

**Pre-session sharing - Jeff McBurney - Sight
Reading Factory. Com - discount code MMEA1617
Flute air stream focus - Pneumo-Pro**

MMEA 2016 - Great Falls

**All Things in TUNE - Techniques and Inspirations
for developing sound and intonation awareness in
our ensembles - Leon Slater**

The focus of this session is to establish practices for our students that will help them grow to become independent musicians. Our collective goal is to create independence in awareness and decisions regarding good sound and intonation. The development of this awareness and ability in our students has to be taught on a consistent, daily basis.

My intention for the format of this session is to be more of a “round table” discussion format. As we go through the various sections of this discussion, please feel free to volunteer techniques or approaches that you have witnessed making a difference for your students.

I have changed my approach to teaching intonation awareness radically in the past 5 years due to what I have observed in other teachers’ teaching, other MMEA sessions and what I have witnessed as beneficial in my own classroom. This (and all of my teaching) is definitely a work in progress:).

Reconnecting to our PURPOSE

What LIVE performances have you witnessed that took your breath away, gave you chills and thrilled your spirit?

- For me - Chicago Symphony Orchestra; Bruckner 7, Mahler 5, Tchaikovsky 4/mvmt.4
- Mnozil Brass - incredible sound you could FEEL.

What performances have you been a part of that did that very thing?

- Maslanka Symphony #4 w/ Bolstad

Reflecting on those AMAZING times can help us all reconnect to what we desire for our students. Imagine giving your students the tools to generate the sound and intonation to do that exact same thing... While there is no substitute for LIVE music (have you ever discussed the difference between recordings and live acoustic instrument performance with your students?), what are some of your favorite recordings to demonstrate incredible sound/intonation that you share with your student?

- UT Austin Tuba/Euph. Studio <https://www.youtube.com/watch?v=IMI0kxzf4YU>

HOW do we get young students interested in taking the time to focus on intonation?

STEP ONE - Philosophy of PURPOSE

Just a kind reminder - WE are the ambassadors of our art form.

- WHAT does our art form do for you?
- Why do you love music?
- Why have you chosen to spend your life promoting and being involved in music?
- What are some of YOUR beliefs relating to the purpose and importance of music?
- For YOU - what are the REMINDERS of what music and art contribute to LIFE?

Have you communicated any of this to your students?

- If it is real for you, you can discuss it and it will be genuine for your students.
- Don't be afraid (of course, choose the right time:).

Our art form exists to bring joy, excitement, beauty and creativity (among other things) into our daily lives. It has been developed over thousands of years of human existence and currently exists for a reason. The act of creating and being a part of a creative process is a powerful, opening and life-affirming activity. We are part of that continuation and connection to the past and part of the future of our art form.

I also believe that this art form does much more for us as human beings than we normally think or talk about.

- Within the large ensemble format of music, what are some of the life skills that we practice on a daily basis that are rarely practiced in other educational settings?

One of the many things we do as musicians is to constantly practice listening to others and be willing to change. Think about that for a second. In what other area of life do you practice these skills?

- Developing awareness of one another, being willing to adjust for a common goal and the good of the ensemble.
- MANTRA - "Listening to others, I am aware and I adjust."

Of course, this is always a good one to share as well. Benefits of music - <https://www.youtube.com/watch?v=R0JKCYZ8hng>

NOVA - The Great Human Odyssey - A paleo anthropologist discusses the use of music within the Homo sapien culture vs. Neanderthal culture, highlighting the theory regarding ART/MUSIC being a primary reason we evolved and survived.

Do you have other videos /resources re: the benefit of music to human beings? Do you have some that you share with students? (Please add them to this document?)

Brenda Nagode - "ownership of contribution"

Philosophy - The WHY of what we are doing: PURPOSE has a way of focusing what we are doing for our students.

