Sight, Sound, Feel:
Intonation and Artistry in Strings/Orchestra

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2:00-2:50 pm
Dr. Janine Riveire, presenting

Why do string students play out of tune? The answer reflects the complexity of what we are asking them to do. They must recognize the notated pitch and key patterns represented on the page; then they respond with muscle movements to create sounds on the instruments. But they also have to anticipate what that sound *should* be, assess the sound they make to discern whether it matches what should be, and then respond instantaneously with a change or correction if needed. That has to be assessed and responded to as well if there is time before moving to the next note or pattern of notes.
--and this is in addition to the complexity of just making sounds on the instrument itself, which is also in addition to the needed internalization/audiation of the music.

The wonder is that anyone can do this at all!

How do we get them there? As music teachers we have to teach the musicianship skills for the hearing as well as the note reading. As string teachers, we must attend to the physical nature of playing these instruments. In the end what I strive for is natural movement that is free of tension, so the player can release the sound already stored within the instrument, and shape it with expressive intent.

Today's workshop will focus on the physical skills and some UDL-friendly activities that will help many different learners get to playing in tune and out of tune with discernment and artistic purpose. We have teaching strategies that can be used in many contexts and repeatedly as needed.

SIGHT
1. Science connection activity. *Students need some a ruler or measuring tape, a pencil, and a calculator. In pairs, measure the vibrating length of a violin or viola (or cello or bass) string (nut to bridge). Divide that length by 12 and mark with pencil that distance from the nut. That is one whole step. Measure the new distance between that mark and the bridge, and divide that by 12. Another whole step marked. This enables students to visualize the changing distance and how the notes get closer together going up the fingerboard. (just like frets on a guitar) (sight but also sound) Using a bass you can show dramatically the difference between first position whole step, middle position whole step, and thumb position whole step. This can also be used to consider the weight/speed/placement variables of tone and dynamics relative to pitch.*
2. Visualizing the patterns of whole- and half-steps on each string; and understanding how they reflect a scale and its key signature. Bornoff is an excellent resource for these patterns.
The essential reasons for having students create their own charts and label them: it goes through their brain differently when they draw it themselves, and the more ways it goes in there, the better it sticks! You might choose to do "life-sized" charts for cellos and basses.

SOUND
1. being able to recognize whole- and half-steps in sound (and other intervals as they grow)
2. being able to audiate them—*I have a list of whole-and half-step songs*—and
3. recognize the notated patterns that help them find where the half steps will show up.
4. pulling a characteristic tone, a **resonant** tone that doesn't distort the pitches being played. Consider what it takes to let the instrument resonate fully (this includes centered intonation).

FEEL

Also known as ***Proprioception***

1. understanding finger pattern habits we have, as well as the physical tendencies of certain fingers to over- or under-stretch. Physically placing fingers while following a key pattern visually.
2. Kato Havas' concept of measuring each distance horizontally as part of placing the fingers. "Swinging" from each finger placement to the next.
3. Pantomime playing, [winging, flip flops, swing-swangs], fingering by touching fingertip to thumb. Getting the notes literally "in your hands."
4. Paul Rolland's pre-emptive exercises similarly use movement analogies ('like pouring ketchup,' or 'smell the fish' or 'rapping your knuckles').
5. **Shifting:** Especially for cellos and basses, changing left hand position is so much more than just moving your hand to a new place on the instrument. It requires repositioning the arm in space—I use the elbow circle approach.

ARTISTRY

1. Tone/timbral implications of where on the fingerboard a pitch is located—and the **artistry** of managing the bow to adjust your sound to what you want.
2. **Vibrato** –getting started
   a. Vibrato is a manipulation of the pitch to create a warmth of expression.
   b. Vibrato should start at the center of the pitch and move both sharp and flat microtonally. (None of this starting flat of center and vibrating up to the center—see research by Michael Allen and others).
   c. *Everything in the body must be well balanced for the hand/arms to be free and flexible for this to happen. We make vibrato possible from the first learning how to hold the instrument; if intermediate players struggle to produce vibrato after you have done various exercises/activities, backtrack and check the basic position of instrument and body.*
   d. If you are checking intonation in a group or with a tuner app, you must play without vibrato. If you are practicing scales for improving intonation, no vibrato.
      If you are practicing scales for expressive reasons, then vibrato is okay.
   e. At least on bass/cello, you *can* put vibrato on harmonics to warm up the sound.
   f. It's only in the 20th century that constant vibrato became a norm in classical music. (See SOUND 4 again)
3. In jazz and other styles, dissonances are used expressively, and the bending of pitches is used strategically as an element of style or individual expression.
4. Dynamics--developing dynamic control—relates to producing a resonant tone, and can be developed from the first few months by exploring the 4 variables: bow speed, bow weight, proximity to the bridge or fingerboard, and region of the bow used.
5. This is the scariest one: involve your students in creating: let them compose short melodies, help them try improvising. This session isn't about those things, but I hope you'll learn about teaching them, because it can work small miracles.

Artistry is born when we are expressing ourselves.

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