You Are Only As Good As Your Last Breath: Improving Brass Pedagogy

Marc Reed, DMA
Director of Brass Studies
Fort Lewis College
970-247-7329
mareed@fortlewis.edu

Performing Artist/Clinician
The Bach Trumpet Division of the Conn-Selmer Corporation

Sponsored by Fort Lewis College and the Conn-Selmer Corporation

CONN-SELMER, INC.

Dr. Marc Reed is Director of Brass Studies at Fort Lewis College in Durango, Colorado where he teaches applied trumpet and horn, brass ensembles, brass methods, and courses in jazz and popular music. He is the column editor of the International Trumpet Guild Journal's Trumpet in the Wind Band Column and is Co-Principal Trumpet of the San Juan Symphony Orchestra. He has taught on the faculty at Blue Lake Fine Arts Camp as Instructor of Trumpet, and is an artist/clinician for the Bach Trumpet Division of the Conn-Selmer Corporation.

Reed has presented clinics at the 2009 Iowa Bandmasters Association Conference, 2011 Alabama Music Educators Association Conference, and will present at the 2011 Midwest Band and Orchestra Clinic, and the 2012 Florida and Colorado Music Educators Association Conferences. He has published several articles on brass pedagogy and is a contributing member of the ITG Journal's Recording Review and Book Review staffs. He serves annually as a Conference Reporter for the ITG Journal, and he recently collaborated with Charles Chaynes on an article discussing the composer's compositional traits.

Previous faculty appointments include the University of Alabama at Birmingham as Assistant Professor of Trumpet and Assistant Director of Bands, Waldorf College as Assistant Professor of Music and Director of Instrumental Activities, Drake University as Artist Teacher of Trumpet, and The University of North Texas as Doctoral Trumpet Teaching Fellow. He was also the Applied Trumpet Instructor at The Colony High School, Griffin Middle School, and Lakeview Middle School in the Lewisville, Texas Independent School District.

Reed holds a Doctor of Musical Arts Degree in Trumpet Performance and Brass Pedagogy from the University of North Texas, Master of Music Degree in Trumpet Performance from The University of North Texas, and Bachelor's Degrees in both Music Education and Trumpet Performance, with a jazz emphasis, from Drake University. Reed studied trumpet with Keith Johnson, John Holt, Richard Giangiulio, and Andrew Classen. He was a three-year member of the North Texas Wind Symphony, directed by Eugene Corporon. He studied wind conducting with Eugene Corporon, Dennis Fisher, and Sue Samuels. Reed can be heard on over a dozen recordings on the DJ Music, Mark, Klavier, and GIA Windworks labels.

Improving Brass Pedagogy

Issues and Myths

- Phrases to avoid
  - Breath from the diaphragm
  - Support the wind
  - Keep a tight abdomen
  - Push the wind
  - Breathe through your nose
- Bad embouchure habits
  - Stretching the lips
  - Smiling while playing
  - Puffing the cheeks
- Syllable shifting
  - Change for different registers
    - "ah-ee" for ascending
- Avoid thinking about pivoting
  - A natural pivot does occur
  - A conscious pivot is distracting

The Breath

- Why is teaching the breath so important?
  - Air is to the wind player as gas is to an automobile
  - We use only 11% of our total lung capacity for daily activities
  - Amount of lung capacity is determined by various factors
    - Age
    - Height
    - Sex
  - See chart that follows