1. Philosophical grounding helps our students.
2. Philosophy of being a musician and what it does for us as human beings.
3. Talking to students about this helps with purpose and focus. While we might be drawn to being a part of music because it is fun and an activity, the benefit to us (as performers) and our audience
4. Life affirming activity that is a blessing to others.

WHY do we focus on sound and intonation?

1. Anything less is a distraction from our art form.
2. Music - when do the right way is powerful!
3. DO THE MUSIC JUSTICE - for ourselves and our audience.

Inspirational READING -

1. Teaching Music With Passion - Boonshaft
2. Scott RUSH!!
3. Suggestions!! please!!!

Step 1.5 - the WHY of Just vs. Tempered Intonation

When I went to college, we never discussed the WHY of the perceived need to bend pitch to be a GREAT, IN-TUNE player. We did discuss the need to be able to bend pitch, but beyond hearing it and doing it, I never understood why.

GOOGLE SEARCH - tempered tuning vs. just tuning - lot's of great physics explanations that you and your kids might connect with?

From the article provided at the back of your packet, "It's Just Intonation" by Beth Bronk:

"Just Intonation uses pure intervals derived from the natural harmonic series. Every interval used in Just Intonation can be found somewhere in the harmonic series: 1to1=unison, 2 to 1=octave, 3 to 2=P5, 4 to 3

= P4, 5 to 4 = M3, 4 to 3 = P4, 5 to 4 = M3, 6 to 5 = m3, and 9 to 8 = M2. The advantage of using these simple-integer ratios is the consonance of the sound they produce. Unlike intervals in Equal Temperament, intervals based on Just Intonation sound beatless, without waves of dissonance. Long (2008) began his research into intonation preference with the idea of 'Coincidence Theory', which states that when the components of harmony are in enhanced alignment, the sound will be more consonant to the human auditory system. Performing in Just Intonation may create greater consonances than Equal Temperament (i.e., more resonant chords and better sound projection) and has the potential to provide more varied and powerful dissonances. The most important point may be that, with good instruction and thoughtful practice, ensembles using Just Intonation may be perceived as performing equally in-tune in all keys (though, admittedly, it is more difficult in some keys than others!).

The table below the adjustments performers must make from equal temperament to reach Just Intonation. There are adjustments for every half step as well, but these scale degree adjustments are adequate for starting out.

Adjustments from Equal Temperament to Just Intonation

Major Keys:

Scale Degree 1 2 3 4 5 6 7 8 (adjustment) - Bb C D eb F G a Bb
 1 (0), 2 (+3.9), 3 (-13.7), 4 (-2.0), 5 (+2.0), 6 (-15.6), 7 (-11.7), 8 (0)

Minor Keys:

Scale Degree 1 2 3 4 5 6 7 8 (adjustment) - Bb C Db eb F Gb ab Bb
 1 (0), 2 (+3.9), 3 (+15.6), 4 (-2.0), 5 (+2.0), 6 (+13.7), 7 (+17.6), 8 (0)

This chart shows that a performer must manipulate the pitch up or down as indicated to perform each of these intervals in tune, with no beats or waves, when sounding against the root of the chord, or scale degree one. The same skill applies to performing chords in Just Intonation. It is crucial that the idea of adjusting the third of chords becomes second nature to both teachers and performers. As the chart indicates, in a major key, scale degree three must be lowered -13.7 cents to be perceived of as in tune. “ (end of cite)

Let students explore this! (or leave them alone in their ignorant bliss:)

I would encourage you to send your students on a mission - IF they are into math and interested in this type of stuff: Google - “tuning systems” or “Just Intonation vs. Tempered Tuning”. As an example, check this out:

- Nathan Nokes explanation of tuning histories <https://www.youtube.com/watch?v=wUBkbrvCmGA>
- Wonderful British accent with a great description <https://www.youtube.com/watch?v=VRlp-OH0OEA>

Just a side note to get students thinking about sound moving and existing on the physical plane:) Interesting visual of resonance patterns at specific frequencies

