Pitch, intonation, vibrato, and shifting: a look at a string player's left hand

CASMEC January 16, 2025, 10:00am Sacramento State

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A string player's left hand manages pitch and intonation. As most of us know, these are not the same thing! Shifting and vibrato are both basic aspects of pitch and are essential tools for any continuing string student. Playing with good intonation is more than a possibility; it is expected (and with no tape on your fingerboard!) Which finger plays which pitch on which string is frequently the cause of much confusion and disagreement, even among good string players and teachers. You could possibly play a pitch over sixteen different ways given four strings and four fingers. What is the right or best finger to use and why? What is the difference between wrist vibrato and arm vibrato? How does kinesthetic memory and basic ear training affect what the left hand should be doing? Basic exercises for beginning or continuing shifting and vibrato will be provided. Bring an instrument, you'll want to try these exercises out for yourself and take them back to your students.

Why and how?
When to teach vibrato and shifting – good posture and basic intonation in keys of D, G, C, A

POSTURE

- Index, middle, ring, pinky 1st-2nd-3rd-4th
- No fingernails – changes pad contact (kinesthetic and tone muted)
- Actual pitch vs comfortable hand "backward C" and "big grapefruit" (expand distance between knuckles)
- Fingers curved close and over the strings (SF vs LA)
- Thumb across from 1nd or 2nd (balance)
- Wrist straight or fingers are flat especially 4th, no vibrato, no shifting
- Elbow supports all four fingers on any string and changes for string level
- "Ping" for finger connection to string
- Shoulder rest
- *Exercise:* Artificial harmonics for shape and intonation (see Shifting below for one finger scales)

INTONATION

- Fingerboard knowledge of half and whole steps (m2s and M2s)
- Go to the keyboard – string players don't know!
- Hand positions vs string positions (where are the half steps vs where is the first finger?)
- About an inch for whole steps and fingers touching for half steps – three inches or four for bass

SHIFTING

- Position name is where the first finger replaces the original finger in first position
- String crossings are slow and sound bad, especially for one pitch as an open string
- High strings in low positions are very loud and bright – higher positions offer varied and different tone colors
- Play 4ths on one string and octaves on two strings – 1st to 4th finger
- 2nd position essential for these keys: F, B*b*, E*b*, E, and B
- Half position for chromatic passages to avoid 1-1-1 fingerings
- The chromatic fingering 0-1-2-1-2-3-4 vs 0-1-1-2-2-3-3
- Allows for stronger fingers to play vibrato
- Shifts are 1st finger to 1st finger for distance (interval)
- Swing under (or over) for a trajectory and target
- Weight – release – shift – weight
- *Exercise:* Slides up and down the fingerboard with curved fingers close to the string – pay attention to how the elbow moves
- Natural harmonic octave higher than lower string at half string for beautiful pp tone
- *Exercise:* One finger scales

VIBRATO

- Which joint moves? Wrist for hand or elbow for arm
- One variable, not two, which will cancel each other out
- To the pitch and behind (below) not on pitch and back and forth (sharp)
- Consider speed – slow to fast
- Consider width (oscillation) – thin to wide
- *Exercise:* guitar position for finger movement and muscle memory
- *Exercise:* Scales with bends – triplets, eighths, sixteenths with and without metronome
- Vibrate for pizzicato (right hand at mid string, no open strings, with the pad not nail)
- Vibrate open strings at the octave (lowest string)
- Vibrate for non right hand accent

The overarching goal and idea behind good technique is to get to the point where you are able to do whatever you want, whenever you want. This allows you to be able to spend time and energy on musical considerations (style, phrasing, dynamics) and not problems of how to do them