Clinic: Pitch Reading and Fingerboard Geography

by Faith Farr

Beginning students usually develop their own short-cuts for pitch reading, often associating a finger number with a pitch, rather than a note name. For beginners, the glyphs for numbers are certainly more familiar than the note glyphs on the staff. While the finger number short cut may work for a very short time, students will be hampered in pitch reading if they don't develop strategies for figuring out unfamiliar notes as their playing expands both to the low strings, and to upper positions, and for recognizing familiar notes in new positions. G on the D string played in 2nd position is "G" not "4." The letter denotes the sound and the location; using different fingers to touch the same spot is the essence of shifting.

Students' ultimate reading goal should be quick and accurate pitch reading, including the note names, whole/half step relationships and correct fingerboard geography across strings that allows them proper finger placement on the fingerboard in the appropriate finger patterns.

Letter name drills

An early drill that I recommend for beginners includes reciting the music alphabet forward and back. Forwards is usually fairly easy, once they get over the hump that G returns to A. But unless letters backwards become equally fluent, students will forever have a hard time reading on low strings where they need to go backwards from a known note to figure out what a less familiar note is.

Establish a $\frac{4}{4}$ chant in eighth notes. Students could conduct, or use a body motion such as tap knees, hips, shoulders, head for the 4 beats. Say 2 letter names per beat / body motion. Continue until you come back to A on beat 1:

A, B, C, D, E, F, G, A
B, C, D, E, F, G, A, B
C, D, …
etc. until
G, A, B, C, D, E, F, G
A!

Now that you can do it forwards, recite the music alphabet backwards, using the same $\frac{4}{4}$ chant in eighth notes. Keep practicing backwards until it is as easy and flawless and fluent as forwards.

The benefit of fluency in the musical alphabet is that you only need to know one or two landmark spots on a clef, and you can calculate what all the letter names are. The notes you play frequently will become quickly familiar—and you will also have a strategy to figure out unfamiliar notes—in a new clef or on leger lines.

I like the music alphabet system because it applies to all clefs and all registers. The "All Cows Eat Grass" and "Every Good Boy Does Fine" mnemonics are limited to notes within that particular clef; they don't help with leger lines above or below the staff.

Fingerboard Geography drills

Along with drilling the basic music alphabet, I drill the chromatic alphabet on the instrument as a way of establishing fingerboard geography. I do not point to the black and white keys on a piano, because it doesn't help a non-pianist. And knowing piano (5 years of lessons before I started cello in 9th grade) didn't help me. When I started cello, I knew full well the difference between F and F♯, but it was still really hard for me to get finger 2 into action. I became a fluent cello reader only when I started thinking cello geography, rather than "translating from piano."

For beginning students, I tell them: there is a sharp between everything, except not between B-C and not between E-F. Remember "Babies Cry" and "Elephants Forget." There is a flat between everything except not between B-C and not between E-F. Remember "Babies Cry" and "Elephants Forget." The sharp/flat notes have two letter names, but the same sound and might be played by the same finger. They just have a different look on the staff and different letter name. In tell my students it's like one person might have 2 jobs: dressing up in a suit for their office job where they are known as Mr./Ms., and dressing up in flamboyant clothes for their gig in their rock band where they are known by their stage name. Same person, same address and phone number, but two names and two jobs.

My first fingerboard geography drill is letters in first position with sharps. I place my left hand on the C string and point with my right hand at all the note spots: open string, the spot before first finger that we're not using in 1st position (unless we extend), finger 1, 2, 3, 4 and the spot after 4th finger that we're not using (unless we extend). Then do the same on the G string, D string and A string. Many of my students end up just using their left hand fingering 1, 1, 2, 3, 4, 4 to get all the notes in. What I'm after is naming the spot on the instrument with a sensible finger. Fluency is saying the notes on all 4 strings in 30 sec or less.

My second drill is letters in 1st position with flats. As before, point to the spots on the fingerboard and name the notes. I do all sharps, and then all flats—not mixing the two just to make sure the less common notes like A♯ and G♭ get a turn.

Once students are shifting, I have them recite the chromatic alphabet from open to harmonic on each string, using 1st position and 4th position—remembering there is the extended x1 spot and the x4 spot that my fingers aren't touching in 1st position, and the x4 spot between 4th position and the harmonic. Reciting all 4 strings from open to the harmonic fluently should take 40 sec or less.

Although I time these drills, I do recognize that people talk and think at different tempos. I might ask a student to recite the full language alphabet A to Z or count to 10. When the student can recital the chromatic alphabet at about the same tempo that they say the language alphabet or count, then I say they have developed fluency. Someone with a naturally slower tempo will say the music letters slower than someone with a naturally fast tempo. When the students realize that their music tempo is slow, hesitant and full of errors compared to their language tempo then they have a way of testing their progress towards fluency.

The next drill I call "zig-zag." Choose a position between half and 4th; choose to start on the C or A string; choose sharps or flats. Name the notes across the string with finger 1; then go back the other way naming the notes across with finger 2, then the first direction across for finger 3, and the other way for finger 4. For example, 2nd position, starting on the C string, using sharps would be:

Finger 1: E, B, F♯, C♯
Finger 2: D, G, C, F
Finger 3: F♯, C♯, G♯, D♯
Finger 4: E, A, D, G

Do two or three different positions per practice session. Fluency is naming the notes without hesitation.

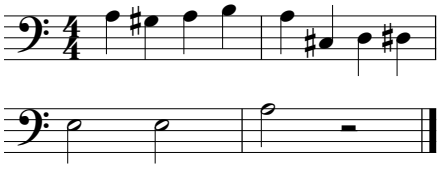
Travelling Tune is a simple-to-play tune that works in every position on each pair of

Originally published in MNSOTA's *String Notes* — Spring 2020 (Vol. 22, No. 3)

strings. I usually write it for students as

2 1 2 4 2 2
1 2 3 4 – 4 –

Choose a position; choose starting on A, D or G string; choose sharps or flats; e.g. in high 3rd position starting on the D string, using sharps you would play:



Playing is easy; the point is not to play, but to say the note names you played! Do three *Travelling Tunes* in different positions per practice session. Fluency is naming the notes without hesitation.

Thanks go to John Madura for suggesting these additional minor *Travelling Tunes*:

natural 2 xi 2 4 2 2
xi 2 3 4 – 4 –

harmonic 1 3 4 xi 1 1
4 1 2 3 – 3 –

melodic 2 xi 2 4 2 1 – 2
xi 2 3 4 –

For every new piece:

For every new piece, my assignment for students is to pizzicato and say the notes names in their new pieces once every day. Whenever the pitch is difficult, my solution is "pizz and say letters." My less experienced students usually roll their eyes at this assignment, so I show them my definition of "fluency." I ask them to spell out a word that is written on the page, say the title of their piece. "Gavotte" G-A-V-O-T-T-E. When they can say the music letters as quickly as they can say the English letters, they have developed fluency.

Faith Farr teaches cello at her home studio and is an artist member of Thursday Musical. She received MNSOTA's Master Teacher: Studio award in 1996 and has done many cello pedagogy presentations. She has served as editor of this magazine since 1996.