Lung Capacities

	20	25	30	35	40	45	50	55	60	65	70	75	80
4'	1.8	1.8	1.7	1.7	1.6	1.5	1.5	1.4	1.3	1.2	1.1	1.0	0.9
4' 1"	1.9	1.8	1.8	1.7	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.0
4' 2"	2.0	1.9	1.9	1.8	1.7	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0
4' 3"	2.1	2.0	1.9	1.9	1.8	1.7	1.6	1.5	1.5	1.4	1.3	1.1	1.0
4' 4"	2.1	2.1	2.0	1.9	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1
4' 5"	2.2	2.2	2.1	2.0	1.9	1.9	1.8	1.7	1.6	1.5	1.4	1.2	1.1
4' 6"	2.3	2.2	2.2	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2
4' 7"	2.4	2.3	2.3	2.2	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.3	1.2
4' 8"	2.5	2.4	2.3	2.3	2.2	2.1	2.0	1.9	1.8	1.6	1.5	1.4	1.2
4' 9"	2.6	2.5	2.4	2.3	2.2	2.1	2.0	1.9	1.8	1.7	1.6	1.4	1.3
4' 10"	2.7	2.6	2.5	2.4	2.3	2.2	2.1	2.0	1.9	1.8	1.6	1.5	1.3
4' 11"	2.8	2.7	2.6	2.5	2.4	2.3	2.2	2.1	1.9	1.8	1.7	1.5	1.4
5'	2.8	2.8	2.7	2.6	2.5	2.4	2.3	2.1	2.0	1.9	1.7	1.6	1.4
5' 1"	2.9	2.9	2.8	2.7	2.6	2.5	2.3	2.2	2.1	1.9	1.8	1.6	1.5
5' 2"	3.0	3.0	2.9	2.8	2.7	2.5	2.4	2.3	2.2	2.0	1.9	1.7	1.5
5' 3"	3.1	3.1	3.0	2.9	2.7	2.6	2.5	2.4	2.2	2.1	1.9	1.7	1.6
5' 4"	3.2	3.2	3.1	2.9	2.8	2.7	2.6	2.4	2.3	2.1	2.0	1.8	1.6
5' 5"	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.5	2.4	2.2	2.0	1.9	1.7
5' 6"	3.4	3.4	3.2	3.1	3.0	2.9	2.7	2.6	2.4	2.3	2.1	1.9	1.7
5' 7"	3.6	3.5	3.3	3.2	3.1	3.0	2.8	2.7	2.5	2.3	2.2	2.0	1.8
5' 8"	3.7	3.6	3.4	3.3	3.2	3.1	2.9	2.8	2.6	2.4	2.2	2.0	1.8
5' 9"	3.8	3.7	3.5	3.4	3.3	3.1	3.0	2.8	2.7	2.5	2.3	2.1	1.9
5' 10"	3.9	3.8	3.7	3.5	3.4	3.2	3.1	2.9	2.7	2.6	2.4	2.2	1.9
5' 11"	4.0	3.9	3.8	3.6	3.5	3.3	3.2	3.0	2.8	2.6	2.4	2.2	2.0
6'	4.1	4.0	3.9	3.7	3.6	3.4	3.3	3.1	2.9	2.7	2.5	2.3	2.1
6' 1"	4.2	4.1	4.0	3.8	3.7	3.5	3.4	3.2	3.0	2.8	2.6	2.3	2.1
6' 2"	4.3	4.2	4.1	3.9	3.8	3.6	3.4	3.3	3.1	2.9	2.6	2.4	2.2
6' 3"	4.5	4.3	4.2	4.0	3.9	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.2
6' 4"	4.6	4.4	4.3	4.2	4.0	3.8	3.6	3.4	3.2	3.0	2.8	2.5	2.3
6' 5"	4.7	4.6	4.4	4.3	4.1	3.9	3.7	3.5	3.3	3.1	2.9	2.6	2.3
6' 6"	4.8	4.7	4.5	4.4	4.2	4.0	3.8	3.6	3.4	3.2	2.9	2.7	2.4
6' 7"	4.9	4.8	4.7	4.5	4.3	4.1	3.9	3.7	3.5	3.3	3.0	2.7	2.5
6' 8"	5.1	4.9	4.8	4.6	4.4	4.2	4.0	3.8	3.6	3.3	3.1	2.8	2.5
6' 9"	5.2	5.0	4.9	4.7	4.5	4.3	4.1	3.9	3.7	3.4	3.2	2.9	2.6
6' 10"	5.3	5.2	5.0	4.8	4.6	4.4	4.2	4.0	3.8	3.5	3.2	3.0	2.7
6' 11"	5.5	5.3	5.1	5.0	4.8	4.6	4.3	4.1	3.9	3.6	3.3	3.0	2.7
7"	5.6	5.4	5.3	5.1	4.9	4.7	4.4	4.2	3.9	3.7	3.4	3.1	2.8
7' 1"	5.7	5.6	5.4	5.2	5.0	4.8	4.5	4.3	4.0	3.8	3.5	3.2	2.9
7' 2"	5.9	5.7	5.5	5.3	5.1	4.9	4.7	4.4	4.1	3.9	3.6	3.3	2.9
7' 3"	6.0	5.8	5.6	5.4	5.2	5.0	4.8	4.5	4.2	3.9	3.6	3.3	3.0
7' 4"	6.1	6.0	5.8	5.6	5.4	5.1	4.9	4.6	4.3	4.0	3.7	3.4	3.1
7' 5"	6.3	6.1	5.9	5.7	5.5	5.2	5.0	4.7	4.4	4.1	3.8	3.5	3.1

*Estimated vital capacities for **females** in liters. Follow height (in left column) and age (at top, in five year increments). Based on a formula from the American Thoracic Society*

