MOVEMENT TRAINING AS AN IMPORTANT FACTOR IN THE TRAINING OF THE YOUNG VIOLINIST

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The violin is a difficult instrument to master. It requires balance, stability, coordination and control. At the same time the violinist must be relaxed and able to move freely. It is our belief that these qualities would be learned with more ease if the young violinist received movement training while studying the violin. When children combine music making with a natural sense of movement, they are more likely to enjoy playing, produce a beautiful sound, and are less likely to be injured when entering a college music program or conservatory.

Our paper\presentation presents the following: 1. an overview of the teachings of violinists who incorporate movement training into their teachings, such as Paul Rolland, John Kendall, Kato Havas, and Yehudi Menuhin; 2. a review of traditional techniques such as Laban and Dalcroze, that have been used to improve the movement quality of young musicians; 3. a discussion of the effectiveness of such programs in enhancing the child's music ability as opposed to movement training outside the child's music experience, such as dance or athletics; 4. common postural and biomechanical faults of the teen age and young adult violinist; 5. methods and techniques used by the authors to address these faults.

COMMON POSTURAL FAULTS IN YOUNG VIOLINISTS

STANDING POSTURE

-- Foot placement: Toes are pointed straight ahead; the body's weight is over the heels
-- Knee position: The knees are locked and rigid.
-- Pelvic position: The pelvis is tucked under as the hips sway forward or tipped back as the lumbar curve increases its curve (sways).
-- Low back: The lumbar curve is exaggerated (lordotic), causing a sway back or decreased, causing a flat back
-- Mid back and Ribcage: The backward curve of the thoracic spine is flattened, displacing the ribs forward or increased (kyphotic), causing the rib cage to sink.
-- Shoulder girdle: The scapulae assume an abducted position (move away from the spine).
-- Sternum and clavicle: The sternum (breast bone) and clavicle (collar bone) are sunken.
-- Head and neck: The head is either too far forward, dropped down and/or not turned far enough to the left.
-- The arms: The left elbow is pushed too far forward and locked in that position and the right elbow is held too high.

SITTING POSTURE

Additional problems occur in sitting. The violinist must position herself properly in respect to the music stand and conductor. In addition, the chair is often uncomfortable and not conducive to good posture.

-- Foot placement: Feet are not firmly placed on the ground.
-- Pelvic position: The pelvis is usually tipped too far forward and rotated to the right. The right pelvic bone is unweighted.
-- Low back: The lumbar curve is exaggerated and rotated to the right.
-- Mid back and rib cage: The thoracic curve is flattened and rotated to the right and the ribs displaced forward.
-- Head and upper body posture faults as in standing.

Balanced Sitting Posture
- The pelvis is vertical and is balanced on the center of the rounded bones at its bottom.
It is neither tilted forward, causing the lower back to sway, not tilted back, causing the buttocks to tuck under.
- The lumbar curve assumes a forward curve.
- The rib cage hangs down toward the pelvis.
- The shoulder girdle rests on top of the rib cage and no tension is held in the shoulders.
- The chest floats up and the shoulders widen
- To position the head properly, allow the spinal column to lengthen upward through the center of the neck as the head floats up to balance on top of it.

Balanced Standing Posture
- The feet are placed directly under the thigh sockets (about six inches apart) with the toes facing approximately straight ahead.
- The knees are relaxed and in line with the thigh and ankle joints.
- The pelvis rests on top the thighs.
- The trunk is balanced as in the sitting posture.
- The arms hang long at the sides.

CENTERED BREATHING - Lynn E. Medoff

The diaphragm is a large, strong, thin, dome-shaped muscle in the center of the trunk. It is the most active agent in breathing. The diaphragm forms the floor of the rib cage. Knowing its structure and function is important to the understanding of efficient breathing mechanics. The diaphragm is attached to the lower border of the rib cage by a broad tendinous sheath and to the lumbar spine by long, thin tendons called crura. During inhalation, the fibers of the diaphragm contract and the muscle pulls downward (its dome flattens out). The more the diaphragm descends, the more the vertical length of the ribcage increases and the more the lungs can fill with air.

Deep, vertical breathing is often referred to as "belly" or "abdominal" breathing because the abdomen expands when breathing in. This occurs due to pressure exerted by the descending diaphragm on the abdominal organs which in turn push against a relaxed stomach wall causing the front of the pelvis to expand. Most of us do not allow the breath to descend; our breathing is shallow and held up in the shoulder area. This creates tension in the back, chest, and shoulders and disturbs the balance of the body.

Awareness of rib cage movement during inspiration increases the perception that in order to get a fuller breath, we should lift the rib cage up. In reality, when the body needs more oxygen, we yawn or sigh to allow the diaphragm to fully descend. The rib cage elevates slightly and expands during inspiration. However, overemphasizing this motion causes the ribs to displace forward, the shoulders to elevate, the back to extend and the breath to be held too high.

