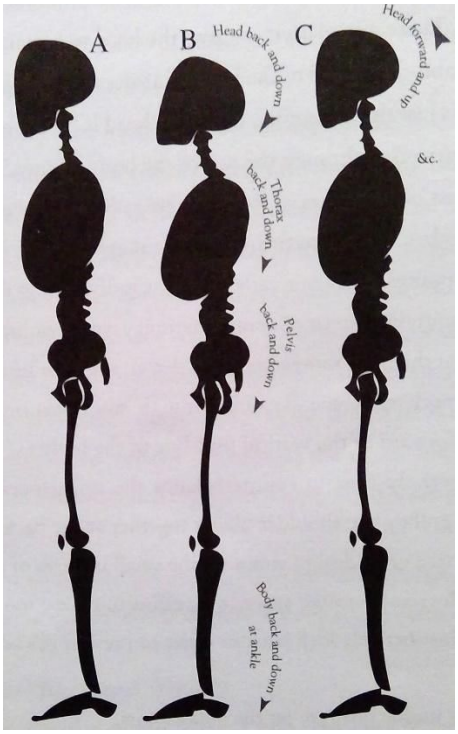

Figure 1. From Balance to Downward Pull and Back to Balance. (Johnson, 2009)

Primary Control

Primary control is one of the most significant concepts used in Alexander Technique. Primary control is the idea that the relationship of the head and spine determines the optimal use of the entire system. Ideally, the head should be balanced comfortably on the top of the spine. The head should not be pulled back and down; rather think forward and up through the top of the head. Figure 1 A shows a body with the head balanced properly on top of the spine, and B shows

a body with the head pulled back and down, resulting in misalignments in the rest of the body. C in Figure 1 shows the head after letting the head go forward and up, back to its natural balance on top of the spine. The head should lead the body whenever we stand up or move forward. If the head is not balanced freely on the top of the spine it can cause major problems with any motion. Primary control is the key to moving freely. (Gelb, 1995)

Primary control can be a struggle for violinists because of how we balance the violin between our jaw and collarbone on our left side. Violinists should be able to turn their head to the left and then slightly nod to reach their chin rest so that the violin is balanced comfortably. Partial weight of the head should be used rather than tightening the neck in any way. Raising the shoulder to bring the violin closer to the jaw is a common tendency that should be avoided. Reaching out with the head to meet the chin rest should also be avoided as it results in the head no longer aligning with the spine, which causes unneeded effort and tension. (Conable, 1995)

Use

"Use," or the "use of self," refers to the way a person moves their body. Alexander Technique aims to improve a person's use so that they have ease and freedom of movement. This term is a useful shorthand when addressing how a person moves their body. Observing one's habitual use is the first step of trying to implement Alexander Technique principles. The next step is to inhibit the habitual use to be able to choose more effective use of self. (Alexander, 1985)

Inhibition

In order to break habits, we need to choose not to react in our habitual response. This is called inhibition. Everyone learns specific ways to react to situations throughout their day-to-day lives. These reactions become habitual and may be carried out with excessive tension. (Alexander, 1985) For example, a violinist may have learned to anticipate bringing a violin to playing position by reaching their jaw forward as the violin is brought up. First, the violinist must be made aware of the habit. They may have been making this motion for years without realizing it. Once the violinist becomes aware of this habit, they must inhibit this inefficient reaction to bringing the violin to playing position. The habitual response must be stopped with a mental decision before it starts so that a new pattern can be chosen. (Conable, 1995)

Violin teachers can help their students become aware of such habits and even help the inhibition process by reminding the student to change their reaction to the stimulus before the stimulus is present. This useful process can be employed while correcting any error a student might habitually make when playing the violin. Inhibition is an essential tool when correcting any bad habit.

Directions

After inhibition takes place, the next step is to send mental directions to improve one's use. These instructions direct the muscles to release tension in a certain direction. For example, one might direct the knees to release out and away from the hips. (King, n.d.) It is essential to avoid forcing the body to execute the directions; this would likely cause tension. Rather, envisioning the directions allows the muscles to be free of tension. (Gelb, 1995)

Another example of such directions would be: “Allow the neck be free to let the head go forward and up so that the back may lengthen and widen.” (Gelb, 1995, p. 68) These directions are designed to enable proper primary control and release excess tension held within the body. Avoid moving the head forward; instead release the tension at the base of the skull. When the tension at the base of the skull is released, this creates a sensation of rotating the head forward and releasing tension upward. These directions are an important step to achieving a head that is balanced on top of a lengthened spine, the objective of Alexander Technique. (Gelb, 1995)

When preparing to play the violin, it is beneficial to give the body directions to help achieve primary control. If the head is released forward and up so that the spine lengthens when the violin is brought to playing position, the violin will be supported without any excess tension. (Conable, 1995) An exercise with step by step directions to achieve a tension free playing position is described in the activity section.

The Force of Habit

Everybody acquires habits through life. Some of these habits are non-beneficial or unhealthy, even though they may feel natural or comfortable. One may even kinesthetically feel that they are breaking a physical habit when in actuality they are not. An example of this concept is when Alexander first tried to correct the habit of his head being back and down. He discovered that even though he thought he made the correction by moving the head forward and up in a way that “felt right,” what “felt right” was actually falling back into his old habit. Using the kinesthetic sense of what “felt right” was not a reliable way to fix physical habits.

Not being able to rely on what "feels right" makes it difficult when adjusting physical habits by oneself. Mirrors and the observations of parents and teachers help the student to understand habits of the body that are difficult to sense. With this information, old habits can be curtailed and replaced with new ideas of motion. (Gelb, 1995)

Because violinists rely so much on kinesthetic memory, it is important that they understand the power of habits, and when habits can be unhealthy even though they seem comfortable. Teachers and students struggle with this when trying to correct technique issues. Often, students do not want to change inefficient habits because the unfamiliar posture or motion is less comfortable than the incorrect habit. Explaining how powerful habit is and that incorrect technique may seem more comfortable initially, helps the student be more willing to change their technique. Also, explaining how fixing the technique will benefit the student in the future by preventing injury or producing a more beautiful tone can motivate the student to break bad habits.

