

Clarinet Embou-Sure

by M. Max McKee

Preparation

It is my basic assumption that you will be teaching this concept to several elementary (or at least beginning) students at one time. I also assume that right now you have a clarinet (in its case) in front of you and that you will follow along step by step to carefully learn this concept.

LABELING BARRELS

Using self-stick, peel-off type labels, remove and label each student's barrel for easy identification. Add the mouthpiece to make up the basic mouthpiece/ barrel combinations and slip the ligatures over the mouthpieces. This will allow you to take all of these units to one area for addition of reeds. If you can possibly work it out to have this done before the students arrive, it will be a significant time-saver.

SOAKING REEDS

Now, using a pan or bowl filled with water, dump in about twice as many 2 1/2 or medium (not soft) reeds as there are clarinet mouthpiece/barrel combinations. Let the reeds soak for a couple of minutes and then begin "setting up" the mouthpiece /barrel/ligature combinations with free-blowing reeds. [Here is the one point in this whole operation where you need my assistance; but, as I'm not there to help you, enlist the most experienced clarinetist you can find to set you up with a free-blowing reed (tested on your clarinet!).]

COLOR AND SYMMETRY

Now that the reeds have soaked, select reeds with the same color characteristics as the one enclosed with EMBOU-SURE: Golden brown with absence of heavy black streaks in the bark of the cane.

Also check the reed to see if the cut is symmetrical (fig. 1) both on the face and on the butt-end. Now hold the reed upside down and look at the heart and tip area while holding it toward a strong light. Be sure that the shaded areas of light and dark cane (translucent and opaque) are also symmetrically cut as shown in figure 2.

Though control of these factors can never guarantee a free-blowing reed, it definitely places the odds firmly in your favor.

REED PLACEMENT & LIGATURE TIGHTNESS

Place the soaked reed in position against the mouthpiece, but...to avoid the possibility of chipping the tip of the reed, leave the ligature on the mouthpiece. Raise it just far enough toward the tip of the mouthpiece so that the butt-end of the reed will slide under it and into approximate position. Now, carefully align the reed both at its tip and at the butt-end: Reed tip even with or a hairline below the extreme tip of the mouthpiece; butt-end centered side to side on the flat area (table) of the mouthpiece.

Then push the ligature snugly downward and check to be sure that the (hopefully present) engraved line (nearest the tip if there is more than one) around the mouthpiece is an eighth to three-sixteenths of an inch above the ligature. Now tighten the two screws until very snug but not until they can cause damage to the cane! (Maximum tightening once screw friction begins: 1 1/2 turns.)

Reed alignment and ligature tightness are extremely important. A reed placed too high or too low will not

respond correctly. Placed too high, it in effect becomes a slightly stiffer reed; too low, it will not vibrate properly. When the reed is not centered on the table, vibration is also greatly affected. When the ligature is too tight, the cane of the reed is gradually warped; when the ligature is too loose, the reed literally moves around on the table--a full-bodied tone is a virtual impossibility. THESE FACTORS ARE CENTRAL IN MY INSISTENCE THAT THE TEACHER SOAK, TEST, ALIGN, AND TIGHTEN THE REED. A host of undesirable variables are thereby eliminated and the student's chances of immediate success are multiplied many times over.

CLARINET BODY ASSEMBLY

Assembling the body of the clarinet for each student (again, prior to class time if possible) and laying it in the student's case is another important facet of EMBOU-SURE. At the point in teaching where the body of the clarinet is needed, the last thing you want to do is break the train of thought by having to stop to explain the hazards of joining the bridgework between the upper and lower joints. You must, of course, be prepared to teach this, but that comes at the end of the first lesson--not in the middle.

So, assemble the clarinet bodies (carefully checking the position of the bridge keys) and place them in their respective cases beside each student's chair. You are now ready for that new batch of fledgling clarinetists!

BREATH SUPPORT

Chances are, you already have your own method of teaching breath support. Chances are, it matches up perfectly with breath support practices in clarinet playing. So, this will be quite abbreviated. Also, too much can often be made of proper breathing---to the point where all sorts of unnatural physical things start to happen.