- <https://www.youtube.com/watch?v=YedgubRZva8>
- <https://www.youtube.com/watch?v=wwJAgUBF4w>
- Worthless, but interesting:) https://www.youtube.com/watch?v=uENITui5_jU

Other suggestions: Rubens Tube Experiment

Cymatics - Sound and Science

10/25/16 Btw - my students are way into this...a student just yesterday exclaimed - "you can see what sound is doing...we are doing the exact same thing, it is just that this helps you see what is going on"

Step 2 - DAILY approach

Intonation development has to be a daily focus. Incorporating the teaching of HOW to establish good sound, HOW to bend pitch and what good intonation FEELS like is a very important part of daily instruction.

A few basic rules to help -

1. Insist on 100% participation. It takes everyone to make this work for the ensemble.
 - a. How many unaware/out of tune people does it take to make the ensemble sound bad?
 - b. It only takes a few folks to distract and detract from the collective work environment.
 - c. Engage percussionists by having them rotate through the exercises on Timpani (2 at a time on two drums each). EVERYONE does the breathing and singing together.
 - d. We are in this together! I trust you are doing your best!!
2. Silence is key to success. Truly listening and being aware starts with silence.
 - a. Excess sound will dismantle everyone's ability to truly hear what is going on.
 - a. Even fidgeting, key clicking or whispering can render the ensemble work useless (or make it much more difficult).
3. Foundation of posture, breathing and sound production come first.
 - a. I know we know it, but don't give up! It has to happen consistently in order to become a habit.
 - a. We all need reminders.
4. NEVER "give" them the answer! (resist the urge - it is a short cut with NO results)
 - a. If you tell a student "you are sharp/flat" or "push in", etc., you are only robbing them of the opportunity to learn how to hear it and make decisions for themselves.
 - i. This will also undermine their ability to hear and adjust in chordal structure or melodic line/relational tuning (Just Intonation discussion).
 - a. In rehearsal, the use of a tuner is for the "standard" presenter only. Everyone else is taught how to make those decisions for themselves.
 5. Establish a "we're in this together" feel in your classroom. We all have our own different way of doing this, but it is an important part of helping students feel OK about singing and trying to tune on their own. Remind them: "I know you are doing your best - keep trying!"
 - a. One of the ways to get your groups more comfortable in singing is to start with "non-pitch" oriented work within a piece of music. Singing on articulation
 - a. syllables can help students loosen up and at least begin to audiate confidently. (MASLANKA example - with Missoula community band - slow detailed work with musicians audiating their part while fingering their instrument - TOTALLY helped them gain ground on technical issues while opening up the feel of community in the room)

NO JUDGEMENT - JUST ENJOYMENT

Step 3 - Physical Set-up

Stretching exercises (band yoga - boga- bandoga - bayoga - believe it or not, my younger students have grown to ASK for this at the beginning of the rehearsal).

I. Standing Stretches: Instruments down and safe.

1. Shoulder rolls (including arm)
2. Shoulder stretch - cradle and cross-over cradle
3. Chin to shoulder stretches - L and R
4. Spine stretches - side to side, back and forward
5. Hands interlocked under the chin breath - chicken wing breath:)

Guide the students in a step by step direction and ask them to focus on various areas of their body.

While beneficial in a number of ways, these are great ways of simply establishing awareness - they are practicing following directions AND thinking about adjusting their bodies by focusing their mind.

1. Seated exercises
 - a. Head Rotation, Neck stretches, shoulder rolls, back arch/hip rotation
 1. Hand hold - position that releases tension
 2. Posture
 - a. Quite literally how to sit:) - musician seating vs. relaxed/casual seating
 - b. Stand location for optimal
 - c. Head alignment
 3. BREATHING (relaxation vs. tension)

Anyone have Alexander Technique experience that works for kids?