Exhalation occurs due to the recoil of elastic tissues. The space within the rib cage decreases as the diaphragm releases back up to its dome-shaped position under the lungs and the rib cage drops to its normal position. In order to force more air out of the lungs, it is necessary to exhale with more force and/or for a longer period of time. This causes the muscles of the abdominal wall to contract and exert pressure on the abdominal organs which then pushes the diaphragm further up under the rib cage.

In summary, the practice of good breathing mechanics energizes the body, improves posture and movement mechanics, promotes relaxation, and increases the strength and efficiency of the abdominal muscles.

RELAXATION - Lynn E. Medoff
CONSTRUCTIVE REST POSITION

Lie on a padded supportive surface (the bed is too soft). Align your head with your spine. (If your head tips back, place a small pillow under it.) Bend your knees at 90 degrees and place your feet flat on the ground. Position your arms at your sides, across your chest or overhead (see diagrams).

IMAGERY
The back of your body melts into the surface that supports it.
The back of your head melts down.
Droplets of water on the back of your neck drip down.
The area behind your shoulders melts down. The area between your shoulder blades turns into gelatin and softens downward.
The long area behind your ribcage melts down.
The area behind your low back softens down.
The area behind your pelvis broadens and melts down.
Visualize your legs hung by a rod under your knees.
Your thigh bones slide deep down into the center of your pelvis.
Visualize droplets of water on the tops of your knees trickle downward over the front of your legs over the tops of your feet, onto your toes and into the ground. Droplets also trickle down the backs of your legs onto your heels and into the ground.
Draw your attention toward your head
Watch your eyeballs fall inward toward the center of your skull.
Look around inside at the vast empty space. See the depth from front to back and the width from side to side.
Watch droplets of water on the center of your forehead drip to the outsides of your forehead.
Watch your lower jaw melt away.
Watch your ears open up.
The front of your body melts into the back of your body and the back of your body melts into the surface supporting it.

BREATHING IMAGERY
Lynn E. Medoff

Notice the rhythmic flow of breath in and out of your body.
Visualize the breath traveling down and up a long central axis through your torso.
Inhale through your nose and watch the breath travel down the long central axis to your pelvis.
Visualize a balloon in your pelvis filling up with air.
Exhale through rounded lips and watch the abdominal muscles on the front of your pelvis pull in and up to compress the balloon and send the air back up the long central axis and out the mouth.
Watch your inhalations deepen, lengthen and slow down as your abdomen expands. Watch the exhalations lengthen as your abdominal muscles pull in and up.
You may also hiss the air out through your teeth (This adds resistance to the air going out allowing you to exhale for a longer period of time.) Watch fingers along the sides of your ribcage pull your sides inward.

MOVEMENTS COORDINATED WITH BREATHING IN THE CONSTRUCTIVE REST POSITION

Single knee to chest - Inhale and exhale as explained above. After your abdominal muscles have pulled in and up, bring one knee toward the chest. Inhale and exhale and lower your leg again after the abdominal muscles have pulled in and up. Don't let your stomach muscles release when raising and lowering the leg.

Knees side to side - Inhale and let your knees fall to the side. Exhale and bring your knees center. Feel the abdominal muscles bring your knees center as you exhale.

Shoulder shrugs - Feel how your shoulder blade (scapula) rests on the surface underneath it. Slide it up and down as the tip of the shoulder moves toward the back of your ear. The front of the chest opens up. Repeat with the other shoulder. (no particular breathing pattern)

Folding and unfolding the arm overhead - Inhale, exhale; as your abdominal muscles pull in and up, bend your arm then extend it overhead. Inhale, exhale bend arm and lower. Visualize the folding and unfolding of the arm at its joints and feel as if the arm is anchored at the pelvis as it reaches overhead.

Leg slide - Inhale, exhale; as abdominal muscles pull in and up, slide your leg down to an extended position. Pull foot back and tighten front of thigh. Inhale, exhale and return to starting position. Do not release stomach muscles when sliding leg out and in.

CHIN REST PRESSURE IN VIOLIN PLAYING: MUSICAL REPERTOIRE, CHIN RESTS, AND SHOULDER PADS AS POSSIBLE MEDIATORS

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Improving the "fit" between the performer and instrument, in the context of the musical composition, may prove beneficial in the prevention of injury in musicians. The violin poses particular problems because it requires total support, yet the hands must both be free to play. Changing the chin rest and the shoulder pad are common ways to modify the violin to fit the individual. We hypothesized that changes in chin rest and shoulder pad would result in changes in pressure and force applied over the chin rest during violin performance, and that these effects would be predictable from anthropometric measures recorded at the neck and shoulder. We also hypothesized that different musical compositions would result in different levels of pressure and force.

