MMEA: Newton's Apple Hits String Teachers On the Head

(or Teachers Learn Some Physical Laws of String Playing)

by Janis Nash

"Arcs are our friends," and "Straight lines are our enemies." These are a few of the light-hearted ideas presented at two sessions of the MMEA Midwinter Clinic by clinician Dr. Gerald Fischbach, assisted by Wendy Barden. The two separate sessions were entitled *The Body in Motion: Physics and Pedagogy* and *Achieving Artistry in the Beginning String Class.* Much of the same information was presented at both of the sessions; however a new method book co-authored by Robert Frost, viola, and Gerald Fischbach, violin, was discussed more thoroughly in the second class. Dr. Fischbach points out that students are expressive from day one, so the goal of string teaching is for them to keep these expressive qualities and work toward artistry. The *Artistry in Strings, A Comprehensive Course of Study for Group or Private Instruction* shows strategies for developing performance skills. Patrick Neher, University of Arizona, edited the bass book, and Diana Elledege, a cello performer, edited the cello book. To fully gain an appreciation of the method, teachers are encouraged to review it for themselves. This article is an overview of the two sessions and is not meant to be a complete review of *Artistry in Strings*.

Dr. Fischbach discussed how the principles of physics apply to string players. Rather than showing diagrams of the physical forces acting on string players including weights and vectors, he discussed how the forces could be our adversaries instead of our friends if we ignore them. For example, students can turn into statues if we don't start teaching them that string playing is movement based. House of Note provided instruments for the teachers to play during the session. This furthered the teachers' learning and kept them involved by using a "learn-by-doing" approach.

While acknowledging that arm holding instruments, violin and viola, are different than floor holding instruments, cello and bass, he suggested that teachers avoid the term *"hold"* as in "bow hold" or "instrument hold." Instead, positioning of the instrument involves dynamic balance or balance in motion. Starting violin and viola students in banjo position first, allows them to keep the left shoulder free while students pluck the strings with the fourth finger (pinky) of their left hand in about fourth position. Students are instructed to find the end button with their right hand and continue plucking to keep their bodies in motion. The end button is then brought to center of the throat. A frozen left fourth finger is a common flaw, as is a frozen left shoulder, and these problems are avoided from the beginning. Bass and cello students may also pluck in their proper positions while rocking side to side.

The bodies are slightly in motion because "staying frozen is not fun" even though the students are instructed to first start in an alert stance, called the "Statue of Liberty." Since we are trying to avoid statuesque students, they are instructed to stand with their feet at a "V" with the left foot forward and then rock back and forth. Teachers should model this stance with their backs to the students. Instruct the students to hold (or support) their "torches" high. Support the end button with the right hand while aiming it at the middle of the throat. A common mistake happens when holding the instrument too low. It is more effective to start high, and bring the instrument into place because the muscles "turn on" when lifted from above. They don't work the same way when lifted from below. Common sense tells us that the weight of instrument should be over the left foot. Positioning should be with good balance — not to far to the right or left.

A dynamic motion that Dr. Fischbach identified is the *Swingstrum*, one of twenty *Swingersizes* that are the hallmark of this method book. The *Swingstrum* is accomplished by holding the violin or viola with the right hand on the body of the instrument. While the left pinky is rounded, a strumming action is performed with the left fourth finger. *Shuttle Swingstrum* involves the left hand moving back and forth. Start around fourth position; go back to first position and back up to fourth position. In this manner, shifting is actually introduced in lesson one! Dr. Fischbach says to remember that the "elbow lane is the no parking zone." The arm should be constantly floating.

Students start out playing with the bow on all four strings for several reasons. One is that the bowed sound is what they have fallen in love with. Another is that teaching the larger muscle groups first is consistent with Dalcroze concepts. Further, starting out with the bow also facilitates teaching notation. Rhythms are learned as families, and the names of the notes are in color-coded arrow boxes. For example, students learn that the D string is pink.

The basic bow hold is a grab with the right hand. The problem with this hand shape is that it does not allow for flexibility. Therefore the bow is held in the fingers. The springs that provide flexibility are the joints of the fingers, another dynamic issue. Students are to bring the bow out of palm of hand while maintaining the same wrap around quality. The pinky goes on top of the bow stick for violin. An analogy for obtaining the proper hand shape is to think of a monkey hanging on a branch. Holding the bow with the left hand, swing up and catch branch and hang. This is a movement-oriented approach.

In the case of the bass French bow however, the monkey hang might not be best approach. Instead, think of the right hand as a floating parachute, or pretend to dip the hand in water and let water flick off of fingers, then put the hand on the bow.

Dr. Fischbach mentioned the concept of the early bow hold. This is when the bow is not held at frog. To discover the difference in how the bow feels in this hand position, bring the hand two inches above the frog. Notice how much heavier the bow is when held at the frog than above the frog. Hand placement depends both on the size of student and the size of the bow. This requires experimentation to see what is best for the student.

The first bowed sounds that students make are open strings and harmonics. Start with the bow on the string at the middle. For cello and bass, start at the lower middle. Have the student lift and place it back on the strings. At this point, repairs in the bow hand shape "may be necessary." Another light-hearted idea is to think that corrections *may* need to take place. To perform the corrections, have the right first finger tap, second finger tap, third finger tap, and fourth finger tap. The thumb is placed on bow at inside corner of thumb.