End Gaining

The term "end gaining" refers to focusing on the end result rather than the means whereby we obtain the end result. It is "Grasping for results without thoughtful attention to process." (Gelb, 1995, pg. 164) End gaining is a habit seen in day-to-day life. An example would be a person speeding on a highway to reach a destination. The driver is focused on reaching the destination, but is not focusing on negative consequences that may occur with the way the goal is reached. Violinists must deal with this concept often. An example would be a student practicing by playing through an entire piece rather than focusing on the means used to successfully play

the most difficult passages. Violin teachers can help their students be aware of the common tendency of students to end gain when teaching them how to practice effectively. Teachers can also help by emphasizing *how* the student's movements must change in order to correct a musical passage or technique rather emphasizing only the result. An example would be working on a crescendo with a young student who has been introduced to crescendos before. A teacher might say, "remember to gradually get louder at the crescendo," emphasizing only the end goal of creating a crescendo. Instead, the teacher could say, "remember to gradually use more bow to create the crescendo," emphasizing the importance of *how* the student can successfully create the crescendo. The teacher could also demonstrate *how* to use more bow to create the crescendo. Emphasizing the process rather than the end result leads to clear communication with students.

These Alexander Technique Principles are all applicable to improving violin technique. They are helpful tools when trying to use the body efficiently when playing the violin. The activities that apply Alexander Technique Principles aim to better the use of self in preparation of violin playing and while playing the violin.

Body Mapping

Body Mapping is "The method discovered and developed by William and Barbara Conable to access the body map and to consciously alter it when inaccuracies are found." (Johnson, 2009, p.5) Body Mapping is an extremely useful tool for learning Alexander Technique and violin technique. Barbara Conable states, "The most valuable asset you can bring to the study of the Alexander Technique is an accurate body map." (p. 32) William Conable is a string teacher and an Alexander Technique teacher. He used Body Mapping in his Alexander Technique classes and found that his students learned at much faster pace because of it. (Conable & Conable, 1995) Many Alexander Technique teachers have followed the Conable's lead and integrated Body Mapping into their Alexander Technique lessons.

Everybody has a map in their mind's eye for how they think their body is structured. If their map is incorrect, people will still try to move according to their misconception. Barbara Conable (1995) states "When there is a conflict between the map and the reality, the map will always win in movement." (p. 32) This can lead to serious consequences especially for violinists.

William Conable's first discovery of Body Mapping occurred when coaching a violinist. He discovered that after he showed her where the elbow joint was on an anatomical model, she was able to bend her arm with increased freedom. The violinist had mismapped her elbow joint to be an inch further up the arm than it actually was, and so was unconsciously trying to bend her arm from a "fantasy joint." The discovery of how important it is for musicians to learn how the body is structured led to further development of Body Mapping and establishing Andover Educators. (Johnson, 2017)

There are many ways to work on making the body map accurate. It is beneficial to study anatomical images and videos. Palpation, self-inquiry, and mirror work are also effective methods. (Johnson, 2009) The Body Mapping activities in Part 2 explore concepts that are especially pertinent to teaching and playing violin.

Part 2: Applications

Activities Exploring Alexander Technique Principles

Constructive Rest

The first activity is called Constructive Rest. It involves applying Alexander Technique Principles while lying down. This activity enables awareness of applying directions while letting gravity completely support your body. Try this activity for 10-20 minutes to try and release tension. Gelb (1995) recommends Constructive Rest "...when you wake up in the morning, when you come home from work and before retiring at night." (p. 163) It is also beneficial before a performance or any other stressful situation. (Gelb, 1995) Constructive Rest is advantageous to do before practice to achieve the sensation of being completely tension free. Trying to maintain that feeling of freedom while practicing is key to improving one's use. The following instructions describe the process to achieve Constructive Rest.

Start by lying down on the floor. A carpeted floor or a mat would be ideal. Put paperback books (2-6" worth) under the head for support and to help prevent the head from pressing back and down. The books should rest where the neck ends and head begins. Bend the legs so that the feet are flat on the ground and shoulder width apart. Make sure knees are balanced freely, directly above the feet. Do not let them fall outward, or inward towards each other. Put hands

either on the rib cage or let them rest at your side. Allow all of your weight to be supported by the floor. Notice and inhibit the body's habitual movements. Remind yourself of these directions: "Allow the neck be free to let the head go forward and up so that the back may lengthen and widen." (Gelb, 1995, p. 68) Avoid fidgeting and bring your attention to your breath. Gravity will lengthen the spine and release tensions as you rest for 10-20 minutes. When it is time to get up, do so slowly and carefully. Make sure to not stiffen or shorten the body. Notice the distance between your feet and the top of the head. The distance may feel as though it has expanded. (Gelb, 1995)

Primary Control While Sitting or Standing

The next exercise explores primary control while simply sitting or standing and turning one's head. As violin players usually sit or stand, it is a useful exercise to improve one's use before involving the instrument. Rather than saying "stand or sit up straight," as this wording promotes an erect posture with excess tension, teachers can use this primary control exercise to achieve balanced posture that is free of tension.

The exercise starts with exploration. With open eyes, either sitting or standing, turn the head to look around the room. Turn the head side to side. Tip the head up to see the ceiling, then tip it down to see the floor. Observe any habitual tendencies. Does the body twist when moving the head? Is there cracking or popping in the spine? Did your breathing slow or stop? Next apply these directions: Allow the neck to be free to let the head go forward and up. Let the back lengthen and widen. While looking around the room, let the head lengthen up and away from the torso, rather than craning or jamming the head forward. The body should not twist with the head. When allowing the head to lengthen away from the torso, turn the head side to side, and then up

towards the ceiling and down towards the floor. The motion of moving the head should ease and become freer. (Barker, 1978)

Leaning Forward with Ease

The next activity involves leaning forward in a chair while achieving primary control. This is another activity that applies Alexander Technique principles to a movement that happens often in a music rehearsal space. This activity is helpful because it creates ease in this seemingly simple movement by drawing awareness to inefficient habits, inhibiting them, and then letting primary control lead the movement.

