“Connecting with Your Voice”:

The Enhancement of Brass Performance through Vocal Techniques

HANDOUT

The Midwest Clinic

International Band and Orchestra Conference

PRESENTATION SLIDES

December 16th, 2021 - 2:45pm - W 186

QR Code also placed here on each slide for your convenience throughout the presentation.

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Participation

This clinic will partially participatory in nature. If you have your instruments (brass) with you, please feel free to get them out and work along with us. If you do not, please feel to sing and free buzz along with us as well.

*If you do not have an instrument, we ask that you please keep your mask on while singing and participating to prevent any additional aerosols in the room.

Identifying the Issues:

1. Initial learning takes place in group setting, not in individualized instruction.
2. Instructors must focus on emergent needs of the group, not the individual.
3. Instruction becomes centered on the function of the physical instrument - the inorganic material vs. the organic material (the body).
4. Can result in deficiencies of production that remain unaddressed until individual instruction is assumed.

Areas of Possible Inefficiencies:

1. Maturity of tone.
2. Improper breath balance.
3. Insufficient respiratory habits resulting in obstruction of the airway (closed throat).
4. Immature sound quality.
5. Intonation issues.
6. Unhealthy mechanical (embouchure) issues.
7. Unhealthy habits developed in response to repertoire requirements and overall ensemble needs.

Identifying the “Fix”:

New Methodology must be developed to aid in the establishment of efficient technical ideas.

1. Aimed at the installation of both process and practice habits.
2. Students can repeat at home to encourage technical improvement.
3. Students can begin to become self-sufficient through establishing a process for practice.
4. Arm students with tools for addressing foundational elements of technique by giving them specific, targeted exercises.
5. Lead to healthy production of sound and discourage hyperfunctional muscular habits that will inhibit progress later.

Addressing the Issues:

We propose to employ singing techniques as a basis for the induction of healthy function and instill a solid basis for a more advanced foundation in brass technique.

Singing in the classroom is an idea that has certainly been used for an "effect tool" in both the classroom setting as well as the applied studio.

Often used to aid in development of musicianship skills:

I. Intonation
II. Accuracy
III. Rhythm
IV. Sight Reading
V. Tonality

Alternately used to aid in the development of musicality or musical imagination:

I. Phrasing
II. Dynamics
III. Rubato

Justification:

1. Voice is closest pedagogical relative to the brass family.
2. Trains the same muscles: respiration, phonation, and articulation.
3. Can Isolate the muscle groups without the distraction of the instrument.
4. Musician can separate the production from the product:
    a. “How does it feel?” vs. “How does it sound?”
5. Cheap and Easy!
6. Manage tonal expectations by utilizing a secondary instrument.

Purpose:

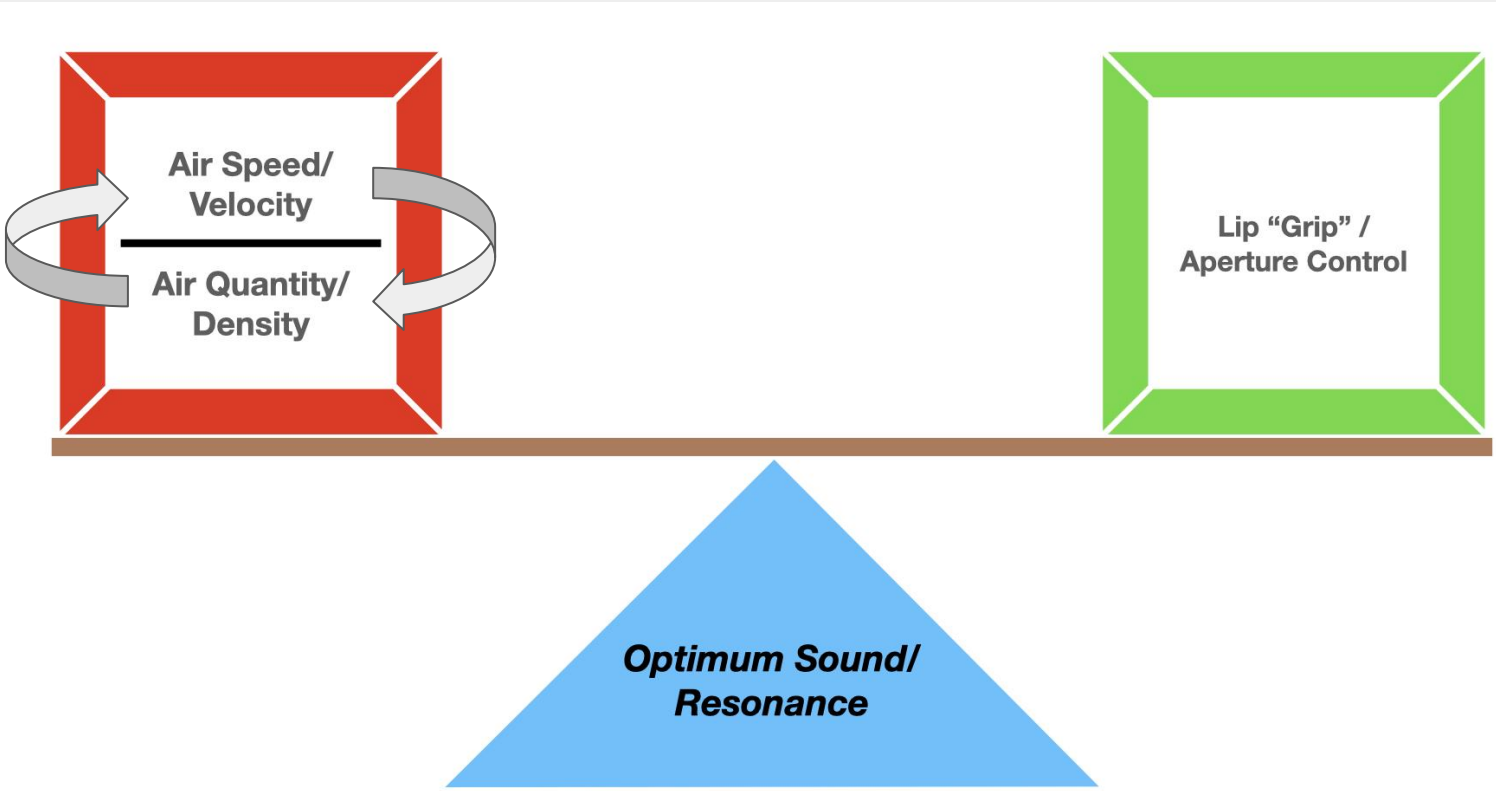
Systematic method to encourage healthy function through targeted exercises progress from singing to playing.