	20	25	30	35	40	45	50	55	60	65	70	75	80
4'	2.1	2.1	2.0	2.0	1.9	1.8	1.8	1.7	1.6	1.5	1.4	1.3	1.2
4' 1"	2.2	2.2	2.1	2.1	2.0	1.9	1.8	1.8	1.7	1.6	1.5	1.4	1.3
4' 2"	2.3	2.3	2.2	2.1	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3
4'3"	2.4	2.4	2.3	2.2	2.1	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4
4' 4"	2.5	2.4	2.4	2.3	2.2	2.2	2.1	2.0	1.9	1.8	1.7	1.6	1.4
4' 5"	2.6	2.5	2.5	2.4	2.3	2.2	2.1	2.1	2.0	1.8	1.7	1.5	1.4
4' 6"	2.7	2.6	2.6	2.5	2.4	2.3	2.2	2.1	2.0	1.9	1.8	1.7	1.5
4' 7"	2.8	2.7	2.7	2.6	2.5	2.4	2.3	2.2	2.1	2.0	1.9	1.7	1.6
4' 8"	2.9	2.8	2.8	2.7	2.6	2.5	2.4	2.3	2.2	2.1	1.9	1.8	1.7
4' 9"	3.0	2.9	2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.1	2.0	1.9	1.7
4' 10"	3.1	3.0	3.0	2.9	2.8	2.7	2.6	2.5	2.3	2.2	2.1	1.9	1.8
4' 11"	3.2	3.1	3.1	3.0	2.9	2.8	2.7	2.5	2.4	2.3	2.1	2.0	1.8
5'	3.3	3.3	3.2	3.1	3.0	2.9	2.8	2.6	2.5	2.4	2.2	2.1	1.9
5' 1"	3.4	3.4	3.3	3.2	3.1	3.0	2.8	2.7	2.6	2.4	2.3	2.1	2.0
5' 2"	3.6	3.5	3.4	3.3	3.2	3.1	2.9	2.8	2.7	2.5	2.4	2.2	2.0
5' 3"	3.7	3.6	3.5	3.4	3.3	3.2	3.0	2.9	2.8	2.6	2.4	2.3	2.1
5' 4"	3.8	3.7	3.6	3.5	3.4	3.3	3.1	3.0	2.8	2.7	2.5	2.4	2.2
5' 5"	3.9	3.8	3.7	3.6	3.5	3.4	3.2	3.1	2.9	2.8	2.6	2.4	2.2
5' 6"	4.0	3.9	3.8	3.7	3.6	3.5	3.3	3.2	3.0	2.9	2.7	2.5	2.3
5' 7"	4.2	4.1	4.0	3.8	3.7	3.6	3.4	3.3	3.1	2.9	2.8	2.6	2.4
5' 8"	4.3	4.2	4.1	3.9	3.8	3.7	3.5	3.4	3.2	3.0	2.9	2.7	2.5
5' 9"	4.4	4.3	4.2	4.1	3.9	3.8	3.6	3.5	3.3	3.1	2.9	2.7	2.5
5' 10"	4.5	4.4	4.3	4.2	4.0	3.9	3.7	3.6	3.4	3.2	3.0	2.8	2.6
5' 11"	4.7	4.6	4.4	4.3	4.2	4.0	3.9	3.7	3.5	3.3	3.1	2.9	2.7
6'	4.8	4.7	4.6	4.4	4.3	4.1	4.0	3.8	3.6	3.4	3.2	3.0	2.8
6' 1"	4.9	4.8	4.7	4.6	4.4	4.2	4.1	3.9	3.7	3.5	3.3	3.1	2.8
6' 2"	5.1	5.0	4.8	4.7	4.5	4.4	4.2	4.0	3.8	3.6	3.4	3.1	2.9
6' 3"	5.2	5.1	4.9	4.8	4.6	4.5	4.3	4.1	3.9	3.7	3.5	3.2	3.0
6' 4"	5.3	5.2	5.1	4.9	4.8	4.6	4.4	4.2	4.0	3.8	3.6	3.3	3.1
6' 5"	5.5	5.4	5.2	5.1	4.9	4.7	4.5	4.3	4.1	3.9	3.7	3.4	3.1
6' 6"	5.6	5.5	5.4	5.2	5.0	4.8	4.6	4.4	4.2	4.0	3.8	3.5	3.2
6' 7"	5.8	5.6	5.5	5.3	5.2	5.0	4.8	4.6	4.3	4.1	3.8	3.6	3.3
6' 8"	5.9	5.8	5.6	5.5	5.3	5.1	4.9	4.7	4.4	4.2	3.9	3.7	3.4
6' 9"	6.1	5.9	5.8	5.6	5.4	5.2	5.0	4.8	4.6	4.3	4.0	3.8	3.5
6' 10"	6.2	6.1	5.9	5.7	5.6	5.4	5.1	4.9	4.7	4.4	4.1	3.9	3.6
6' 11"	6.4	6.2	6.1	5.9	5.7	5.5	5.3	5.0	4.8	4.5	4.2	4.0	3.7
7'	6.5	6.4	6.2	6.0	5.8	5.6	5.4	5.2	4.9	4.6	4.4	4.1	3.7
7' 1"	6.7	6.5	6.4	6.2	6.0	5.8	5.5	5.3	5.0	4.7	4.5	4.2	3.8
7' 2"	6.8	6.7	6.5	6.3	6.1	5.9	5.7	5.4	5.1	4.9	4.6	4.3	3.9
7' 3"	7.0	6.8	6.7	6.5	6.3	6.0	5.8	5.5	5.3	5.0	4.7	4.4	4.0
7' 4"	7.2	7.0	6.8	6.6	6.4	6.2	5.9	5.7	5.4	5.1	4.8	4.5	4.1
7' 5"	7.3	7.2	7.0	6.8	6.5	6.3	6.1	5.8	5.5	5.2	4.9	4.6	4.2
7' 6"	7.5	7.3	7.1	6.9	6.7	6.4	6.2	5.9	5.6	5.3	5.0	4.7	4.3

*Estimated vital capacities for **males** in liters. Follow height (in left column) and age (at top, in five year increments). Based on a formula from the American Thoracic Society*

Excerpted from *Arnold Jacobs: Song and Wind*, by Brian Frederiksen. p. 114-115. Used by permission.