II. Breathing Exercises - LIST out effective ones and their purpose/focus

1. Breathing - all kinds of exercises - balance of daily routine and fresh info.
2. Following the air inside your body - guiding the "in" and the "out" with instruction:
 - a. Focus on the point of entry only.
 - b. FULL breath vs. shallow breath
 - c. Mentally isolate an area for the air to go (send the air into ...)
 - d. Full breath - shoulders up and sigh - release
 - e. Concert "centering" breathing (present moment)
 3. Breathing Gym - DVD
 - . FULL BREATH focus - fill to the bottom, sip exercise
 - a. REGULATION exercise - 8 in, 8 out; 4 in, 12 out; 2 in, 16 out; 1 in, 16 out
 - b. OPEN INHALE, Free Release (use of hand for sound focus)
 - c. Other exercises that you have had success with students?
 4. Prep breath for performing - SOUND!
 - . Mouth/throat shape from sound - throat OPEN?
 - a. Inhalation sound
 - b. Warming the sound - aural shape and air temperature

- c. FULL BREATH, FREE RELEASE - Inhalation/Exhalation one and the same - no stop and hold.

III. SOUND exercises (Swing Central 2013 - Wycliffe Gordon) wycliffe w/ joe alessi -<https://www.youtube.com/watch?v=Aqpf65FpV0>

This one might not be ok for school...? - but I think we know these guys - <https://www.youtube.com/watch?v=fgsMkNevPNg>

1. More, better sound - just getting the students to REALLY put out some sound is the first step. Fill up the room - "let me feel your sound" - and then, work on refinement:)
 - a. Embouchure refinement and focus areas to help:
 - i. Flute - level flute, focused aperture
 - ii. Clarinet - FLAT CHIN
 - iii. Sax - mp angle,
 - iv. Brass - firm corners
 2. Aural shape manipulation
 - a. Wind instrument sound production mirrors vocal sound production.
 - b. Aural Cavity - demonstrate with voice, demonstrate with your instrument
 - i. Eee to AH or OH - open throat, aural cavity
 - c. Warm, Dark, FULL sound is the goal
2. Generating intensity and sustain within your sound (soft and loud)
 - a. Breathe and Hiss
3. Exercises relating to developing better FULL sounds
 - a. Full Breath in, free release -
 - b. Focusing on aural cavity openness
4. Exercises relating to developing better soft sounds and entrances
 - a. initiate sound from a mf/f and decrescendo to p.
 - b. Freeze the embouchure, breathe through your nose and reinitiate sound at p level, crescendo to mf

Step 4 - The HEART of the matter!

Listening - aware - adjust - listening

Explaining WHY we need to bend pitch - JUST INTONATION
See Section 1.5 of this packet - personalize and clue in your students:)

4.1 - SINGING with a set standard - DRONE

NOT ALL drones are created equal - ORGAN drones KILL ME!!! <https://www.youtube.com/watch?v=8nvDmzK8P-c>

Some drones online only have the TONIC
<https://www.youtube.com/watch?v=e7X4So9Ywpw>

Cello Drones have Tonic, Dominant AND a pretty decent sound

Cello Drones are available on YOUTUBE, iTunes for download, as a CD or on hellgateband.org/audio

I find that for comfort of fitting the students voice Concert b-flat is a great place to start with getting students comfortable singing. Experiment with it and see which pitch center fits your student's voice. Truly, the key of the piece you are starting in on that day is a fabulous place to start:)

I prefer Concert F for performing exercises and working on tuning.
I prefer Concert A for Flute and Alto tuning

Sing Sing SING! Humming/Singing with a drone - establishes the FEEL of intonation within our ears, heads and bodies. (doing this on an almost daily basis - a little bit at a time).

Encouragement is key...initially I won't even correct students that are singing the wrong note:) There is a time for that, initially just getting them to try is paramount.