If you stress: sit tall, full breath, fast air...in your own words, of course, that's enough. Be sure that the student is not slumping forward, that he takes a breath similar to a big sigh, and that he understands that the air is to be expelled as though trying to blow out candles. When you stop to think about it, if you are sure the student is sitting correctly, getting him to take a deep breath is simple: he's been doing it all his life. The only unfamiliar part is air intensity. Even that is easy with such statements as:

"Blow out making the loudest, longest, hissing sound you can."

"Imagine a piece of paper flat against the wall; blow a fast enough air to hold it there as long as you can." (The real physical act of placing a piece of paper against the wall will actually work.)

Forming the Embouchure

Present each of the students with his own reed/ligature/mouthpiece/barrel combination. Also have your own prepared and ready to assist in demonstrating. Instruct the student to firmly grasp the barrel with his left hand (a preliminary move which eventually establishes the left-above-right hand position). Demonstrate and mention that the reed faces toward the student. Also give caution about rubbing the reed against clothing, chipping the reed, etc.

Now, using your own facial expression and voice, instruct each student to "make an exaggerated, facial 'A' sound." The muscles which control the chin and lower lip must visibly move: the lower lip plus the muscles and tissue covering the chin becoming very flat. To be certain that a facial 'A' is formed, the visual image of "showing a deaf person the letter 'A' with your facial muscles" is usually very clear. If not, this is: "Imagine you are putting Chapstick on your lower lip. Run your finger over your lip as though it were the tube of Chapstick." (If you look in a mirror, you will notice that the famous "flat chin" portion of the clarinet embouchure has been formed.) Now instruct the students:

"Maintaining the feeling of the facial 'A', add a facial 'Q' on top of it." (It is the "oo" sound we are interested in.) This instantly brings into position the muscles which surround the lips and completes the formation of a perfect clarinet embouchure.

THE FIRST TONE

The next step is to couple the embouchure formation with the reed/ligature/mouthpiece/barrel combination. It is important to mention that the reed rests on the lower lip, while the upper teeth contact the mouthpiece. Instruct the student to take about half-an-inch of reed into the mouth. (Watch the angle of the mouthpiece/barrel combination to the body; keep it down. Also note head position; keep it up...level.) Demonstrating for the student, explain:

Take a deep breath, re-form the embouchure (“A-Q”), and “blow out candles.” Your demonstration will produce top line, concert F#.

Testing each student individually you will encounter one of six predictable results:

#1--CORRECT RESULT More often than not, a reasonable tone results. Imitation of your tone and pitch will be automatically attempted. When it happens, the sound of mouthpiece and barrel produces concert F# (clarinet G#) and should sound like this:

EXAMPLE #1

#2--NO TONE, RUSHING AIR In this instance, there is only one cause: No pressure of any kind against the reed. It always sounds like this:

EXAMPLE #2

REMEDY: Increase lower lip pressure against reed.

#3--SQUAWK-LIKE TONE or FLAT PITCH These sounds:

EXAMPLE #3a

EXAMPLE #3b

are created in three possible ways:

- a. Insufficient pressure against the reed.
- b. Too much reed in the mouth.
- c. Insufficient intensity in the air flow.

REMEDY: Check visually for too much reed; if confirmed, the sound will usually be squawk-like (3a) rather than low-pitched. If, on the other hand, the tone is more like 3b (low pitch), ask for increased lip pressure and/or increased air intensity. To check this, ask the student to demonstrate the air flow by playing on the mouthpiece/barrel unit and then while still blowing, remove it from his mouth. The air intensity question will be immediately answered. Sometimes an increase in air intensity alone will solve the problem; other times a request for “faster air and a bit more firmness against the reed” may be necessary.

#4--SQUEAKS or CONTINUOUS HIGH-PITCHED SQUEAL This sound:

EXAMPLE#4

occurs most often because the reed has been forced to vibrate in its second mode (i.e. an octave and a fifth higher).

- a. Insufficient pressure against the reed.
- b. Too much reed in the mouth.
- c. Mouthpiece/barrel unit angled too far away from body or that student is looking downward.

The first two of these can be checked as in #3. Angle and head position can be checked visually.