Start by sitting in a chair. Explore the habitual motion of leaning forward and then sitting back in the chair. Notice if parts of the body tense, you hold your breath, or if the body is pushed forward instead of letting the hip joints hinge. Then apply these directions: Let the head lead up and away from the top of the spine. Don't force the movement, instead let the muscles engage as needed and sense if the movement is easier. Engage the body in the upward movement and lean forward

These first three activities have explored achieving a sense of ease and freedom in activities leading up to playing the violin. Next explored is achieving freedom in movements that involve the violin.

Bringing the Violin to Playing Position

Bringing the violin to playing position is an action that can be riddled with bad habits and tension. This exercise explores this motion and promotes replacing bad habits with tension free balance.

Begin either sitting or standing. Get into playing position in your typical manner. Notice how the body prepares. Does the jaw thrust forward anticipating the violin? Does your shoulder raise? Do you clench the instrument between the jaw and shoulder? Is the head properly aligned atop the spine? Next apply these directions: Allow the head to move forward and up, lengthening the neck and spine. Inhibit any tense habitual response while bringing the violin to the shoulder. Turn the head side to side still thinking forward and up and let the jaw come to rest on the chin rest. Remind yourself of the directions. The violin should be comfortably balanced atop your collarbone and shoulder with your jaw gently resting on the chin rest.

Playing with Ease

The next activity explores what habitual tensions one has while playing even the simplest of music. Choose a simple scale, exercise or piece that is memorized so well that the body seems to go on autopilot and begin playing. Explore the body kinesthetically to sense for any unneeded tension. Notice which part or parts of the body feel tight or uncomfortable. Stop playing and bring the violin to position with the preceding exercise. Inhibit any excess tension as you prepare to play the first note. Be conscious of keeping the head balanced and begin playing, maintaining the relaxation achieved with primary control. This is a wonderful activity to apply to daily warm

ups to maintain awareness of the body while playing, as well as promote a sense of ease while playing.

Ridding Tension in a Difficult Passage

Preparing a difficult passage is often made even harder when one's body becomes tense in anticipation of the difficult passage. Start by playing through the difficult passage and noticing how the body responds when the passage is approached. Start again but inhibit any excess tension that creeps into the body in anticipation of the difficult passage. Maintain primary control while practicing a relaxed preparation without actually proceeding to the difficult passage. Once a tension free preparation is achieved, proceed to the difficult passage and maintain the feeling of ease by sending these directions: let the neck be free, let the back lengthen and widen. If needed, break the passage into small chunks that are able to be played without excess tension before putting the whole passage together. When freedom of movement is maintained, the difficult passage is able to improve with more ease.

Activities Exploring Body Mapping

Kinesthetic Sense

The kinesthetic sense is an extremely useful tool when learning about Body Mapping and trying to use the body naturally and efficiently. This sense is not one of the five senses typically emphasized in our society. Because of this, kinesthesia is not mindfully utilized or developed by violinists. Violinists train their auditory, visual, and tactile senses, but would benefit from developing their kinesthetic sense as well. (Johnson, 2009)

To experience the kinesthetic sense, start with putting a hand up in the air where it cannot be seen. Wiggle or wave the fingers without them touching each other. Even though you are not using your vision, hearing, taste, smell, or tactile sense, much can be sensed about how the hand is moved. The speed, orientation, and amount of tension in the hand can be sensed in the way the hand is moved using the kinesthetic sense. (Johnson, 2009)

To train the kinesthetic sense one must develop awareness. Violinists can play for hours without realizing they have excess tension, and then realize it after the fact when their bodies ache. Johnson (2009) states "Any information we receive about ourselves kinesthetically is delivered to the brain by kinesthetic sense receptors found in the muscles and connective tissue." (p. 24) It is important to pay attention to this kinesthetic information to avoid the pain and discomfort that occurs from ignoring the quality of our movements. Once a violinist becomes aware of their kinesthetic sense, they can use it to help correct any discomfort by applying Body Mapping and Alexander Technique principles. (Johnson, 2009)

One example of how to use the kinesthetic sense would be to help a student sense the difference between a tight or relaxed bow hold. The student may have a properly set up bow hold in every other way, but if there is excess tension their tone will suffer. Model a very tight bow hold for the student, and have the student make the tightest bow hold possible. Then have them make the most relaxed bow hold possible without the bow falling from their hand. Have them repeat that exercise, but with their eyes closed. They should still be able to make the tight and relaxed bow hold by using their kinesthetic sense. Now that they are aware that they can use this sense, they can use it to help change their habitually tight bow hold to one that is relaxed.

The Spine

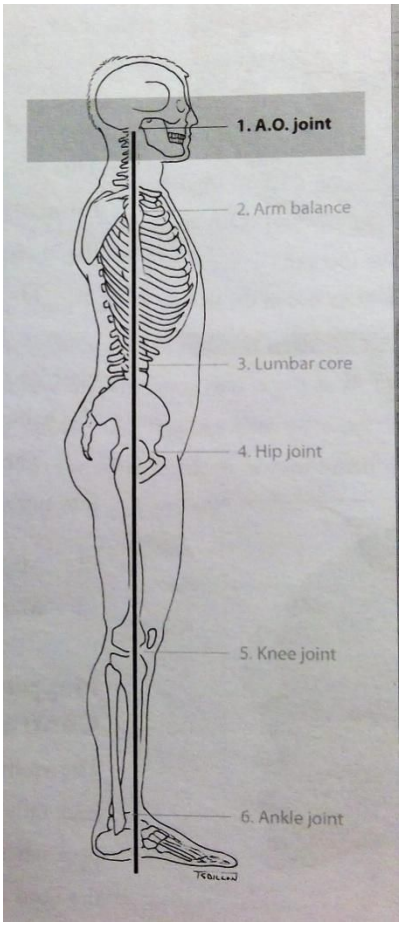

Figure 2. The A.O. Joint. (Johnson, 2009)

