

Improving the intonation of your string students through sight, sound, and touch

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Pitch accuracy is one of the most important aspects of a quality musical performance and especially critical to string students. This session will discuss some problems in and causes of poor string instrument intonation and provide teachers with practical teaching strategies along with a variety of resources that will help students make progress in improving their intonation.

1. Philosophy
 - a. Importance of intonation on performance
 - b. Misconceptions of intonation problems
 - c. Teaching aural skills from day one
 - d. The teacher determines the expectation for intonation
 - e. What research has shown us
2. Sound
 - a. Inability to “audiate” (Edwin Gordon, 1993)
 - i. Must start from day one
 - ii. “Say” (sing) note names (daily)
 - b. Pitch matching / echoes
 - i. When tuning open strings
 - ii. As a daily warm-up activity
 - iii. Listening for what is correct & incorrect
 - c. Using reference pitches / drones
 - i. Sustained pitches
 1. Beat elimination – explain/demonstrate to students
 - ii. Tetrachords & Scales
 - iii. Tunes & Performance repertoire
 - iv. Improvisation
 - v. Word of caution about loud reference pitches
 - d. Detune the instrument’s open strings for scales/simple tunes
 - e. Accompaniments
 - i. Puts a melody in harmonic context
 - ii. EEi, accompaniments with different harmonic analysis
 - f. Instrument harmony
 - i. Double stops - checking with open strings
 - ii. Partners “double stops”
 - iii. Listening for sympathetic vibrations/ringing of instrument
 - g. Tuning in orchestra/groups
 - i. Tuning sequence – 1. Listen, 2. Internalize, 3. Tune
 - ii. Build chords – Root, Third, Fifth (& Seventh)
 - iii. Chorales
 1. *371 Bach Chorales*, published by DeHaske, distributed by Hal Leonard
 2. *Bach & Before for Strings*, published by Kjos
 3. *Bach Chorales for Strings*, published by Southern Music
 - h. Aural theory training
 - i. Intervals
 1. Higher/lower game

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2. Half/whole step identification
 3. Advanced interval identification
3. Touch
- a. Instrument position
 - i. Violin/Viola
 1. “The Frankenstein” – too far forward
 2. “The sagger” – instrument not parallel to ground
 - ii. Cello/Bass
 1. Endpin/instrument too low
 2. Neck too far away from head
 - b. Left hand position
 - i. Violin/viola
 1. Left hand shape
 - a. Straight wrist – correct with teach/student touch
 - b. Sequence: (Start without the instrument)
 - i. Turn head slightly to left, then raise left hand so palm faces the nose (simulate holding a violin).
 - ii. Bend first finger to form a square or a “table.”
 - iii. Gently twist the wrist slightly (“turn the lightbulb”). The first finger will pull backward slightly, the fingernails will align in a straight line with the nose, and the palm will face the shoulder rather than the nose.
 - iv. Apply the same sequence with instrument in correct shoulder position.
 2. Left arm position
 - a. Make the left arm “swing” to cross strings, maintaining the hand shape
 - ii. Cello
 1. Left hand shape
 - a. Check 1st finger placement. Should NOT be on pad.
 - b. Have students reach first finger back to the nut, then bring back to regular first finger position
 2. Left elbow height
 - a. Bridge taps
 - b. Flying pizzicato
 - c. “Grab a Coke”
 - iii. Double Bass
 1. Left hand shape
 - a. “Inhale and hold”
 - b. Fingers over face, thumb in the left ear
 2. Left elbow height
 - a. Bridge taps
 - b. “Grab a Coke”

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- c. Finger Tapes (Finger Placement Markers)
 - i. To tape or not to tape?
 - ii. How many? Applied for how long? When to remove?
 - iii. The purpose of FPMs
 - iv. What to avoid
- d. Right hand technique
 - i. The right hand effects intonation too!
 - ii. Speed/Weight/Placement considerations to maintain constant tone & pitch
- e. Problems with the mechanics of open string tuning
 - i. Fine Tuners – lubricate or replace
 - ii. Pegs - lubricate
 - iii. False Strings – compare with kid’s sneakers
 - iv. Environmental factors
- f. Pitch adjustment on the instrument
 - i. Students must understand how and when to *physically* adjust a pitch on the fingerboard
 - ii. Pitch adjustment exercises
 - 1. “Hands together” pitch matching exercise -- Have students unify on a fingered pitch, then put your hands together (like you are closing a clap). Once you open your hands slightly, the students slide their finger up/down. The wider you open, the more out of tune they play.
 - 2. Pitch bending – use keyboard with pitch bend wheel on organ setting and have them play and bend notes up and down
 - 3. “Follow me” exercise – similar game, but teacher is on a violin
 - 4. One finger tetrachords/scales
 - iii. Other strategies to enhance students’ listening
 - 1. Eyes closed – enhances sound
 - 2. Play softer – sometimes when students are too loud, they don’t listen
 - iv. Block vs. Independent fingerings
 - 1. When to begin independent fingering
 - 2. Exercises for block fingering
- 4. Sight
 - a. Fingerboard diagrams & worksheets
 - b. Visual readouts
 - i. Tuner
 - ii. Other software (see technology below)
- 5. Technology
 - a. Tuners
 - i. Good for initial steps
 - ii. Reliance - compare to calculators from math class
 - b. Commercial Tuning CDs

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- i. *The Tuning CD* by Richard Schwartz – available on Amazon and iTunes
- ii. *Cello Drones* – <http://www.navarrorivermusic.com>
- c. Intonia (Mac/PC) - <http://www.intonia.com>
 - i. Visually displays pitch live
 - ii. Allows students to analyze recordings
- d. Tartini in Tune (iOS)
 - i. Available on the app store, \$2.99
 - ii. <https://itunes.apple.com/us/app/tartini-in-tune/id410789405?mt=8>

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