1. Building a Toolbox.
2. Additive Approach.
3. Isolate Elements of the Mechanism.
4. Gain Consistency and Predictability.
5. “*Sing - Buzz - Play*”

The Buzzing Pro v. Cons

i. Pros
   1. Fundamental understanding of “Lip vs Air” Balance.
   2. Develops ease of playing without natural resistance of the instrument.
   3. Students focus on a “non-brass” sound to enhance their “centering.”
   4. Ear Training!!

ii. Cons
   1. Student’s can develop over balance towards “air” and over blow the aperture.
   2. Add artificial “tension/resistance” in their embouchure to get same feeling of when they are playing their horns.
   3. Embouchure is over tight - forthcoming injury.


Air Speed/
Velocity
Air Quantity/
Density
Lip “Grip” /
Aperture Control
Optimum Sound/
Resonance

Desired Results:

1. Engage students in daily routine that encourages thinking as well as playing.
2. Teach effective practice habits and rehearsal strategies to save muscle fatigue in young musicians. (efficiency)
3. Establish healthy foundational ideas as a basis for continued study

    -Product as the result of healthy function, not function as a result of desired product

4. Create synergy amongst muscular elements
5. Balanced muscular antagonism

Broad Findings: Areas of Overlap

1. **Posture** - Encouraging relaxation and addressing hyperfunctional muscle engagement.
2. **Breathing** - Understanding the breath cycle and airflow vs. support.
3. **Shaping the Airway** - Avoiding constriction through the encouragement of an open throat.
4. **Vowels and their impact on Cavitation** - Airspeed vs Air Quantity and the effect on accuracy, tone quality, dynamics and expression.
5. **Consonants and their usefulness** - articulation and releases.

Keeping an Open Throat

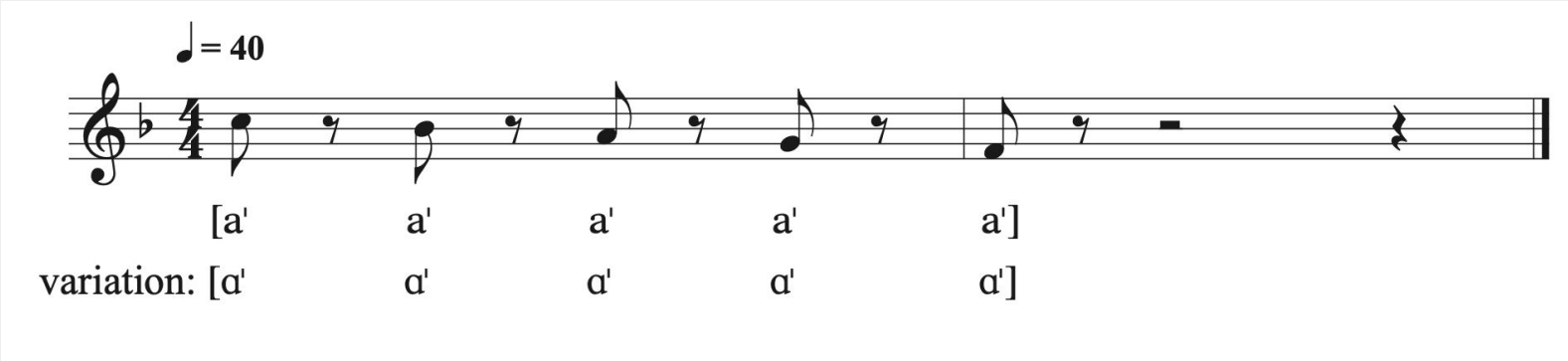
Breath Cycle:

- Inhalation
- Suspension
- Exhalation
- Recovery

The suspension phase aids in maintaining the inspiratory posture by encouraging the following:

1. Open oral cavity: dropped jaw, relaxed tongue
2. Lowered Larynx
3. Open throat/vocal bands
4. Expanded rib cage
5. Depressed diaphragm
6. Relaxation of the abdominal muscles outward

Exercise #1: Vocal Onset Exercise

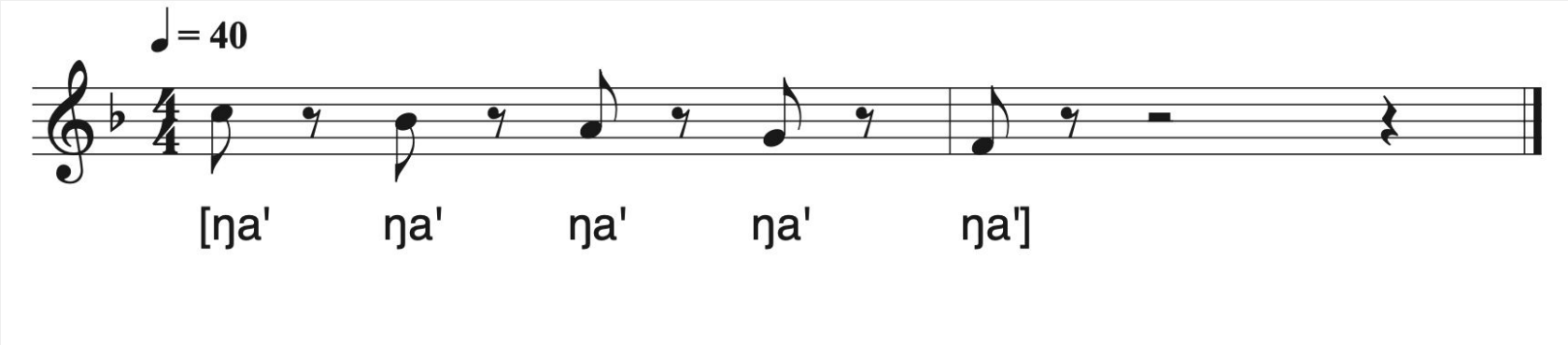


These steps should be followed in order:

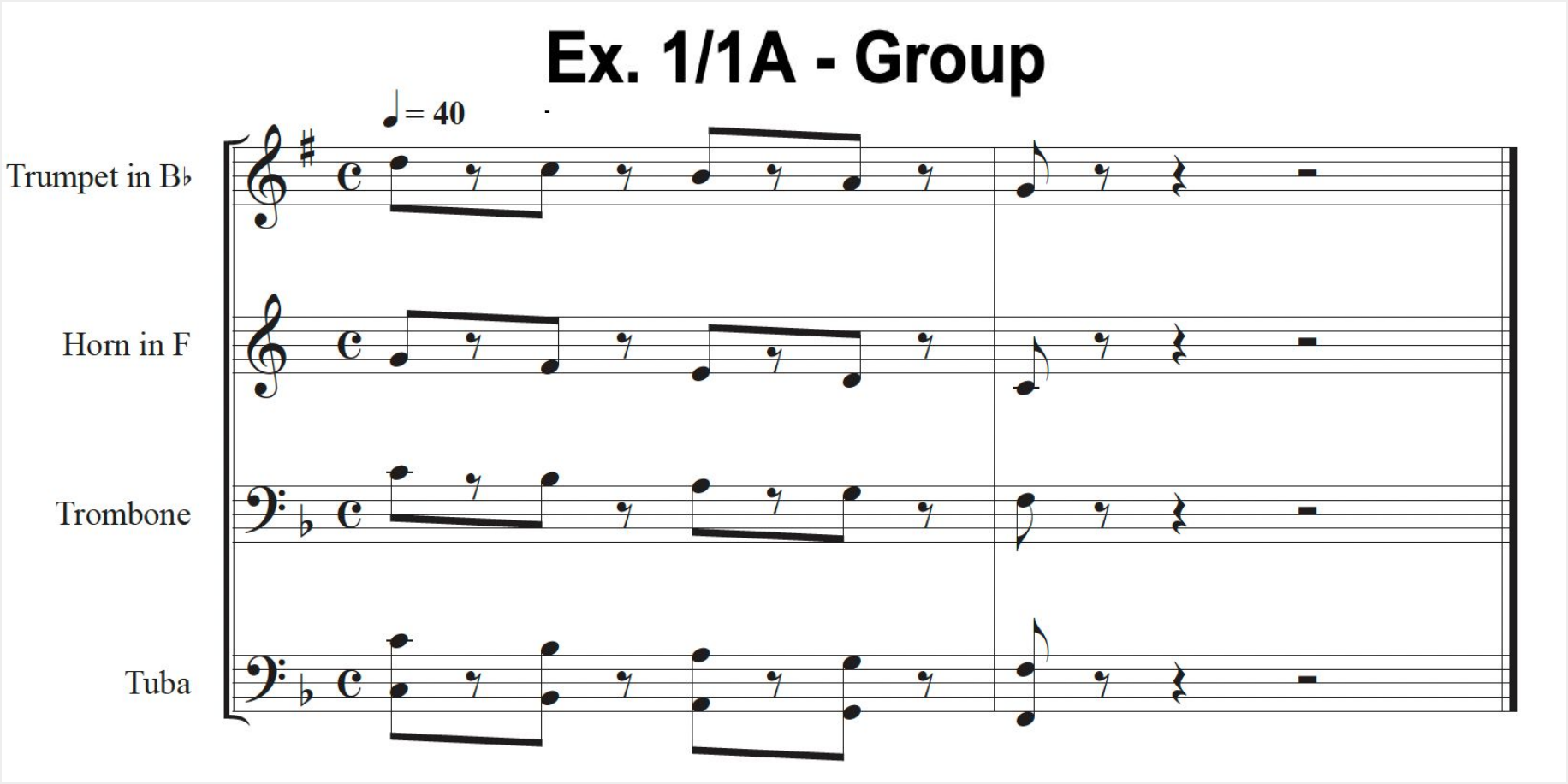
1. Think starting pitch
2. Open the mouth to ready the intake of air.
3. Silent breath
4. Brief Suspension
5. Balanced Onset
6. Balanced Release, leaving the vocal bands open
7. Progress to next pitch repeating each onset and release.

Exercise #1A:

Incorporation of nasal consonants to encourage simultaneous onset of phonation and tone



Ex. 1/1A - Group



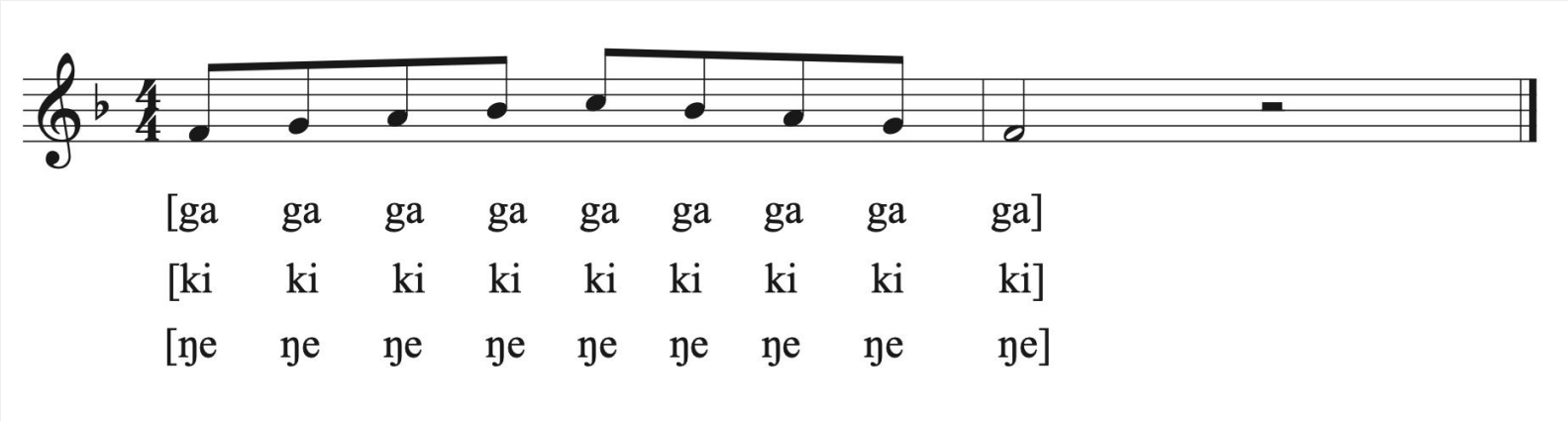
**Feel free to displace any line by an octave as needed*