Understanding the map of the spine is important so that violinists can balance around the core of the body to achieve effortless movement. Johnson (2017) states "An essential function of the spine is to *bear the weight* of the head and the upper torso." (p. 19) The spine is comprised of a front and back half. The spine is often considered synonymous to the back because a portion of the spine can be felt on one's back. But, only the tips of bony processes that make up the back half of the vertebrae can be felt. The back half of the spine houses the spinal cord while the weight-bearing half of the spine is located at the core of the body. The core of the body is at the

body's center. As seen in Figure 2, the core of the body runs from the top of the spine all the way to the arches of the feet. A violinist who finds balance around the core rather than the back avoids aches and pains in muscles that would be forced to overwork to compensate for a lack of natural balance. (Johnson, 2009)

When trying to "sit up straight" one often arches their back and delivers their weight through the back half of the spine rather than the front half. This can lead to lower back pain. To achieve weight-delivery through the front half of the spine, experiment with walking backwards. Walking backwards results in a natural release of tension in the lower back while delivering the weight down the front half of the spine. (Johnson, 2017)

Understanding the map of the top of the spine is very important to violinists because when holding the violin between the jaw and collarbone the head can come off of its balance atop the spine. The atlanto-occipital joint (A.O. joint) is the joint where the head and top of the spine meet. The base of the skull (called the occipital) is designed to balance on the top vertebra (called the atlas). The spine has cushioning disks between each vertebra designed to support the weight of the head. When the head is balanced at the A.O. Joint this function is utilized. If the head is not balanced, neck muscles have to compensate and problems ensue because of this. The balance point is located midway between the ears (side to side) and between the front teeth and back of the skull (back to front). Common misconceptions are that the A.O. joint is farther back than it is, or located lower by the jaw. (Johnson, 2009)

Explore where the A.O. joint is by putting your thumbs in your ears. The A.O. joint is halfway between the two thumbs. Keeping the thumbs in the ears put the index fingers under the nose. Move the index fingers up over the head until they reach the back of the head directly

opposite of the nose. The A.O. joint is halfway between the nose and the back of the head. Gently nod from this joint. This slight motion can be used to supply more security for large shifts on the violin and still keep the head properly aligned with the top of the spine. (Johnson, 2009)

The Whole Arm

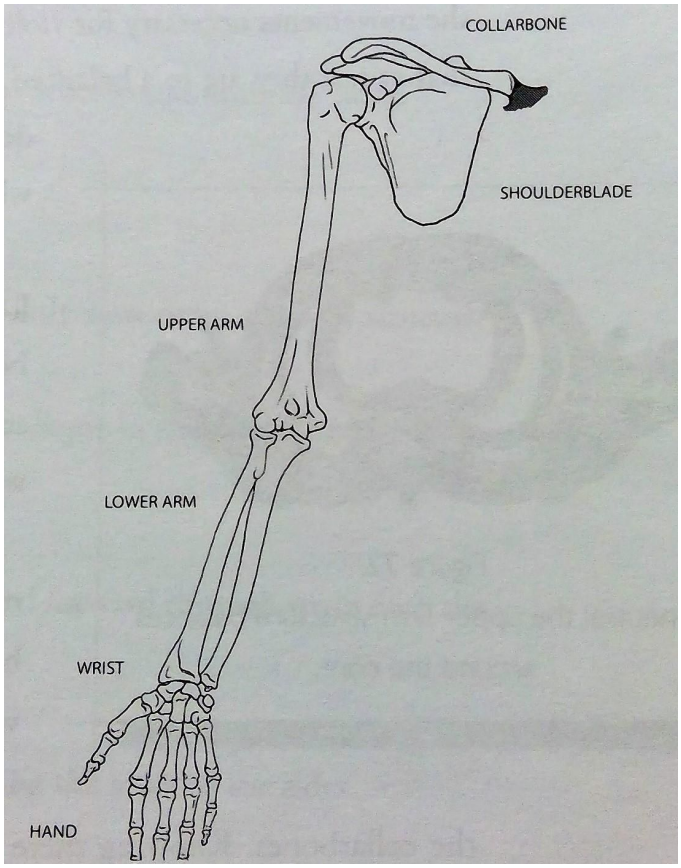

Figure 3. The whole arm. (Johnson, 2009)

Having a correct map of the whole arm prevents pain and tension in the shoulder region. The collarbone and shoulder blade are often left out when thinking of what makes up the whole arm. The collarbone and shoulder blade enable our arms to move in many ways. When the relationship between the collarbone, shoulder blade, and the rest of the arm is not realized, it limits the arm's movements to those of a doll. "A human arm is not what we see on a Barbie

doll- it is not a limb that sprouts off the side of the body" (Johnson, 2017, p.18) It is important to realize that the humerus connects to the shoulder blade. "The socket for the ball of the humerus is contained in the side of the shoulder blade" (Johnson, 2017, p.18) The shoulder blades should not be pinned back to create a tense, erect, "good" posture, but should feel balanced when in the neutral state when aligned with the core. Shoulder blades should also be able to travel out to the side away from the spine. To get a feel for this sensation, one can use the following activity. (Johnson, 2017)

Start by imagining there is a big tree trunk in front of you. With a front crawl motion bring both arms around the imaginary trunk. Continue the motion with one arm around the front of your body as if to pat yourself on the back. Repeat with the other arm. Notice how much movement the shoulder blade is capable of and how they move away from the spine. (Johnson, 2017)

The collarbone is also capable of a wide range of motion. With a hand on your collarbone, feel how it moves while doing the front crawl motion. The collarbone can "...travel up, forward, and even rotate from its joint with the sternum." (Johnson, 2009, p. 53) It's wide range of motion is surprising to those who imagined their arm structure similar to a doll's. Freedom in the shoulder blade and collarbone enable the large arm movements needed for coming to the frog of the bow.