1. HUM - lips closed, mouth open. Establish awareness by having them start with teeth clenched. And then open to AH inside their mouth while keeping their lips closed. (have them try closed vs. open)
 - a. HUM the primary pitch of the drone - encourage them to match the dynamic level of the drone in their ears.
 - b. Bend pitch down and hold out - FEEL how flat feels - return to CENTERED
 - c. Bend pitch up and hold out - FEEL how sharp feels - return to CENTERED
2. Open mouth - AH vowel - exaggerated OPEN
3. Root and Dominant singing (1 and 5 together)
4. 5 - 4 - 5 - 1 movement
5. Major Scale against the drone

4.2 - BENDING PITCH on the instrument

The ability to manipulate/bend pitch with the embouchure is essential to playing a wind instrument in tune. Miniscule adjustments with aural cavity and embouchure are the key to playing a wind instrument in tune.

Exercises for bending pitch awareness:

Exercise 1 - Tuner/ bending pitch - use on a projector and demonstrate

1. Holding a single pitch dead center on the tuner. (perfect time to demonstrate adjusting your instrument).
2. Bend the pitch down by 20 cents/ up by 10 cents (demonstrate holding those pitches at flat and sharp)

Students attempt as a group -

1. Listen for success and have the student describe how they are doing it:)
2. Help with clarification about which part of their embouchure they manipulate to bend down or up.
 - a. Flute: head nod vs. roll
 - b. Clarinet/Sax: aural cavity
 - c. Double Reeds: aural cavity, reed in/out
 - d. All Brass: aural cavity, emb. Corner activation
3. As a GROUP, continue to bend up and down on cue (hand signals).
 - . Lead a discussion on which bending is easier: up or down?
 - a. WHY do we need to do this?

i. Not only to know which direction to adjust our tuning slide, barrel or mouthpiece...

ii. JUST intonation...:)

Exercise 1.2 - individually at their stand with your small tuner have them demonstrate the skill for you. (light talking, inattentive class is actually best for this:)

- **Just did this 10/25/16 - had sections "circle up" standing and facing each other and they are all responsible for teaching each other. Int. Band - 80% success, Advanced Band - 95%, Wind Ensemble - 100% success**

Exercise 1.3 - have the group perform root and fifth with a drone as individuals bend pitch down and up (with the use of a tuner/visual that they can see)

DO THIS MULTIPLE TIMES as a group - several different times - spread out over several rehearsals. Confirm/re-teach - 100% success is our goal.

Assessment 1 - Individual demonstration of bending pitch and sustaining bent pitch.

1. Assessment - demonstration of mastering the skill of bending pitch. Around the room one at a time - we are all in this together - any advice to help others?
 - a. Demonstrate the ability to find "in tune" - dead center on the tuner and sustain a pitch at zero for a minimum of 5 seconds.
 - b. Demonstrate bending the pitch UP by at least 10 cents and hold for 3 - 5 seconds.
 - c. Demonstrate bending the pitch DOWN by at least 30 cents and hold for 3-5 seconds (watch embouchure for distortion). The key here is bending slowly and holding the pitch flat and steady.

IN CLASS assessment - ONE by ONE

Exercise 2 - SLIDE with drone (no visual tuner used)

The slide - start as close to "dead center" as possible and then bend pitch down and back up to matching - (sign language to communicate).

2.1 - AS A GROUP with direction

2.2 - Instrumentalists as soloists - As students demonstrate the slide have all students show waves in their hands - matching the speed of the waves and drop their hand when it is in tune.

2.3 - In pairs - one student is the drone the other bends and matches pitch.

DO THIS MULTIPLE TIMES as a group - several different times - spread out over several rehearsals.
Confirm/re-teach - 100% success is our goal.

Assessment 2 - Drone - bend FLAT - return to in tune

1. Assessment - demonstration of bending pitch flat and returning to drone center

a. Done in pairs - one person is the drone - the other demonstrating exercise 2.3

b. Each pair does it twice while the class shows recognition OR the pair does it as a recording individually. (I prefer to have them record and share it with me).