REMEDY: Raise the head and/or bring the clarinet/mouthpiece/barrel unit closer to the body. Remember that in addition to these problems, lip pressure or amount of reed in the mouth may also be factors. Amount of reed is often significant here...usually too much.

When correcting the squeak problem be sure that the student stops blowing, makes adjustments, and then blows again. Otherwise, even a severe change of position while playing will not allow the reed to shift back to the fundamental mode of vibration.

Though this problem is quite infrequently encountered with beginners, it can be the most difficult to correct when it does occur. If the squeaks or squeals persist, try exerting upward pressure against the student's lower lip while he plays; a shift of register often occurs.

#5--COMPLETELY STOPPED or INTENSE AIR ONLY

Complete stoppage of the air stream indicates:

- a. too much lip pressure against reed and/or
- b. too little reed in the mouth.

When intense air only (with no musical sound of any kind) occurs, the problems are the same.
The sound is:

EXAMPLE #5

REMEDY: Watch the student from a profile viewpoint. Often it is visually obvious that only the very tip of the mouthpiece (and reed) is in the mouth or that extreme pressure is being exerted against the reed. Most of the time your comment will be: "Take a little more reed in your mouth." The extreme pressure problem is less likely unless the student breaks out of the "A-Q" position. (See BUNCHED CHIN)

#6--THIN TONE AND SHARPNESS OF PITCH

This less frequently heard sound:

EXAMPLE #6

(especially uncommon with beginners, whose embouchures have not developed) is caused by a combination of:

- a. too much lower lip pressure against reed.
- b. insufficient reed in the mouth (and possibly)
- c. tight, closed throat.

REMEDY: If the tone is on-pitch but very thin, ask for more reed in the mouth. If the tone is very thin and sharp, ask for less pressure and make a careful visual check on the amount of reed in the mouth. At the same time, be aware of the fact that an “ee” vowel (high tongue) and closed throat can contribute to this sound. Audibly and facially show the student an “oh” while he plays; he’ll imitate automatically.

BUNCHED CHIN

This is strictly physical in nature and must be observed to be corrected. It can contribute to #4 (SQUEAKS) or #5 (STOPPED) or #6 (THIN, SHARP). But even #1 (CORRECT RESULT) is possible in the initial stages of development. Later on, however, it will contribute to frequent squeaks and a host of other problems.

To simulate the “bunched chin” for yourself, simply push your lower lip up over the top lip. Feel your chin. Bunched up; pebbly in texture. Now carefully draw your lower lip down to its normal position without relaxing the “bunch.” You should have the sensation that the muscles in your chin are pushing upward.

Those who have this problem have usually learned it by bringing the lower lip up to meet the reed rather than establishing a lower lip set on which to place the reed. **BE ABSOLUTELY SURE THAT THE CHIN DOES NOT BUNCH UP DURING THE FIRST LESSON!** Once established, it is extremely difficult to alter. Go back to “A”--place the reed--”Q”. Then watch to see that the lip does not rise up at the moment the student blows.

If the situation already exists with a student who has been playing for a year or two, the problem can best be solved by having the student:

- a. look into a mirror while playing (profile).
- b. play open G (holding the clarinet with the left hand only).
- c. use the right hand to feel the flat “A-Q” chin.

It will take several weeks to correct it (since re-training is involved), so don’t worry about the fact that the student slips back into the bunched chin following work with the mirror.

REED STRENGTH

Keep in mind that unless you have personally pretested each student’s reed to ensure a full-toned, free-blowing reed, each of the above problems (#2-#6) takes on other cause variables:

#2 - RUSHING AIR may indicate hard reed.

#3 - FLAT PITCH may indicate soft reed.

#4 - SQUEAKS may indicate soft reed.

#5 - STOPPED may indicate soft reed.

#5 - INTENSE AIR may indicate hard reed.

#6 - THIN, SHARP may indicate hard reed.

These are variables with which you should not have to deal during the first lesson!

Adding the Body

HOLDING THE CLARINET

Once tone and pitch are well-established, add the mouthpiece/barrel combination to the body of the clarinet. Now instruct the student to grasp the barrel of the clarinet as before with the left hand; then with the thumb and index finger of the right hand, grasp the thumbrest (as though it were a small knob on a drawer). This will simplify supporting the weight of the instrument and eliminates the necessity of demonstrating proper thumb position at this point.