Breathing Goals

- A free-flowing and relaxed breath is most desirable
  - Tension is the brass player's worse enemy
- Two basic syllables
  - "Oh" for inhalation
  - "Toh" for exhalation
    - Stress a warm breath
    - A good breath has a yawn-like quality
- Circular motion
  - Conceptualize as one circular motion
  - Clock imagery
    - Start at twelve and inhale as you move counterclockwise
    - Begin exhaling at six and continue back towards twelve
- Student struggles?
  - Wind patterns may help

Breathing Checklist

- Breathe from the bottom up
    - RH on stomach, LH on rib cage
        - RH moves first, LH moves last
- Breath across tongue, not roof of mouth
    - Strive to make cold spot on back of the throat
- Tension can come from
    - Tightness in chest
    - Constriction in throat
    - Arching of the tongue
    - Teeth being too close together
- Shoulders should remain neutral
- No unnecessary movement
    - This is wasted energy
- Air is released, not forced

Breathing Exercises

- In/out for various counts
    - 4/4
    - 2/4
    - 1/4
    - 1/4
    - 1/etc…
- Paper in front of face
    - 1) Hold paper close to face
    - 2) Blow paper with steady airstream
    - 3) Keep paper elevated for as long as possible
    - 4) Start close to face and gradually move further away
- Paper on binder/stand
    - 1) Adjust stand to height of student's face
    - 2) Paper on binder; half on/off
    - 3) Blow paper off of the stand
        - Careful not to force
- Air through the instrument
    - Seal around mouthpiece or leadpipe
    - Shows how easily air will move through the instrument
    - Reinforce warm, moist air
- Fog
    - Hand
    - Bell of instrument
    - Mirror
- Pinwheel
- Tube
- Bag

Other Advice

- Breathe in-style and in-tempo
    - Slower for adagio
    - Faster for allegro
- Internal breaths are just as important as the initial breath
    - **You Are Only As Good As Your Last Breath**
- Breathing too much?
    - Can cause hyperventilation
    - Causes tension by adding good air on top of good air
- Try to expel most of the air in lungs before breathing again
- Exhale before breathing; this ensures a fresh, full breath
- Work on breathing exercises at the onset of every practice session or rehearsal

Singing

- Why sing?
    - Instruments emulate voice
    - Clear indicator of what is in the mind
    - Sing as instrument sounds
        - Full
        - With the desired articulation
            - **Toh, toh, toh…**
            - **Tah, tah, tah…**
    - Gets horn off face
- The mind's instrument
    - Comprised of most beautiful sounds one has ever heard
    - Goal setter
    - Comes from?
        - Teachers
        - Colleagues
        - Live performances
        - Student's own playing history
        - Recordings
    - Helps to develop relative pitch

Buzzing

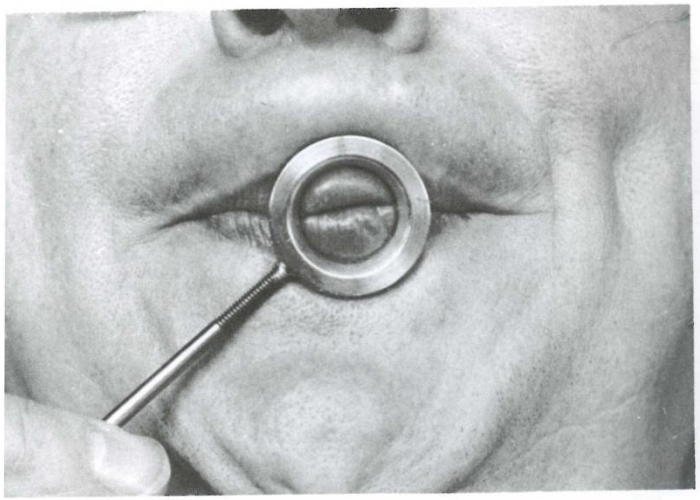
- Is the foundation of the sound
    - Brass players sing from their lips
- The instrument is amplification
- Eliminates instrument
    - No resistance means that air depletes faster.
        - Thus, full breaths are a must
    - Frees performer from inborn pitch tendencies of instrument
    - Allows focus on sound
        - No fingers and/or slides
- Substitute for instrument practice
- Enhanced by buzzing devices (all retail under $20. Windsong Press Limited carries a wide array for buzzing and breathing devices. www.windsongpress.com)
    - B.E.R.P. (Buzz extension resistance piece)
    - Buzz aid
    - Buzz clip
    - Embouchure visualizer

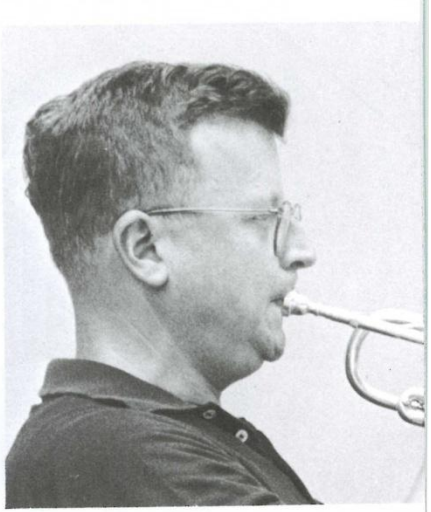
Mouthpiece Buzzing Tunes

- *Mary Had a Little Lamb*
- *Twinkle, Twinkle, Little Star*
- *Yankee Doodle*
- *Silent Night*
- *Happy Birthday*
- *Hot Cross Buns*
- *Camptown Races*
- *Amazing Grace*
- *Danny Boy*
- *Aura Lee (Love Me Tender)*
- *O Christmas Tree*
- *God Bless America*
- *My Country 'Tis of Thee*
- *America*
- *Star Spangled Banner*
- *Ode to Joy*
- *Work Song*
- *Joy to the World*
- *I've Been Working on the Railroad*
- *I'm a Little Tea Pot*
- *Somewhere Over the Rainbow*
- *Auld Lang Syne*
- *'Tis a Gift to be Simple*
- *Away in a Manger*
- *Hail to the Chief*
- *Greensleves*
- *Rudolph The Red Nosed Reindeer*
- *Taps*
- *Take Me Out to the Ballgame*
- *London Bridge is Falling Down*