Laryngeal Positioning and its Effect on Airway Constriction

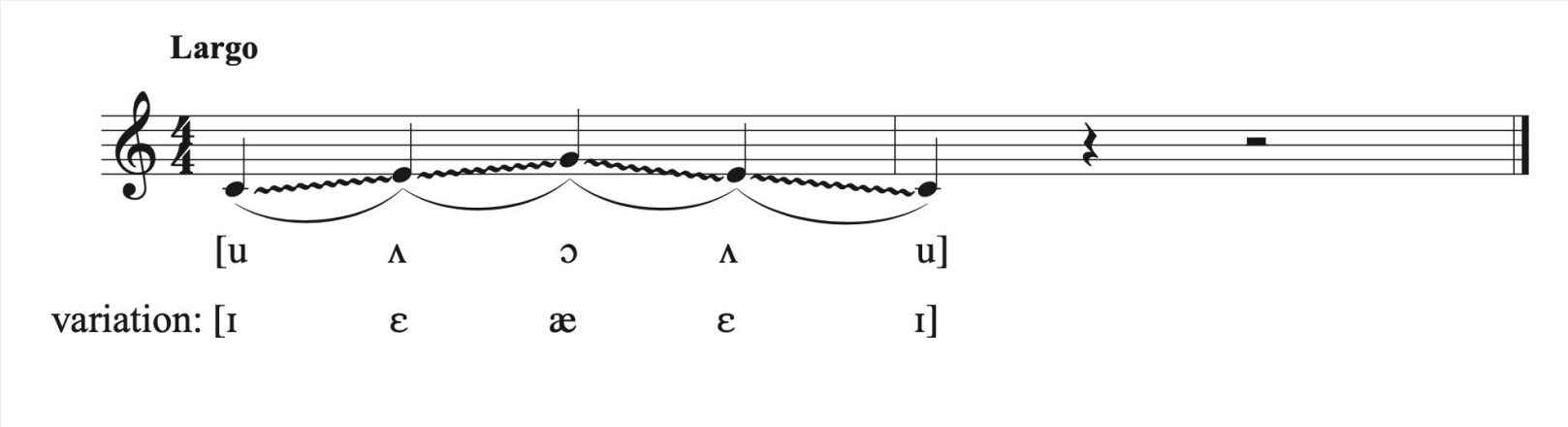
- The Larynx and its attachments
  - Elevators
    - Styloids
    - Temporomandibular Joint
    - Chin
  - Depressors
    - Clavicles
    - Sternum
    - Scapula
- Muscles must engage antagonistically to create balance and stability in laryngeal positioning
- Too high = airway constriction

  Too low = unsustainable widening/elongating of the laryngeal and oral cavity

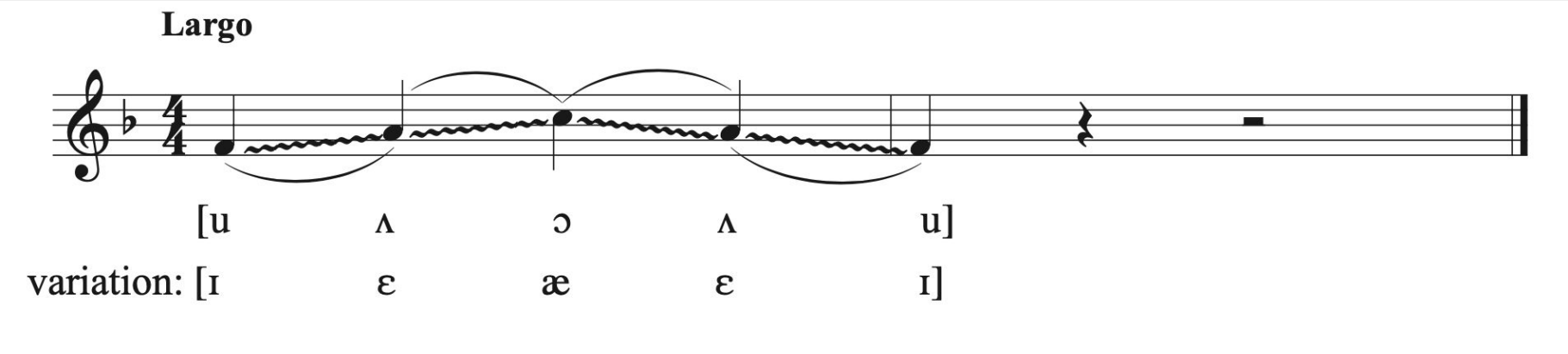
Exercise #2: Exercise to Address Tongue Root Tension



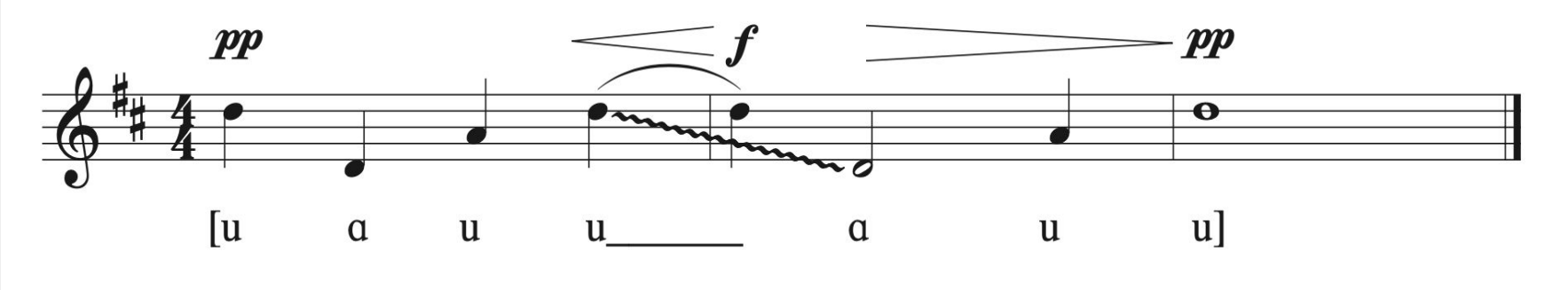
Exercise #3: Exercise to Address Airway Constriction and to Encourage a Comfortably Low Larynx