Explore the movements of the shoulder blade and collarbone with playing the violin. Play whole bows on open strings while noticing any habitual motions. Next, do a slow motion up bow. While traveling to the frog, allow the shoulder blade to follow the rest of the arm. Continue the up bow motion past the end of your frog and land the screw of the frog on your left

trapezius (shoulder muscle). This follow through motion allows you to feel the shoulder blade's motion and how it is important to allow it to move freely when coming to the frog. Next, try the same follow through motion, but with faster up bows. Allowing the shoulder to move freely in this up bow motion results in full and powerful tone.

The Radius and Ulna

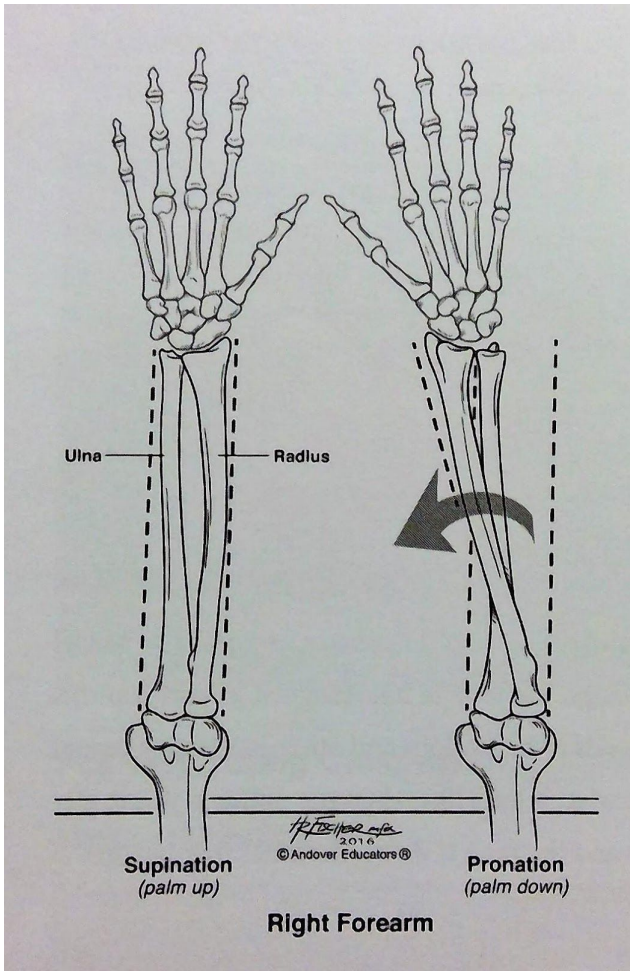

Figure 4. The radius rotation over the ulna. (Johnson, 2017)

The next activity explores the ulna and radius rotation. Mapping the radius and the ulna correctly is extremely important for violinists. If the mapping of these two lower joints in the arm is incorrect it can cause a myriad of injuries. First, become familiar with the ulna and radius. Start with the right palm facing up. With the left index finger identify the ulna by finding the bump of bone that is on the pinkie side that some mis-label as the wrist. Trace the bone with the index finger to its other end which many call the elbow. Next place the left index finger on the bone on the thumb side of the lower arm and trace it towards the elbow. This is the radius. (Johnson, 2009)

The misunderstanding occurs when considering the rotation that involves the two bones. Start with laying your lower arm palm up (supination) on a flat surface. The two bones are currently parallel to each other. Put the index finger on the lower end (by the wrist) of the radius. Now rotate the arm so that the palm is down. Trace the radius up towards the elbow and notice how the radius is now crossed over the ulna. Notice how the ulna is the axis of the rotation and does not move. Figure 4 illustrates this rotation.

Violinists have the tendency to believe that the ulna is able to rotate to bring the pinkie around to face them in playing position when it is actually the thumb side that does the rotation. Letting the thumb rotate back while in playing position results in much less tension in the rotation in the lower arm than when trying to make the ulna rotate the pinkie to face you. (Johnson, 2009)

Explore the habitual motion of putting the left hand into playing position. Notice if the pinkie is yanked around in a way that creates tension. Let the thumb relax back so that the fingers may hover over the strings. Allowing the left elbow to come more in front of the body

rather than out to the side also helps position the left hand over the strings. Notice how the arm can stay relaxed and still be positioned optimally to reach the strings.

The Hand

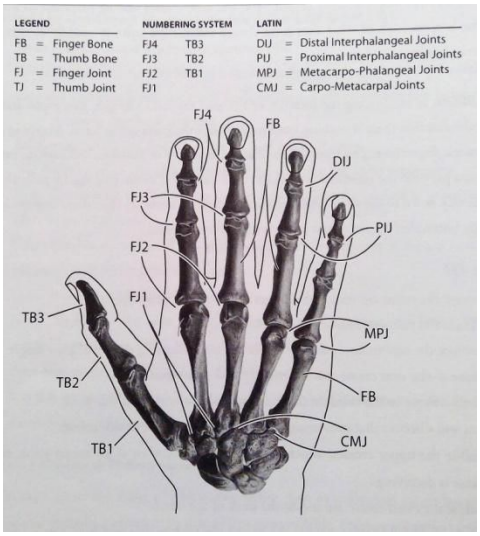

Figure 5. The structure of the hand. (Johnson, 2009)

The left hand can achieve a sense of freedom when playing when the anatomy of the hand is understood. Many violinists have a misconception of where the joint is that enables the left fingers to be brought to the strings. Because the left palm is viewed while playing the violin, many violinists incorrectly think the motion comes from the third crease down at the base of the finger (where rings are worn). There is no joint at that location. It actually comes from the joint about an inch lower in the hand that forms a crease when all of the fingers flex to a 90-degree angle. (Johnson, 2009) Find the MPJ joints in Figure 5 and note where they are located. This concept can be demonstrated in the following activity.