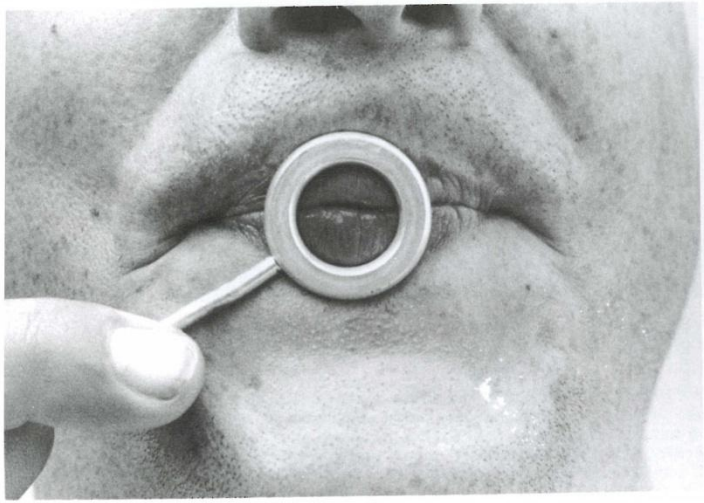
Embouchure

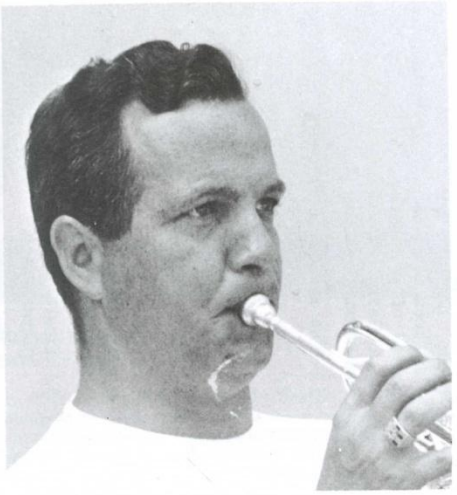
- Problems
  - Most are caused by deficient airflow
- Function
  - Centers pitch
  - Creates timbre
  - Responds to air column
- Is tissue
- A good embouchure
  - Is supple and responsive
  - Is strong but not rigid
    - Think palates, not Mr. Olympia
  - Is initiated by air
- Is different for each person, yet fine ones often share similar traits
  - Firm corners
  - Flat chin (v-shape)
  - Slight pucker
    - Important not to stretch the lips outward or smile
  - Lack of air pockets (anti Gillespie)
  - Similar instrument angles
  - Minimum pressure
    - The idea of using no pressure is false
- Photographic examples from the 1959-1960 Chicago Symphony Orchestra Brass Section
  - Excerpted from *The Art of Brass Playing*, by Philip Farkas. p. 25-31. Used by permission.