Now check to be sure that the natural angle of the clarinet is fairly close to the body (less than 30 degrees) and that the head is level (not looking downward). Also be absolutely sure that the clarinet is between the legs and not to one side! With the clarinet at the side, muscles in the neck will be tight, thus potentially affecting tone production.

FIRST FULL-CLARINET TONE

Now demonstrate the tone and pitch which the student is to produce--the clarinet "open G" (first space concert F), and instruct him to produce the sound exactly as before. Most of the time the proper sound result will occur. When it does not, the most common fault will be a squeak. However, if the results with mouthpiece/barrel-only were excellent, this can usually be corrected by taking the student through the "A-Q" formation process.

As before, there will be six sounds possible. However, as they will be directly related to the six possibilities demonstrated with the mouthpiece/barrel combination, no new variables are introduced:

CORRECT RESULT.....EXAMPLE #7 is analogous to #1
RUSHING AIR ONLY.....EXAMPEL #8 is analogous to #2
SQUAWK/FLAT PITCH.....EXAMPLE #9A is analogous to #3
LOW PITCH.....EXAMPLE #9B is analogous to #3
SQUEAKS/HI SQUEAL.....EXAMPLE #10 is analogous to #4
STOPPED/INTENSE AIR.....EXAMPLE #11 is analogous to #5
THIN TONE/SHARP PITCH....EXAMPLE #12 is analogous to #6

Note that in each of the six possibilities, problems and remedies are identical. (Beginning with EXAMPLE #7, "open G" possibilities are demonstrated first; immediately following each are the mouthpiece/barrel tones to provide immediate comparison.) Thus, if in the process of switching from the mouthpiece/barrel unit to the complete clarinet the student changes his approach toward tone production, recognition of the analogous sounds will allow you to make necessary corrections easily. If, however, you do not obtain immediate results (assuming earlier success with the mouthpiece/barrel unit), remove the body of the clarinet from the mouthpiece/barrel unit and reinforce earlier success. Then, when the body is once again added, watch carefully for differences in the:

- a. "A-Q" set-up (while the student plays).
- b. angle of the clarinet in relationship to the student's body.
- c. speed of the air stream.

ADDING FINGERS

Once the student has achieved the CORRECT RESULT while playing open G, it is time to begin the process of adding fingers. It is my opinion that low C (concert Bb below treble staff) is the easiest fingered note for the beginning student. (Though F undoubtedly produces fewer squeaks and squawks, it provides very poor support in terms of holding the instrument.) But...it should not be attempted until you are confident that both embouchure and breath support have been properly established.

Moving from the mouthpiece/barrel unit to the complete clarinet added no significant variables; the only new dimension for the student was the grasping of the thumb rest to aid in the support of the clarinet. Tone production possibilities remained the same in each of the six instances.

At this point an important and possibly problematical variable is introduced. It is the point at which the most

errors in beginning instruction are likely to occur. Poorly placed fingers may lead the teacher to believe that the problem lies in the embouchure and breath support. In fact, it may lead the beginning student to completely change embouchure and breath support all by himself in an attempt to make a sound. It is, therefore, of paramount importance that:

- a. finger placement be carefully introduced.
- b. finger placement be carefully observed.
- c. poor tone quality due to incorrect finger placement be properly diagnosed.

It is important to mention that the fingers remain in their natural position...not flattened, not arched. The hand should remain completely relaxed as the fingers of the left hand are placed in position. A visual demonstration with your own clarinet or assistance to ensure that the correct finger is placed over the correct hole is often helpful. Be sure to indicate that the thumb covers the hole in the back and that it does not at this point open the register key. Check this visually as it is a primary cause of problems. Also observe the angle of the fingers relative to the clarinet. If the student attempts to place them at a 90 degree angle to the clarinet, mention that the fingers and hand should angle comfortably upward (so that the index finger lays close to the A and G# throat keys). Demonstrate with your clarinet.