Assessment 2.1 - RECORDED - with drone playing sustain TONIC for minimum of 10 seconds, bend flat, return to in-tune. Same on DOMINANT. (recorded and emailed)

Assignment 3 - Horn Adjustment/Tuning Exercise

b. Have all students adjust slides, barrels, head joints and mouthpieces to a "full-in" position. Have them play with their best sound...blowing "straight thru" the instrument. YIKES!

c. Turn on the drone - Double YIKES (brace yourself)

d. Next have them attempt to bend the pitch down and into tune (without moving their instrument adjustment).

e. Finally - have them demonstrate movement of their tuning slides, etc. to match the drone.

Exercise 3.1 - have a ONE student with great sound - adjust their horn to be an "out of tune" standard.

They are now the standard! Challenge the students to find him/her using their ears and determine if they had pulled out or pushed in to be the out of tune standard.

Exercise 4 - Class Drone RELAY - "HAND-OFF" (no use of drone recording)

1. On a Unison or a Perfect 5th - sustain and have students tune collectively to the best of their ability (with drone)

2. Turn the drone off.

3. Hand-off exercise can be performed in several variations:

a. Variation 1 - each student performs the designated pitch for four beats and "hands-off" to the next student - around the room.

i. As the ensemble listens - they show flat or sharp in their hands.

b. Variation 2 - each student performs for 12 beats (except the first student:), the first student solos for 4, the second student joins for 4, and then solos for four beats, the hand-off continues around the room.

Exercise 5 - Class Drone Exercise - Root/Dominant Hand-off

1. Tune entire ensemble on root and 5

2. Same as Exercise 4 with pairs on root and 5.

Exercise/Assignment 6 - Demo of major scale with drone - slow and PERFECT. Bend flat and back into tune. I demo and ask them to be really picky with me - raising their hand when it is truly in tune. Set a high standard - only accept the best.

Assessment 6 - RECORDING of a designated scale against a drone. With the drone sounding on the recording - each tone is to be held for a minimum of 10 seconds. Demonstrate FLAT and return to in-tune perfection:)

Exercise 7 - Improvisation with the drone - with everyone sustaining 1 or 5, each person takes a turn at improvising a melody of their own in a given key. Initial parameters help with guiding creativity:

- only using pitches 1-5 - always end on 5 or 1
- All notes of the major scale
- Relating to a mood or for a particular setting.

4.3 - Large Ensemble - Warm-up/Tuning Exercises

Hand signals for all classroom exercises.

1. Scale degree in fingers. (numbers 1 - 8)
2. Bend pitch direction (both hands flat - showing the direction to bend)
3. Waves (cupped hand in the air replicating the sound wave hitting the ear drum)
4. Listen (pointing to my ear)
5. Embouchure reminders (demo)
6. Posture reminders (demonstrate/ point to center)

TUNING instruments in the ensemble -

- SING/HUM before playing - same feeling?
- Concert F - Root and 5, plus 4
- Tuning in the wedge - only the people within the "wedge" play
- Student demo of wave adjustment
- MESS WITH US! Exercise (intentional out of tune standard)

Concert A for Alto Sax and Flute

Against a drone - Ensemble Tuning

- Unison, 5th and 4th
- MAJOR SCALE -
 - UNISON TOGETHER - each scale degree - with a flat slide:)

- ENSEMBLE IN TWO GROUPS - suspension release -
- CHORALES - running phrases with the DRONE

Trade 4's - demoing my best sound with rhythm; listen and perform back to me
Student led warmup

Thinking in the key exercises (creating awareness of scale degree and eventual discussion of chord type) - looking at a "plain jane" written out scale, have the students "think" in the key by doing patterns.
3rds - 1, 3, 2, 4; clarke - 1231, 2342,; student generated ideas - 1342, 3564, etc....

Listening examples - same tune - young band vs pro (specific examples of poor intonation vs excellent)
RECORDINGS in rehearsal - WOW!! Talk about a wake-up:)

Small Ensemble Chorale Project

Transcription project - playing with a recording... built in great standard of sound and intonation.
Wanna try it? Youngblood Brass Band - bflat groove tunes