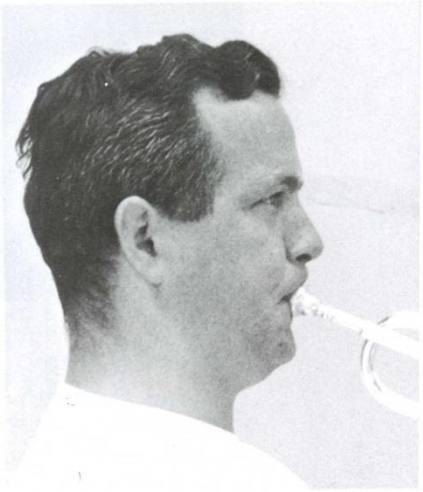




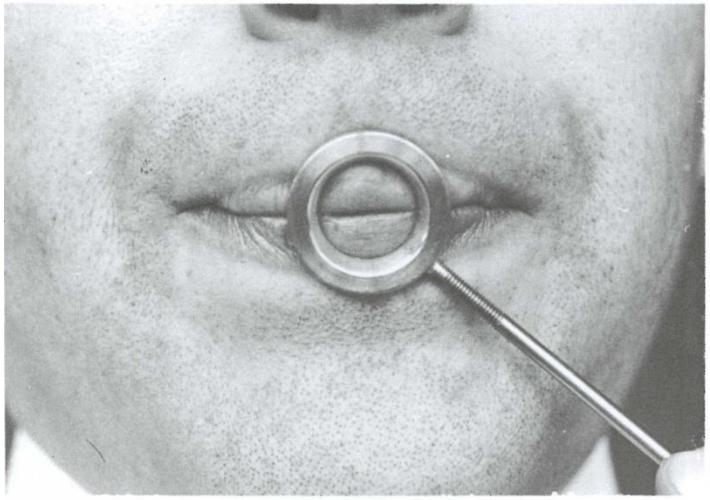
Adolph Herseth



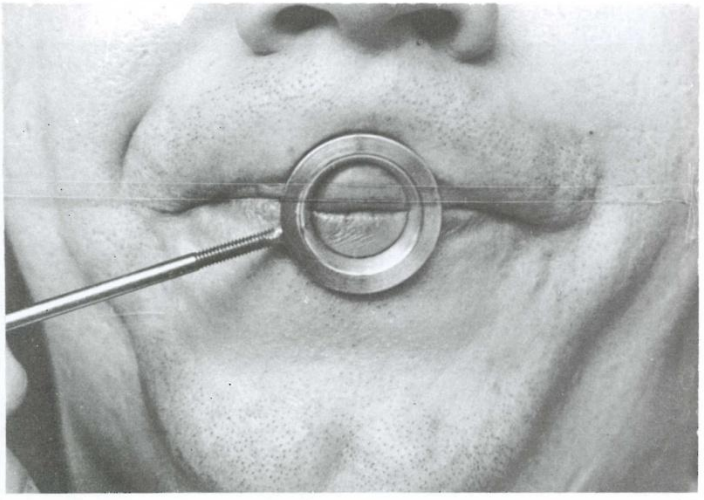


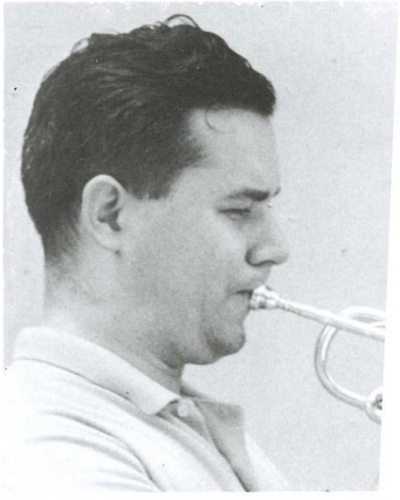


Rudolph Nashan

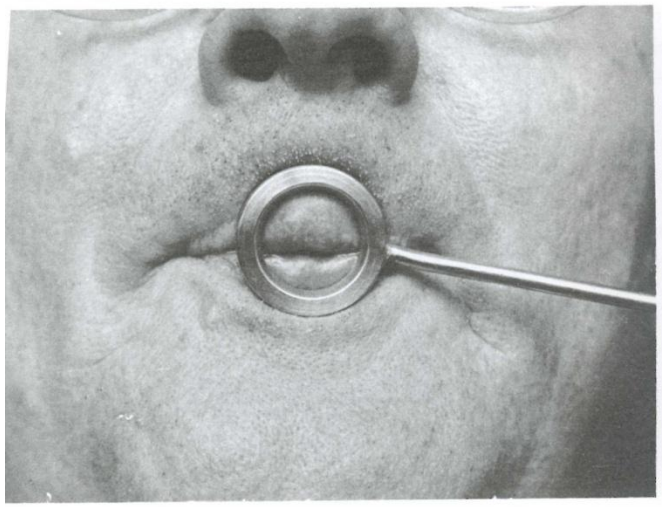


Frank Kaderabek

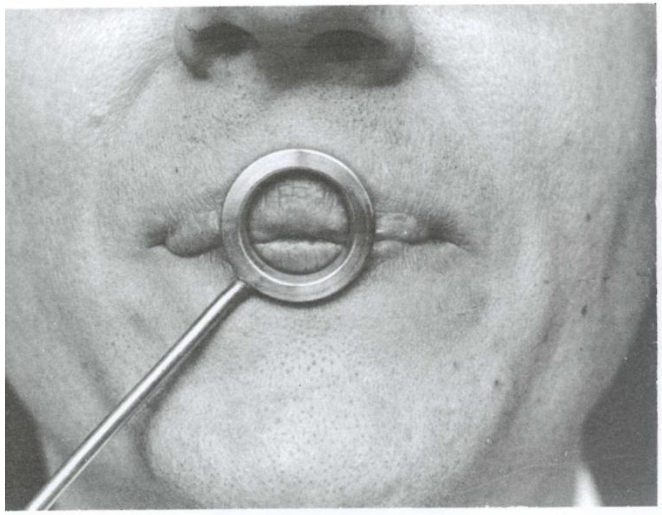




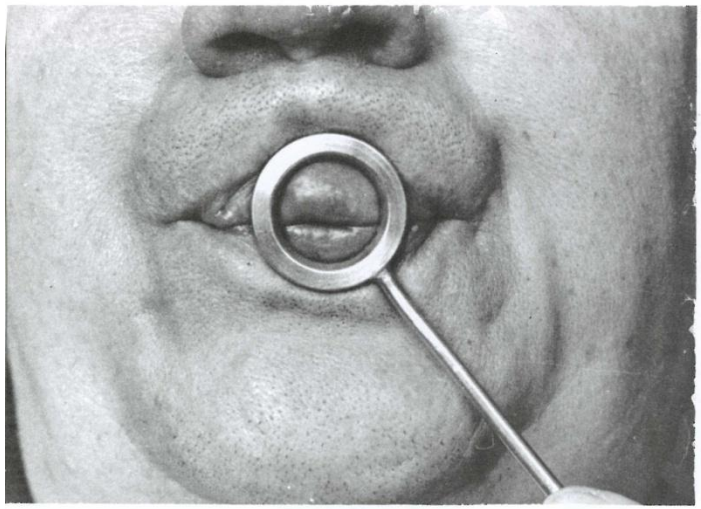
Vincent Cichowicz



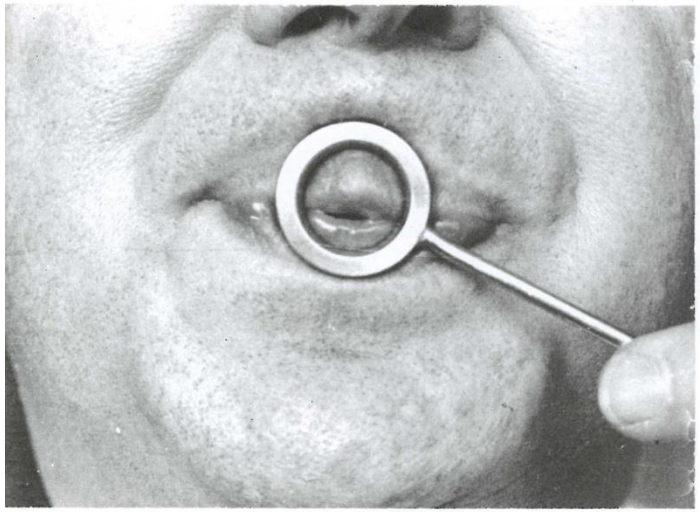
Joseph Mourek



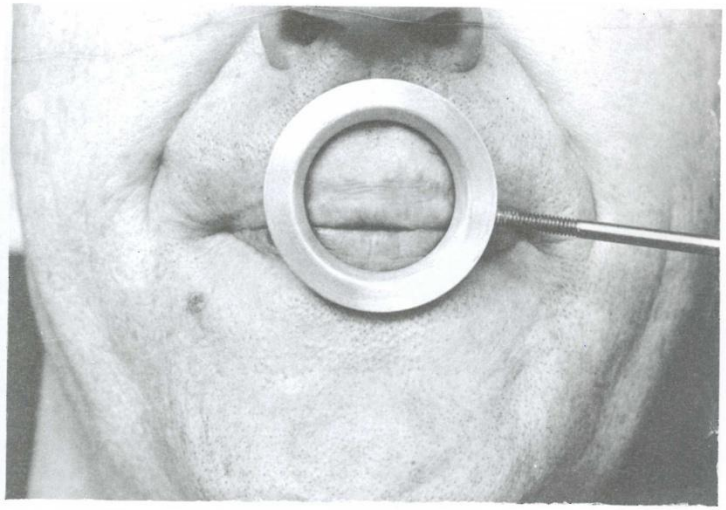
Wayne Barrington



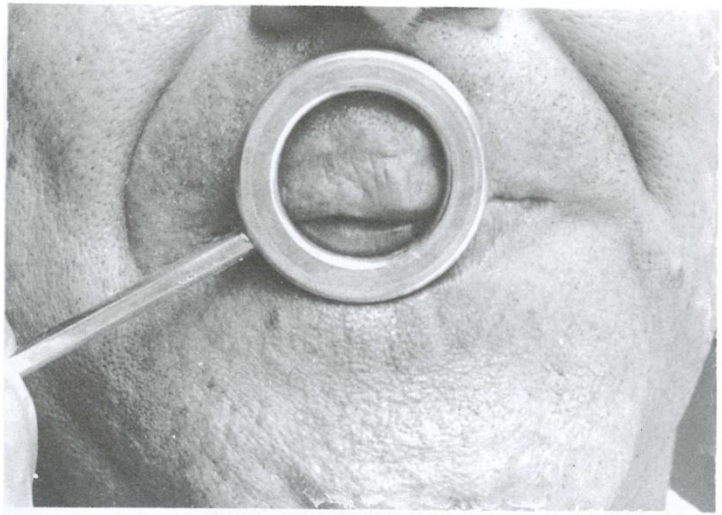
Clyde Wedgwood



Philip Farkas



Robert Lambert



Frank Crisafulli

Beginner Mouthpiece Placement

- Mouthpiece should sit in the center of the lips
    - There should be equal top vs. bottom lip (higher for horn)
    - Will shift to fit each individual over time
- Lip function
    - Top lip is the buzzer
    - Bottom lip buzzes sympathetically
- Getting the first sound
    - 1) Free buzz without the mouthpiece
    - 2) Free buzz and add the mouthpiece while buzzing
    - 3) Mouthpiece buzzing

Articulation

- Is to the brass player as diction is to the singer
    - If one can speak, one can articulate
- Common articulations
    - Tu
        - For staccato and marcato
        - Does not stop the air, simply interrupts it
    - Du
        - For legato
        - Be careful as some will try to omit the initial attack
    - Variations
        - There are countless variations that are determined by musical nuance

Improving Articulation

- Sing
- Sound is
    - 90% air, 10% tongue
- Chicowicz wind patterns
    - Best remedy for tonguing issues
    - Emphasizes and reinforces a constant wind stream
    - Shows balance between wind and consonance
- On Instrument
    - Articulate rhythm on a stationary pitch
    - Slur the passage
        - Shows air flow needed to navigate the passage
- Check fingers or slide technique
    - Poor technique could impede good articulation

Final Thoughts

- Be positive
    - Negativity is a cancer
    - Try to avoid chastising players for missed a notes
        - Breads tentative playing
- It is better to say too little than too much
    - If in doubt, contact a brass player (or me☺)
- Goals of brass performance
    - Always play with a beautiful sound
        - If it does not sound beautiful, no one wants to hear it
    - All brass playing choices should be based on musical ***not*** physical decisions

Suggested Reading

General Brass Pedagogy

Bailey, Wayne, Patrick Miles, Alan Siebert, William Stanley, and Thomas Stanley *Teaching Brass*, 2nd ed. McCraw Hill, 2008.