Now demonstrate the tone and the pitch which you wish the student to produce: the clarinet "low C" and instruct him to produce sound exactly as before. If the correct result is not obtained, it is that one of the original five problems has cropped up. But, by now you should have those sounds well engrained and you should know the remedies. It is, however, unlikely that these problems will repeat if you have carefully instructed tone production with mouthpiece/barrel and then with the complete clarinet. While the correct result sounds like this:

EXAMPLE #13

There are three basic new sounds which might occur:

MUFFLED F or G

Either of these pitches (clarinet first space F or open G) is a dead give away...the thumb is not covering the hole in the back (produces F) and is opening the register key (produces G).

EXAMPLE #14a (Muffled F)

EXAMPLE #14b Muffled G)

NON-DESCRIPT PITCH

One or more of the left hand fingers is not covering properly: pitch resembles C#, D, or D#. Partial thumb cover can also produce this sound. If, on the other hand, the non-descript pitch resembles one of the notes between first space clarinet F and G#, the problem is that the index finger is opening either the G# or the A throat register keys.

EXAMPLE #15a (Lower pitches)

EXAMPLE #15b (Higher pitches)

HIGH REGISTER PITCH

If the student produces an actual pitch in one of the higher registers (probably clarinet G above the staff or possibly three ledger line high E), it means that the thumb or the index finger is partially opening one of the keys at the upper end of the clarinet (register key, A key, or G# key). Of these keys, it is the register key which most often produces the upper partials; the clarinet G is the most likely overtone in the beginning stages.

EXAMPLE #16

When any of these problems occur, ask to see the pads of the student's fingers; if properly placed on the instrument, you should see complete ring imprints on the center of each pad. Many times that imprint will be partially centered over the first joint of the finger, thereby creating a leak. When the student makes another attempt to play low C, observe the position of thumb and fingers, watching carefully for one which appears to be out of position. If, after three tries you are still unsuccessful, I recommend that you return to the open G and check to be sure that the air flow, tone, and embouchure are still functioning properly. This will reinforce for the student that all is OK except fingers. It is less likely that he will then make serious alterations in an attempt to overcome finger-cover problems.

If on return to low C the finger problem still persists, have the student play first line E followed by D, then C. As each finger is placed in position, observe carefully and listen for the exact moment a finger-placement error occurs. Most often too much arch in the fingers and/or position of the finger pads will be totally at fault.

Conclusion

From this point on, you can progress as you wish with the knowledge that the embouchure has been properly formed. At that, don't fail to give each budding clarinetist a visual "checkup" periodically. Also be sure that the mouthpiece is kept clean and that the reed is never left on the mouthpiece. The reed will warp far less and your chances of the student cleaning the mouthpiece regularly are far greater. Also be sure to instruct the student to keep the reed on a flat surface and never to enclose it in a plastic container where it will not dry out. Reed life will be greatly extended by placing it on top of the plastic container (or piece of glass) secured by a rubber band.

Intonation

Every student can and must play in tune from the very beginning! "Theories" which expound that "learning to blow" is the only important aspect in the beginning stages are ridiculous. As soon as a note is introduced, there must be instruction which produces correct tone quality. Since out of tune notes seldom contain proper tone quality, it follows that attention to one cures the other. Note in the following examples that natural tendency of the clarinet to play sharp and with tone quality which is inconsistent with surrounding notes:

LOW A: natural sharpness & tightness; then corrected.

EXAMPLE #17

Also true of low C and low D.

THROAT Bb: natural sharpness and shrillness; then corrected.

EXAMPLE #18

Also true of throat G, G#, and A.

HIGH B: natural sharpness and shrillness; then corrected.

EXAMPLE #19

Also true of high A, Bb, and C.

In all of the above cases the remedy is the same: Let more reed vibrate. Tangible example: Form the embouchure with the index finger placed on your lower lip as though it were the reed. Pushing first inward, then outward, notice that there is “play” or flexibility in the flesh as it rests on the teeth. When you push inward, more of your finger will naturally be inside your mouth. On the clarinet, when you flex the lip inward, more of the surface of the reed will be inside the mouth. Thus, more surface can vibrate. Result: fuller tone, lower pitch. (Note, for example, the cause of #6 and #12 above.) Making students aware of this simple fact will immediately improve intonation and tone with the youngest of clarinetists.