A sensor mat (manufactured by novel electronics, inc. Munich, Germany), sampling at 50 Hz, measured the peak pressure, peak force, pressure time integral, force time integral, and total contact area utilized over the chin rest during the performance of excerpts from a violin concerto by Max Bruch and a violin sonata by G.F. Handel. Repeated measures univariate analysis of variance revealed that chin rest and musical composition produced significant differences in all the pressure and force variables. Shoulder pads proved effective in changing the peak pressure and the total contact area utilized over the chin rest. Stepwise multiple regression indicated that neck measurements were not a significant predictor of force or pressure, but shoulder measurements were a predictor of pressure during the Bruch concerto.

These results underscore the importance of evaluating chin rests, in addition to shoulder pads, when seeking a more comfortable "fit"' for the violinist. In addition, the repertoire of the violinist should be

considered a critical parameter when evaluating levels of force and pressure produced during performance. This study demonstrates that the specific musical composition may interact with the effects of chin rests. Musical composition may also influence the ability of anthropometric measures to predict the forces generated during performance.

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A DESCRIPTIVE ANALYSIS OF MIDDLE SCHOOL STRING PROGRAMS IN CENTRAL KENTUCKY

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Presented by Cecilia Wong

The purpose of this study was to promote a collaborative research project between the University of Kentucky and some of the public school string faculty members in the Central Kentucky area. The major thrust of the paper was to study and describe middle school string programs in central Kentucky and to analyze the results thus determining both strengths and weaknesses in the program as well as possible trends between grades. Three middle school string teachers enrolled in an advanced string pedagogy class, representing five different middle schools actively participated in the study. A questionnaire consisting of demographic information, information on students' initial contact with their instrument, and students' self-esteem was constructed by the teacher/researchers and given to five area middle school string orchestra to respond. One of the main results of this study suggests that the string orchestra directors at the middle school have a major influence on their students. One of the weaknesses that was discovered is the attrition of young eighth grade males fro the middle school string program.

AN EXAMINATION OF THE PRESENCE OF SCHON'S CONCEPT OF "REFLECTIVE CONVERSATION" AS A DEFINING COMPONENT IN THE APPLIED STUDIO MUSIC LESSON

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The purpose of this study was to examine the presence of Schon's concept of reflective conversation as a defining component in the applied studio music lesson. The research problems were (1) to determine the presence of complete and incomplete reflective conversation; (2) to determine the verbally exhibited knowledge base within complete conversations in relationship to conversation length; and (3) to establish an instructional profile of stable behaviors based on reflective conversation as a distinguishing characteristic among selected teachers.

Videotapes of twenty-six applied studio music lessons of thirteen university teachers were analyzed according to problem solving, on-the-spot experimentation, and evaluation. An observation form was developed and was a reliable tool to collect information concerning number and type of reflective conversations, conversation length, and the teachers' verbally demonstrated knowledge base. Knowledge base demonstrated within the teachers' verbal behaviors was obtained by using the procedural model of Flanagan's critical incident technique.

Reflective conversations existed and were a distinguishing characteristic of the teachers. With the exception of two teachers, a stable use of both number and length of reflective conversations, and knowledge base areas, was found. A discernible difference in the teachers' knowledge base within conversation length existed, and thus established instructional profiles for the teachers. Complete reflective conversations ranged form one-sixth to over half of the total lesson time. Within instrument categories, teachers generally revealed a dissimilar knowledge usage. Some teachers exhibited fast-paced problem solving, in one minute or less, and named one or two knowledge areas. Others had longer conversations, up to five minutes, with more deliberate problem solving, and as many as twelve knowledge areas named.

Results indicated that a practically significant situation can be examined by establishing teacher instructional profiles based upon reflective conversation. Methods employed in this study could be used to document teacher problem-solving and teacher knowledge in a variety of settings.

RESEARCH FINDINGS IN THE SUZUKI METHOD OF TEACHING: WHAT DO WE KNOW AND WHERE DO WE GO FROM HERE

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In spite of the fact that the Suzuki method has been widely and very successfully used in the western world in the second half of the twentieth century, research on the strengths and possible weaknesses of the method is limited. Qualitative and quantitative studies are needed if we are to support that the Suzuki method is superior to other teaching methods for children's musical development. Knowing the findings of the existing research on the Suzuki method and on string teaching and learning in general is of great importance to anyone who is involved in Suzuki teaching and research. Parental involvement which is a unique characteristic of the method is proven to be one of the major predictors of musical success. The purpose of this presentation is to review the research literature on Suzuki instruction, string playing, and parental involvement, critically view the findings, and test their implications for the ways in which the *Suzuki* method affects children's musical growth. Research questions related with empirically identified strengths and weaknesses of the Suzuki students are suggested with the hope that they will initiate or motivate further interest in systematically researching one of the most prevalent methods of instrumental music teaching.

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