With your palm facing you, try to bend your fingers at the 3rd crease at the base of the finger. Notice how it is impossible to do so. Trace that crease to the back of your hand and notice

how the joint is actually the big row of knuckles that is lower than that third crease. Next trace those knuckles back to the palm side of your hand and find the corresponding crease. Bend all of your fingers and notice how much of the palm moves to make the motion that brings the fingers to the strings. (Johnson, 2009)

Try the same motion with your violin in playing position. Notice the freedom of motion when making sure to note where the true joint is located. Try playing fourth finger when the joint is beneath the fingerboard, as many inexperienced students try to do. The fourth finger loses all sense of freedom. Allowing the joint to be above the fingerboard allows the finger to be placed with much more strength and agility.

Teaching Healthy Movement with Fundamental Skills

Suzuki teachers have the opportunity to teach very young children how to be aware of their quality of movement. This will enable them to be comfortable, pain free, and thus be able to reach their full potential. The next section contains exercises for fundamental skills that incorporate Alexander Technique and Body Mapping principles with steps learned in Suzuki teacher training classes with Pat D'Ercole.

Playing Position Feet

The first skill Suzuki teachers introduce to students is the proper position of the feet when playing the violin. When introducing this skill, one should make sure the student is balanced around their core so that their whole body is able to move freely. Students often start with a poster board or cardboard foot chart to stand on. They start in "red feet" or "rest position feet"

with soles of the feet together. The teacher traces around the student's feet with a red marker. Next is blue feet, where the students' "unzip" their feet to make the shape of a letter "v". Again, the teacher traces the feet with a marker, this time with a blue marker. And lastly there is "green feet" or "playing position feet" where the left heel is slid in a continuation of the letter v- shape so that the arch of the left foot is across from the right toe. The position of the feet is important because it balances the weight of the violin when in playing position. This helps the student feel comfortable and supported from the foundation up. (P. D'Ercole, personal communication, 2015)

Even though the feet have been given a specific place to be, they should feel comfortable moving freely. To help with this, when tracing the students' feet, leave wiggle room around the feet so that they do not feel like their feet are glued to one spot and not allowed to move at all. Jennifer Johnson (2009) prefers not to trace the feet at all. Instead, the student stands on a mat that defines boundaries, but they may move freely on the mat. The important thing is for the students to feel balanced around their core and feel free to move.

The following activity is a wonderful opportunity to teach the importance of maintaining a stance that enables one to move freely. Start by getting into playing position feet. Next, ask the student or students to sway side to side. Have them "walk in place" in playing position and then bend their knees to a pulse. Point out how you can comfortably move in many ways in playing position. Ask them to come up with another way they can move in playing position. And finally, play a piece on the violin and have them mirror your leg movements. Once they are comfortable moving in playing position, they can lead the leg movements and have you copy their movements. They can come up with silly movements of their own.

Left Hand Playing Position

Getting the left hand to playing position is another important skill. The teacher must not only look for the proper position, but also the comfort of the arm. The arm should not be twisted or rotated in a way that creates tension. The following exercise helps to make sure the forearm is naturally rotated, which enables the side of the pinkie to be seen.

Have the student start in playing position feet with the side of the left pinky and hand touching the sternum. This helps the whole arm start from a relaxed state that has its natural rotation. Next bring the arm away from the torso so that it is positioned over the left foot. The upper and lower arm should make a right angle. Point out the straight line from the 1st finger to the elbow. Note how the fingers have a natural curve so that the tips of the fingers are facing the ground and you can see the side of the pinkie. This is what makes a comfortable violin playing position. Ask the student "Can you count to 10 looking at the side of your pinkie?" This assignment builds focus and reinforces how the arm should look and feel. Have the student practice bringing the side of the pinky back to touch the sternum and then back out to playing position. This activity has the student practice getting the left arm to playing position without any tension, and is also the shifting motion they will use later on in their development. (P. D'Ercole, personal communication, 2015)

Left Hand Finger Motion

To teach the skill of moving the fingers from the base joint, have the students locate the base knuckle joint. Have them wave by flexing all of the fingers to a 90 degree angle with the palm facing away to see how the motion comes from base knuckles. Have them trace the

location of the knuckles to the palm side and have them wave again. Note how the motion comes from the crease in the palm. Draw a line on the crease to help remind them where joint is. Inform the students that this is the joint that enables the left fingers to play on the fingerboard. (Johnson, 2017)

With the same motion, have the students bring their fingertips to their palm in a tapping motion. If the thumb is tight this is very difficult to do. The thumb should be allowed to move reflexively, reacting to the finger tapping motion. This activity cultivates a very relaxed and reflexive motion from the base knuckles.

For the next step have the students start by bringing their left arm to playing position and their right hand palm down in front of them. Letting the right hand mimic the fingerboard, let third and fourth finger of the right hand go in between the thumb and first finger of the left hand. Bring the left hand's first, second, third, and fourth finger tips to the back of the right hand. The base joint crease should be in line with the side of the right hand. Have all of the left fingers jump on the back of the right hand. The thumb should stay relaxed, and if it doesn't the right hand will feel it.

Keeping first, second, and third finger lightly down, have fourth finger jump on the back of the right hand. Next, keeping first and second finger down let third finger jump. Then, keeping first finger down let second finger jump and finally, let first finger jump. This activity can be done to the rhyme "Four Little Monkeys Jumping on the Bed." This teaches finger independence while moving from the base knuckle without excess tension.