Farkas, Philip. *The Art of Brass Playing*. Atlanta, GA: Wind Music Publications, 1989.

Frederiksen, Brian. *Arnold Jacobs: Song and Wind.* Chicago, IL: WindSong Press Limited, 1996.

Johnson, Keith. *Brass Performance and Pedagogy*. Upper Saddle River, NJ: Prentice Hall, 2002.

Nelson, Bruce. *Also Sprach Arnold Jacobs*. Dexter, MI: Polymnia Press, 2006.

Pilafian, Sam and Patrick Sheridan. *The Breathing Gym*. Produced by Focus on Music. 55 min, Focus on Music. DVD.

Steenstrup, Kristian. *Teaching Brass*. Aarhus: The Royal Academy of Music Press, 2004.

Whitener, Scott *A Complete Guide to Brass,* 3rd ed. Belmont, CA: Thomson/Schirmer, 2007.

Trumpet*

Campos, Frank Gabriel. *Trumpet Technique.* New York, NY: Oxford University Press, 2005.

Haynie, John and Anne Hardin. *Inside John Haynie's Studio: A Master Teacher's Lesson on Trumpet and Life*. Denton, TX: University of North Texas Press, 2007.

Hickman, David. *Trumpet Pedagogy: A Compendium of Modern Teaching Techniques.* Chandler, AZ: Hickman Music Editions, 2006.

Johnson, Keith. *The Art of Trumpet Playing.* Denton, TX: Gore Publishing, 1994.

Loubriel, Luis. *Back to Basics for Trumpeters.* Evergreen Park, IL: Scholar Publications, 2009.

Horn*

Farkas, Philip. *The Art of French Horn Playing.* Miami, FL: Summy Bichard Inc., 1956.

Hill, Douglas. *Collected Thoughts on Teaching, Learning, Creativity, and Horn Performance*. Van Nuys, CA: Warner Brothers Publications, 2001.

Rider, Wendell. *Real World Horn Playing.* San Francisco, CA: Wendell Rider Publications, 2006.

Stewart, Dee M. and Philip Farkas. *Philip Farkas: Legacy of a Master*, 2nd ed. Chicago, IL: The Instrumentalist, 1990.

Tuckwell, Barry. *Horn*. London: Kahn and Averill Publishing, 2003.

Trombone*

Begel, Richard. *A Modern Guide for Trombonists.* Fort Wayne, IN: Wealthy Dog Productions, 2002.

Fink, Reginald K. *The Trombonist's Handbook.* North Greece, NY: Accura Music Inc., 1977.

Kind, Richard. *An Alexander Technique Approach to Trombone Technique.* Albuquerque, NM: undated.

Kleinhammer, Edward. *The Art of Trombone Playing.* Miami, FL: Summy Bichard Ind., 1963

Wick, Dennis. *Trombone Technique.* London: Oxford University Press, 1971.

Tuba and Euphonium*

Bowman, Brian. *Practical Hints on Playing the Baritone/Euphonium.* Van Nuys, CA :Alfred Publishing, 1985.

Little, Donald C., and James Ployhar. *Practical Hints on Playing Tuba.* Columbia Pictures Publishers, 1985.

Morris, R. Winston, and Edward R. Goldstein. *The Tuba Sourcebook.* Bloomington, IN: Indiana University Press, 1995.

Phillips, Harvey, and William Winkle. *The Art of Tuba and Euphonium.* Miami, FL: Summy Bichard, 1992.

Stewart, M. Dee. *Arnold Jacobs: The Legacy of a Master.* Chicago, IL: The Instrumentalist, 1987.

*Each instrument has its own professional organization whose mission is to foster its respective discipline. Memberships are reasonable and include published and online journals that have tons of pedagogical information.

Psychology and Musicianship

Dunkel, Stuart Edward. *The Audition Process: Anxiety Management and Coping Strategies.* Hillsdale, NY: Pendragon Press, 1991.

Farkas, Philip. *The Art of Musicianship: A Treatise on the Skills, Knowledge, and Sensitivity Needed by the Mature Musician to Perform in an Artistic and Professional Manner*. Atlanta, GA: Wind Music Publications, 1976.

Green, Barry, and W. Timothy Gallwey. *The Inner Game of Music.* New York, NY: Doubleday, 1986.

Greene, Don. *Fight Your Fear and Win.* New York, NY: Broadway Books, 2002.

Greene, Don. *Performance Success: Perform Your Best Under Pressure*. New York, NY: Routledge, 2001.

Klickstein, Gerald. *The Musician's Way: A Guide to Practice Performance and Wellness.* New York: Oxford Press, 2009.

Kohut, Daniel. *Musical Performance: Learning Theory and Pedagogy.* Champaign, IL: Stripes Publishing, 1985.

Vandercook, H.A. *Expression in Music.* Chicago, IL: Rubank Publications, 1989.

Zander, Benjamin, and Rosamund Stone Zander. *The Art of Possibility: Transforming Professional Life and Personal Life.* New York, NY: Penguin Publishing, 2000.