Ex. 3 - Group



Exercise # 4: Head Voice to Chest Voice Exercise - encourages proper balance of muscular engagement and air pressure.



Vowel Formations and Modifications:

Their impact on the Airway:

Pedagogical Foundation: Cavitation and Air Speed vs. Air Pressure

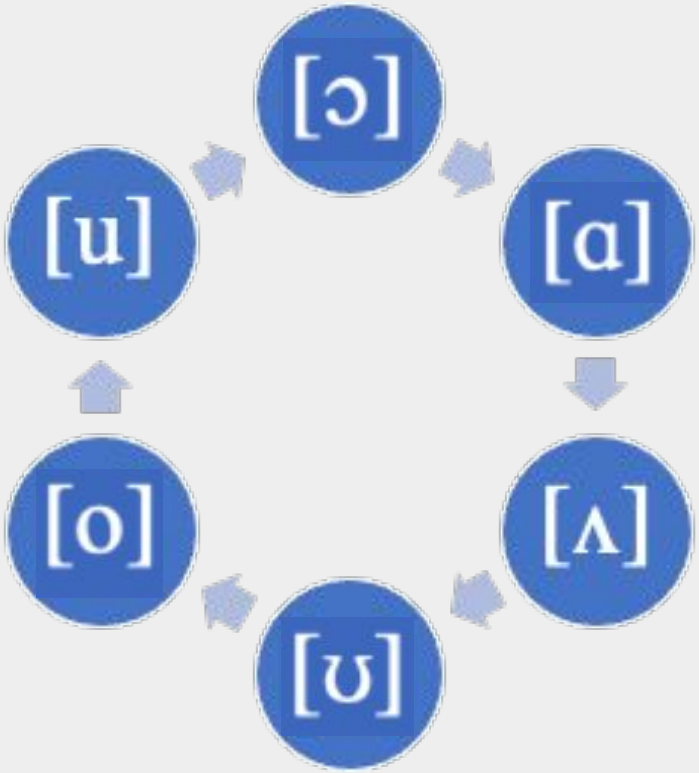
Differences:

1. Brass uses the oral pharynx to control airspeed and quantity by increasing/decreasing cavitation.
2. Singers also use oral pharynx to control airspeed, but also to shape tone into speech patterns.

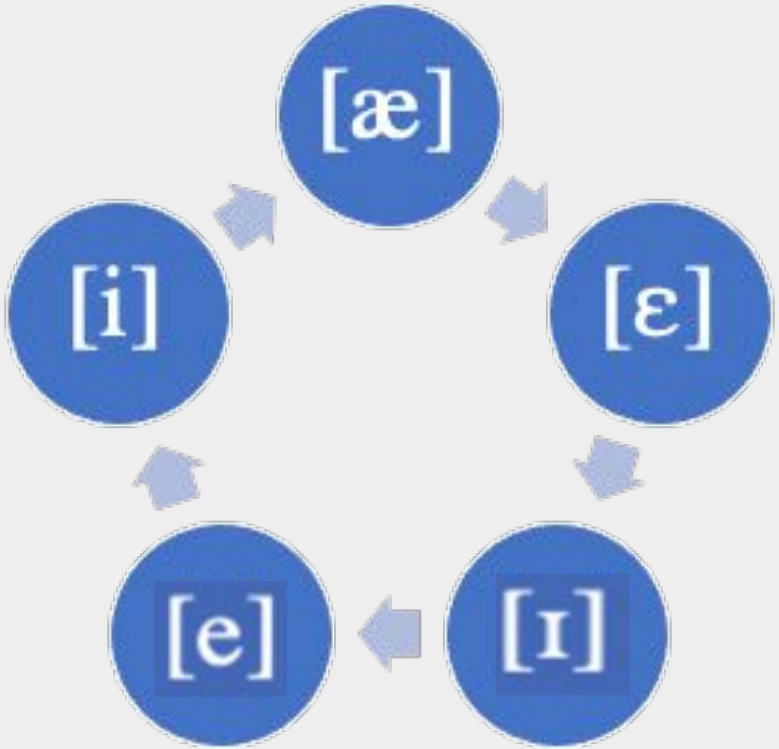
Larger Cavitation = Slower Air = Lower Frequencies

Smaller Cavitation = Faster Air = Higher Frequencies

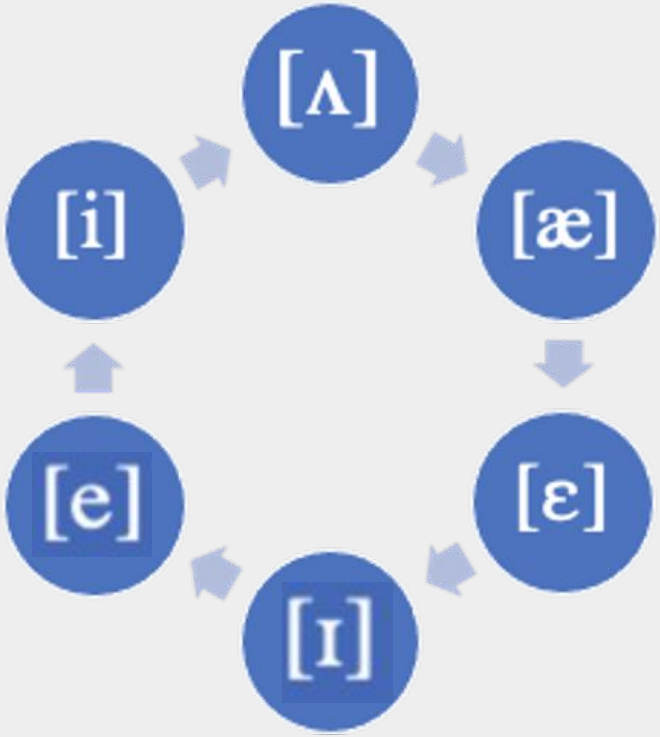
Lower Frequencies:



Higher Frequencies:

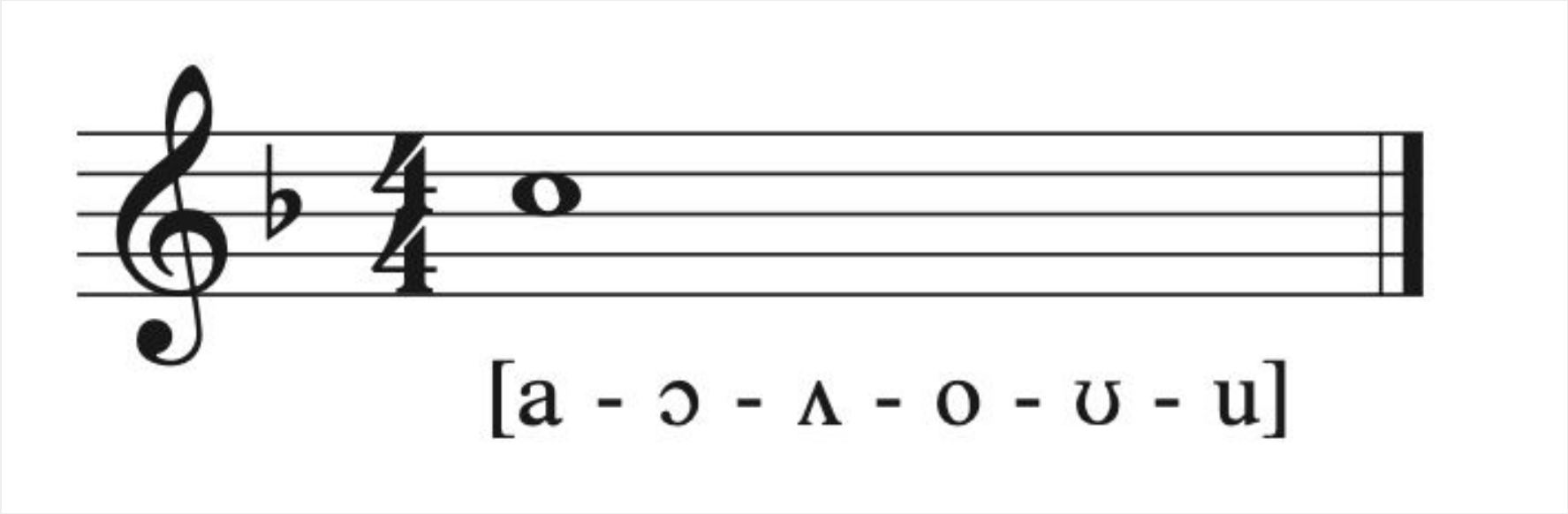


Progression from Mid to High Frequencies:



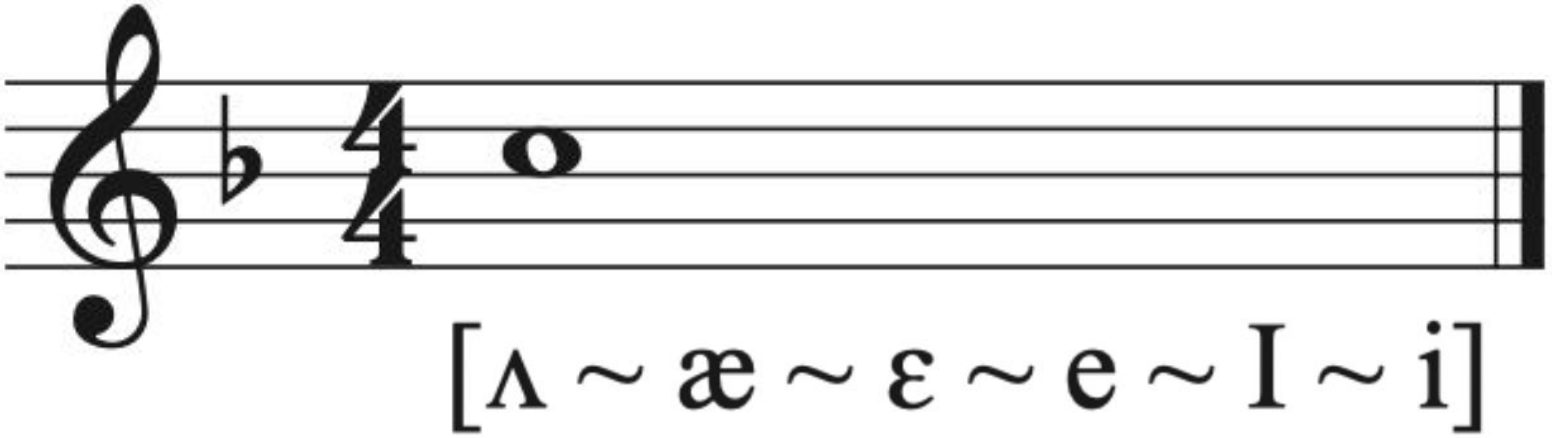
Exercise #5: Larger Cavitation Vowel Progression from Low to Mid Frequencies

**Jaw Position should shift fluidly as tongue moves between the vowels*



Exercise #6: Smaller Cavitation Vowel Progression for Mid to High Frequencies

**Jaw Position should shift fluidly as tongue moves between the vowels*



The Tongue: Encouraging Freedom and Flexibility in Articulation

Classification of Consonants and Picking the “Useful” ones for desired articulatory style.