In keeping with the bodies in motion concept, rock the bow on string. The rock becomes a bow stroke. Then roll, leading with elbow. This is called…you guessed it…

Originally published in MNSOTA's *String Notes* — Spring 2003 (Vol. 5, No. 3)

Rock and Roll. The rocking involves a balanced motion pattern. The bow rocks on a fulcrum, the strings. The roll is a sequenced motion pattern where the elbow leads and the hand follows. The hand finishes the down-bow, and the elbow starts the up-bow. Think of the bow stroke as creating an arced line. Here is where "Arcs are our friends, and straight lines and angles are enemies," is applied. Another quip of Dr. Fischbach's is, "A smile is easier than a straight line." Breaking the bowing action at end of smile thus ends the bow stroke.

Dr. Fischbach encourages the teacher to play with the students. Three rhythms that are introduced can be played simultaneously in group situations. Yes, they are the *Lunch Bunch:*

- Pepperoni pizza ♫♫♫♩♩ — on 4 strings
- Yum, yum peanut butter ♩♩♫♫♫
- Tom took a turkey toe ♩♫♫♫♩

Three-position *Shuttle Swingstrum* is performed with the left hand at approximately the fourth to first to fourth to high position. The *Shuttle* is the left hand "shifting" up and down the fingerboard. Another movement that the left hand does is to "polish" the strings with third finger. By bowing simultaneously, the student produces "magic harmonics". This is the introduction of left hand and right hand playing together.

The left hand moves to approximately first position from fourth position by opening the hand back. Bringing the hand back avoids squeezing. Start on an up-bow and when the bow is changed to down-bow, move the left hand back. This should feel natural because the body wants to mirror itself. For example, both arms are moving away from the center at the same time, and then they return to the center.

To guide the left hand finger placement, tapes may be placed on the fingerboard. The controversy of using tapes versus using no tapes continues, but Dr. Fischbach says that the best reason to use them is because they work.

The first three fingers are used in first position for violin, and the fourth finger is used for harmonics and *Pinky Plucks*, which are *Swingersizes*. Students start using first position on #30, *Down 'n' Back Variations — The Sports Report Rhythms*. Students are encouraged to drop the weight of the arm into the fingerboard. (*Sports Report Rhythms* are drills that the students have been introduced to earlier.)

The high and low fourth finger is added toward the end of the violin and viola books in first position. For cello and bass all four fingers are used right away. All students learn F♯ and F♮ soon after starting the method. The *Snake Charmer Song* is used to teach these pitches.

Some other examples of studies include *Grasshopper Gus* and *Meter Melt*. In *Grasshopper Gus* (#58), students pluck the high string (E) with pinky in low position and then low string (G) in high position. This gets the left hand into the shifting motion and promotes the use of fourth finger. *Meter Melt*, found on page 21 is an open string cycle study, which changes meter gradually from $\frac{4}{4}$ to $\frac{1}{4}$. The method book also includes unisons, duets and rounds.

Many of the studies include CD accompaniment. Dr. Fischbach recommends playing the recording first for #16, *The Lunch Bell*. Then have the students pat to the beat, add hand clapping, which mirrors the eighth notes, and then have the students incorporate eighth notes into their playing.

It is interesting to note that there are *two* Book One bass books available. One starts in first position, the other in fourth position. About two thirds of the way through the book they cross material, and by the end of book all information in both positions is covered. It is important not to mix up the books! Other notable facts are that the bow strokes martelé, spiccato, legato, and slurs are included, and cellists are introduced to third position.

Dr. Fischbach advocates having the students perform and memorize their pieces. Memorization is something that raises students' learning to next the level. The teachers' manual suggests which pieces be memorized.

The teachers' manual includes many other helpful strategies for teaching as well. It includes applications of the *National Standards for Education*. There is an assessment page and a travel log, which gives students a chance to connect the music with other countries. It includes a composition assignment. The manual also includes composer pages with a CD that provides a two to three minute excerpt of each original piece. This is to save teachers time hunting down the originals. Theory pages are included as well. About one hundred in all, they provide small steps so students may follow them easily on their own. Since it would be hard to use all of the pages, teachers can choose which ones to use. Permission is given to copy the pages! Finally, a diagnostics section is included which gives causes and remedies of some potential problems in tone.

The method also includes a parents' guide, which can empower parents to help as the students are learning, and a scope and sequence chart. The scope and sequence samples of teachers' manual pages books one and two, and two copies of the book one CD were offered as free promotional materials. Teachers can obtain a free score if twenty books are ordered.

The two sessions offered many helpful movement-oriented approaches to string teaching that are easily applied in the string class and in private instruction. The ideas and tools presented may sound like fun to students and be interesting to teachers. When talking about physics and music together, we usually think of string instrument construction. This approach applies mechanical physics to new elements — our students and ourselves as we learn to apply the principles of physics to draw out great sounds from our instruments.

Janis J. Nash is a cellist who maintains a private studio in North St. Paul. She looks forward to a school teaching position next fall. 𝄽

Originally published in MNSOTA's *String Notes* — Spring 2003 (Vol. 5, No. 3)