Bowing Motion with Twinkle Twinkle Little Star Variations' Rhythms

To teach the Variation A rhythm from Twinkle Twinkle Little Star Variations by Dr. Suzuki, have the students sit cross legged on the floor. Have them put their bow hand on their left knee. Then have them repeat after you as you sing and tap the Variation A rhythm with the Twinkle Twinkle Little Star pitches. The motion should come from the elbow joint, and the hand should have no excess tension. This activity is an opportunity to have the students explore their kinesthetic sense. The teacher can ask, "Does your arm feel tight? Can you make it as tight as possible? Try tapping the Variation A rhythm. Now try making it as relaxed as possible. Now try tapping the Variation A rhythm again. Having a more relaxed arm makes tapping easier to do, doesn't it?" Rhythms found in the other variations can be introduced by tapping the knee as well. (P. D'Ercole, personal communication, 2015)

The next step is to have the student put their left arm at the cross of their legs. The right hand gently rests at the elbow of the left arm. Then the right hand scrubs down the left arm in the direction of the left hand and back up to the elbow the Variation A rhythm. This activity is an opportunity to observe the beginners' bowing motion. The teacher can ask "Do you see how the arm opens and closes from the elbow?" emphasizing the motion that is required to bow.

Introducing the Bow Hold

When teaching the bow hold it is important that the thumb stays bent, but also does not have excess tension. Make sure to model the steps with a relaxed hand and have the student evaluate their own tension. Start by instructing the student "Stand up bow thumb." The bow thumb is giving the thumbs up sign. The next step is "take a bow." The bow thumb is bent,

making sure the whole thumb stays soft including the muscles in the palm at the base of the thumb known as the *thenar eminence.* (Kapit & Elson, 2014) The next step is "match the dots." Dots are drawn on the tip of the thumb on its inside corner and at the top joints of the second and third finger. The dot on the second finger should be located near the third finger side and the dot on the third finger should be near the second finger side so that the dots are close together. Have the student match the thumb dot to those on the fingers to make the "bow bunny." The first and fourth fingers are the ears of the bunny. The second and third finger top knuckles are the bunny teeth. The bent thumb and bent finger knuckles make the round face of the "bunny" instead of a "fox snout" when the thumb is straight. Emphasize that this is a relaxed and floppy-eared bunny. (P. D'Ercole, personal communication, 2015)

Once the student can successfully make a bow bunny, the next step is to slide in a practice bow. The practice bow could be either ½ wooden dowel cut to 1-foot length or a smoothie straw. (P. D'Ercole, personal communication, 2015) Using a smoothie straw enables the student to tell if the thumb gets tight because the straw will bend or dent. The straw is also very light so it does not feel like it needs to be held tightly.

The practice bow should be slid from the tip to the frog along the top knuckle creases just below the fingernails of the student's bow bunny. The thumb dot should be gently placed opposite of the two middle fingers on the bow (staying bent). The pinkie's tip should be brought atop the bow so that it is curved. While holding the bow vertically, ask the student to sense if the bow hold soft and relaxed. (P. D'Ercole, personal communication, 2015)

Bowing Motion Maintaining a Relaxed Bow Hold

For the next step you will need a smoothie straw, scissors, tape and a stapler. Cut the smoothie straw into thirds. Take one of the thirds and to make sure the straw does not crack when you staple it, pinch one end so that it creases. Staple the end and cover it tightly with tape. Fill the straw halfway with rice. Pinch the other end closed, staple it, and tape it tightly. These will serve as a practice bow/noise maker. Next have the student resume the scrubbing rhythm position, but this time have them position their practice bow over their left elbow. Have their bow do the scrubbing motion above their left arm. The rice will make a nice shaker noise that younger students enjoy. This step combines the bow hold and the bow motion without worrying about the bow or real violin yet. Ask the student to see if they can bow through an entire twinkle song with the most relaxed bow hold possible without dropping the practice bow.

Bringing the Violin to Playing Position

When teaching young students how to get their violin from rest position to playing position, parental assistance is imperative. This enables the parent to help make sure the student does not form any habits of tension from the start. (P. D'Ercole, personal communication, 2015) Look for the student's head to be balanced atop the spine, a neck that looks free of excess tension as described on p. 10, and a wide back with shoulder blades that are not raised up or pinned back.

The students start in playing position feet. The parent stands facing the student. The parent takes the student's left arm in theirs to ensure the student's body stays facing forward. The parent says "Look at me, now look at the violin." while bringing the violin in front of the student's left side. The student should turn their head, but not twist their body. Next the parent

says “Now let the violin come to you.” as they bring the violin to the student’s shoulder making sure to bring the chin rest close to the student’s neck. Make sure the student inhibits any reaction to the violin coming towards them. Next the parents says “Now let your jaw come to the chin rest.” Make sure the student’s shoulders do not raise the violin to the jaw; their jaw comes to the violin. The violin should balance on the collarbone and shoulder. The parent and teacher can look for the components that enable primary control that are introduced on p.10. The student’s left hand is brought to their right shoulder. Have the student count to ten maintaining playing position. The student brings the violin down to rest position by placing their left thumb on the back of the violin at the base of the neck with their fingers on top of the strings. Then they bring the violin under their right arm, with the elbow on top of the chin rest. (P. D’Ercole, personal communication, 2015)

The Alexander Technique concept of inhibition is important to the process getting the violin in playing position. It is important that the student inhibit any reaction to the violin coming to them. Students tend to react to the violin by thrusting the jaw forward while the violin is brought to them, or the left shoulder rises to try and bring the violin up to the jaw. Also, the head might clamp down on the violin. All of these reactions affect primary control. If these reactions happen, play a game with the student where if they successfully inhibit the habit they get a point, but if the parent or teacher has to remind them the parent or teacher gets the point. The student’s kinesthetic sense will continue to grow.