Two Ways Consonants are Classified:

1. How is the consonant articulated?
    a. Airflow Stops? Continues but Interrupted? Airflow exits nasal cavity? Etc.
2. What interrupts the airflow?
    a. Articulators - lips, teeth, tongue, hard palate.

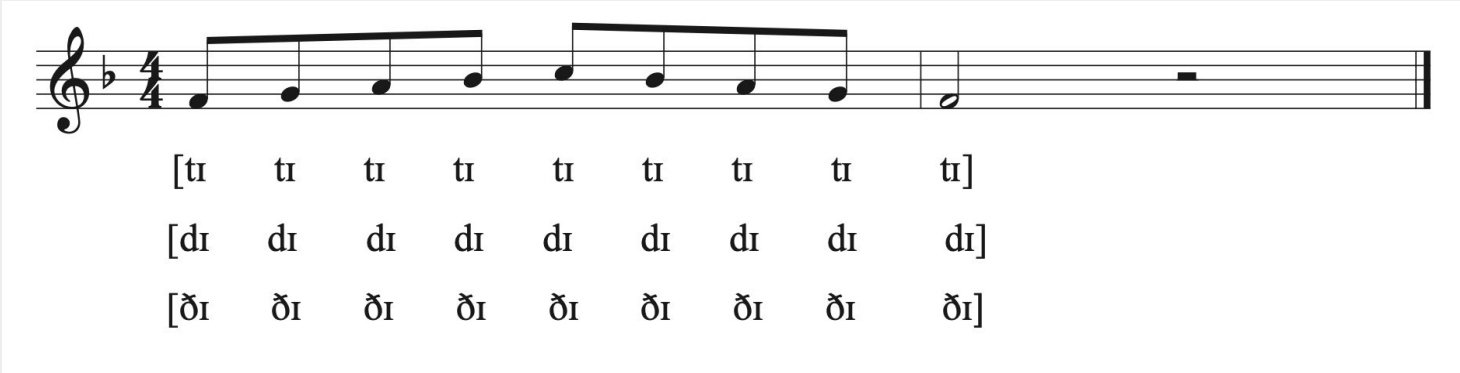
Stop Plosives:

1. Air Stops, Pressure Temporarily Builds, then Suddenly Re-Started
2. Examples: Unvoiced [p], [k], [t]; Voiced [b], [g], [d]
3. Uses: (Philip Farkas, *The Art of Brass Playing, pg 46-47)*
    a. *“Clean, Firm Attack”* = Dentalized [t]
    b. “*Sforzando Attack*” = American [t]
    c. “*Legato Attack*” = [d] Farkas and Arnold Jacob (Song and Wind, 128)
    d. Double/Triple Tonguing, Staccato = [t]/[k]
    e. Double/Triple Tonguing, Legato = [d]/[g]

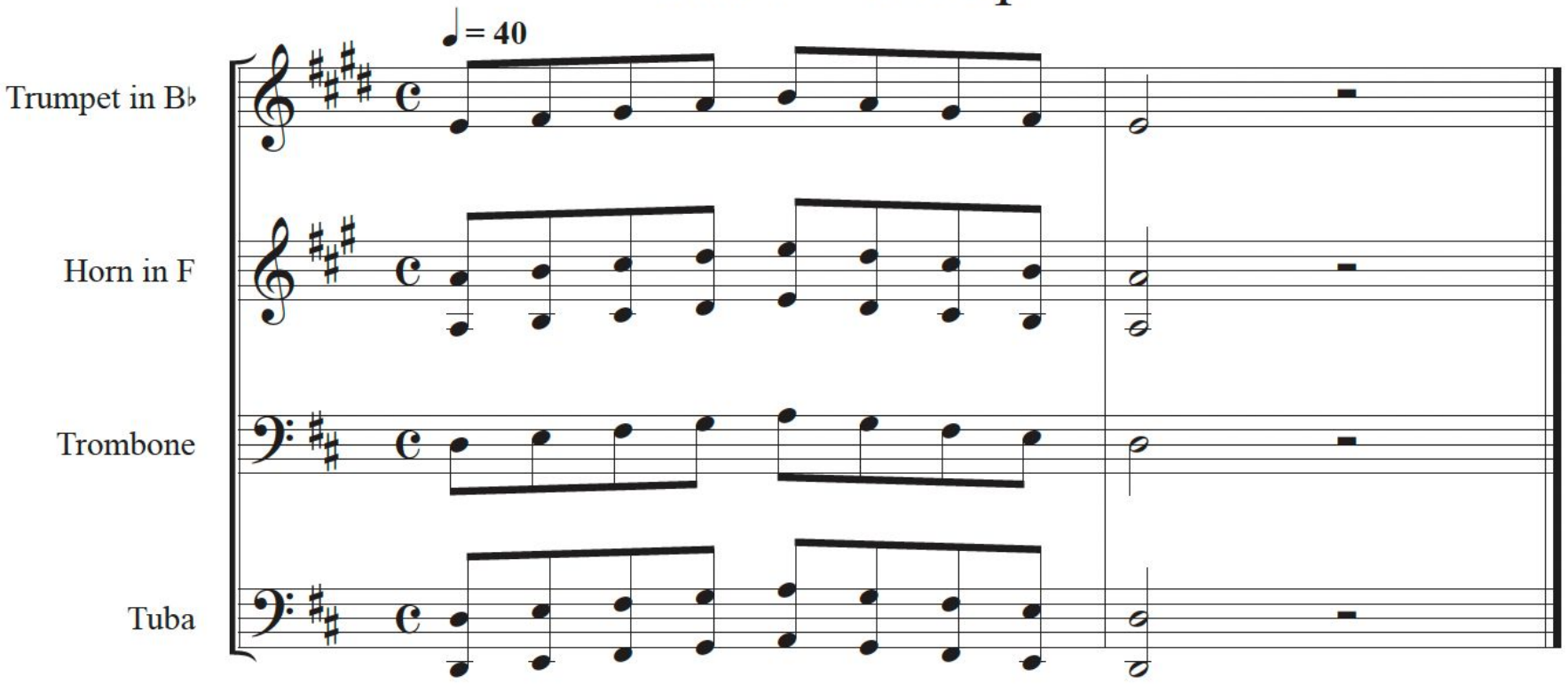
Fricative:

1. Airflow is interrupted by the articulators but not stopped.
2. Somewhat “Noisy”
3. Examples Unvoiced [f], [s], [ʃ], [ð] ; Voiced [v], [z], [ʒ], [ϴ]
4. Possible Uses: (Eli Epstein, *Horn Playing from the Inside Out, pg. 32)*
    a. Lower-Middle Range use [ð] rather than [t]
    b. Classification of articulation by pitch range rather than musical style.
    c. [h] for slurring or onset

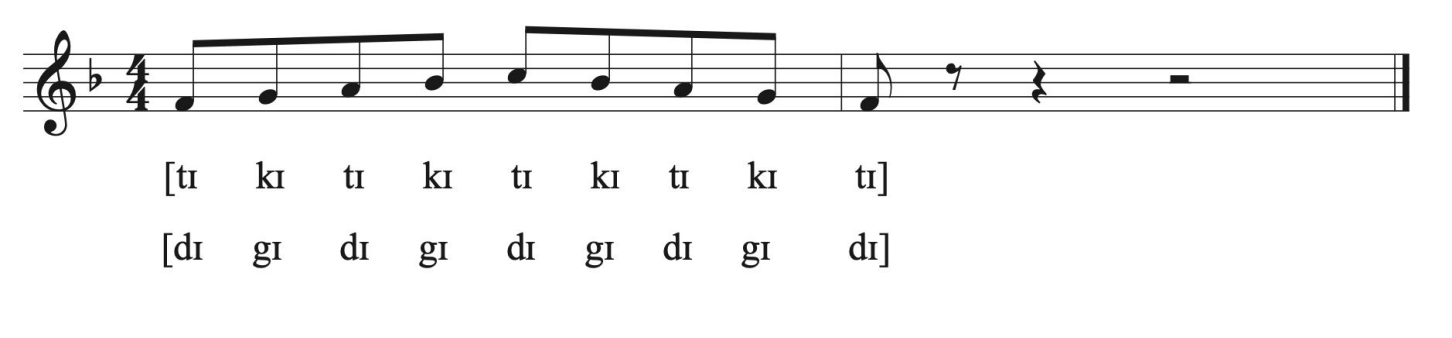
Exercise #7: Exercises for addressing Articulation and Agility of the Tongue (Single Tonguing)



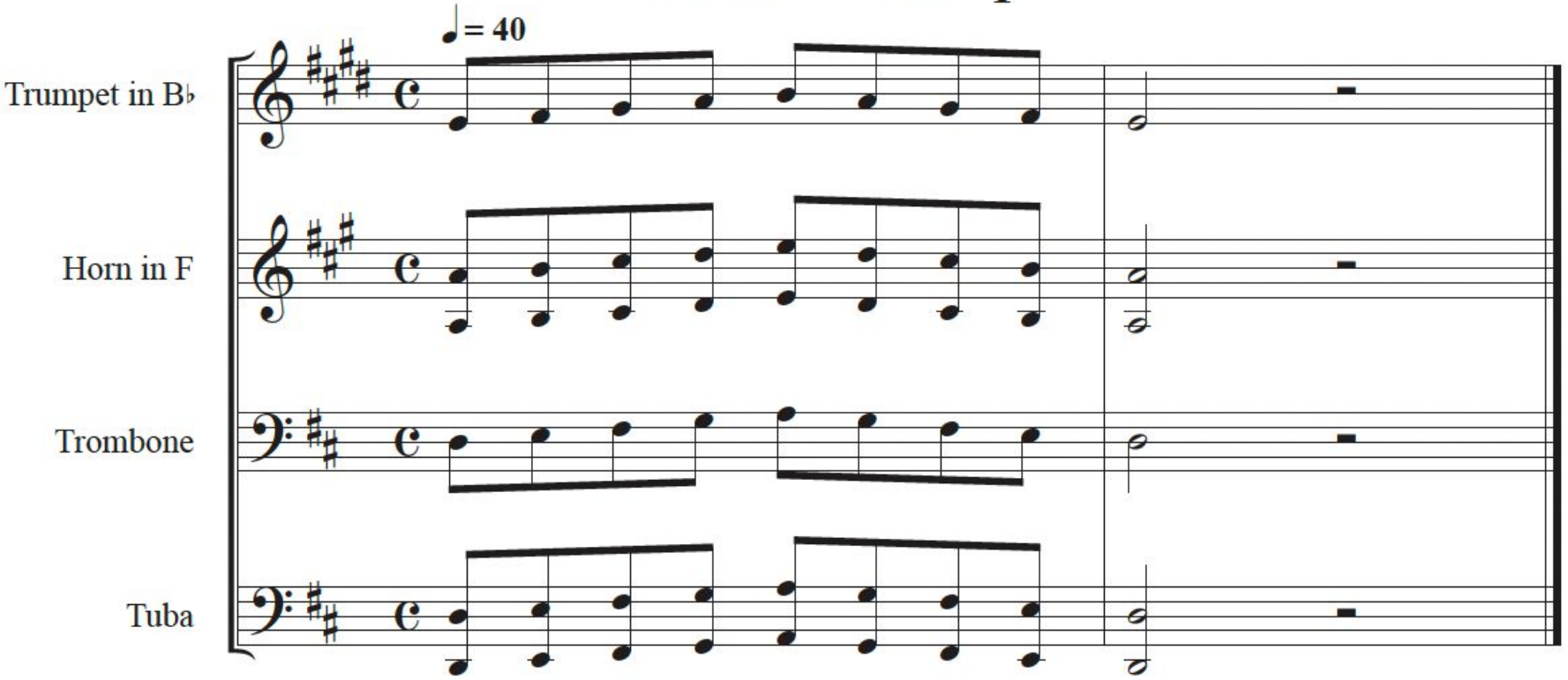
Ex. 7 - Group



Exercise #8: Further Study - Proposed variation for double/triple tonguing



Ex. 8 - Group



Questions??

**If you are interested in being a part of our research test group, please feel free to speak to us after the presentation or scan the QR Code below to send us your information.*