Teaching the student how to bring the violin playing position themselves is very important for the comfort of the student and making sure they are able to move freely. This skill

should be taught only after the student has developed a free and comfortable playing position with the help of their parent or teacher. (P. D'Ercole, personal communication, 2015)

When the student is ready to be independent of parental assistance, have the student start in playing position feet with the violin in rest position under the right elbow and the arm atop the chin rest. The left thumb is placed on the back of the violin at the base of the neck with the fingers on top of the strings so that the violin can easily be brought atop the head. When the violin is brought atop the head, note that this action engages the whole arm, including the collarbone and shoulder blade. Next, slowly bring the violin down past the ear and atop the collarbone and shoulder region and turn the head until the jaw meets the chinrest. The left hand should be placed on the right shoulder. Ask the student to sense if the neck and shoulders feel free or tight. Have them count to 10 and then bring the violin to rest position. (P. D'Ercole, personal communication, 2015)

If any excess tension occurs, play a game with the student where they bring the violin to playing position by themselves with the teacher's and/or parent's eyes closed. When the teacher and/or parent opens their eyes, the student gets a point if they have their correct violin hold. If there is excess tension, the parent and/or teacher gets a point.

Bringing the Bow to the Kreisler Highway

Placing the bow on the E string is a wonderful opportunity to introduce the idea of the whole arm. This concept is introduced with the elevator exercise, which is done with the practice bow first. The student starts in playing position feet. Next, they should set up their bow hold.the bow is brought above the left shoulder, in a horizontal position. Then it is brought down to the

left shoulder. The frog and tip of the bow should move in the same plane. The hand leads the motion on the way up, the elbow leads on the way back down. To help the student keep the bow level, the student can imagine a "little guy" is taking a ride on the bow up to the 10th floor on an elevator, and back down to the first floor. (P. D'Ercole, personal communication, 2015)

Have the student place their left hand on their collarbone while doing the elevator exercise. Do they feel the collar bone moving? Have them place their left hand on their shoulder blade while doing the elevator exercise. Can they feel the shoulder blade move? Both the collarbone and shoulder blade move with the rest of the arm.

The same exercise can be done with the box violin and real violin. Now that the violin is in playing position while doing this exercise, they must make sure to match up the middle of the bow (where the right arm makes a right angle) with the "Kreisler Highway" on the E-string. The Kreisler Highway is located approximately halfway between the top of the f-holes and the bridge. The whole arm is relaxed and lands the bow on the Kreisler Highway. (P. D'Ercole, personal communication, 2015)

Going to the Frog Motion with the Whole Arm

To introduce using the whole arm to go to the frog, start by having the student rest their left hand on their right collarbone. Next use the right hand to come around the front of their body to pat their left shoulder blade. Ask the student to use the left hand to feel the range of motion of the right collarbone while doing this motion. Then have them feel their right shoulder blade while doing the same motion by bringing the left hand under and past the right arm pit to reach to right shoulder blade. The shoulder blade should not be shoved toward the spine to achieve this

motion, rather the shoulder blade should travel out to the side and away from the spine. (Johnson, 2017)

Next have the student hold the bow. With a similar motion have them bring the frog to their left shoulder. The left hand can again rest on the collarbone and shoulder blade to feel the movement that occurs when bringing the frog to the shoulder.

Conclusion

How our bodies move when playing the violin directly affects whether or not pain or injury will be a result of playing the violin. Violin teachers should prioritize how their students use their bodies so that they can avoid injury. The Alexander Technique principles discussed help us understand how to use our bodies efficiently, without excess tension, and how to rid ourselves of ineffective and unhealthy habits.

Body Mapping also helps violinists whether students, teachers, or professionals to understand how to use their bodies in a natural and fluid manner when playing the violin. It is important to comprehend how the body is structured so that it can move naturally, with freedom and ease. The Body Mapping Activities explore important structural concepts that help violinists move naturally.

Suzuki violin teachers have a large impact on all their students' lives. This is especially true because Suzuki students often start at a very young age and see their teacher weekly through high school. To ensure that their students are able to play without discomfort or pain, Suzuki violin teachers must prioritize *how* their students use their bodies when playing the violin. If students are taught how to use their bodies efficiently, it will enable them to have the stamina to

practice the hours necessary to become advanced players. The impact of learning to use one's body efficiently may even transcend their violin playing. It may transfer to other movements unrelated to violin playing, helping the students maintain pain-free movements throughout their lifetime.

The Alexander Technique and Body Mapping principles are important tools to help prevent pain and injury. Focusing on these principles of movement when teaching student-violinists leads to freedom, ease, and pain-free playing that in turn enables all to reach their full potential.

Resources

About the Suzuki method. (n.d.). Retrieved from https://suzukiassociation.org/about/suzuki-method/

Alexander, F. M. (1985). *The use of self*. Gollancz.

Barker, S. (1981). *The Alexander technique: the revolutionary way to use your body for total energy*. Toronto: Bantam Books.

Bosi, B. (2017). The Reality Of INJURIES In A Musician's Career. *American Music Teacher*, *66*(7), 16-20.

Conable, B., & Conable, W. (1995). *How to learn the Alexander technique: a manual for students*. Portland, OR: Andover.

Gelb, M. (1995). *Body learning an introduction to the Alexander technique*. New York, NY: Holt.

Johnson, J. (2009). *What every violinist needs to know about the body*. Chicago: GIA Publications, Inc.

Johnson, J. (2017). *Teaching body mapping to children: Overcoming and preventing injury in the music studio and classroom*. Chicago, IL: GIA Publications.

Kapit, W., & Elson, L. (2014). *The anatomy coloring book* (4th ed., p. 57). San Francisco, CA: Pearson Education, Inc.

King, H. (n.d.). Definition: Directions. Retrieved from http://www.hilaryking.net/glossary/directions.html

Starr, W. J., & Starr, C. (1992). *To learn with love: a companion for Suzuki parents*. Miami, FL: Summy-Birchard.

Starr, W. (2000). *The Suzuki violinist*. Summy-Birchard.

Suzuki, S. (2012). *Nurtured by love*. Van Nuys, CA: Alfred Music Publishing.