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A FUNDAMENTALLY SOUND SWITCH TO BASSOON

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ABSTRACT

The bassoon can be an overlooked instrument in the school band. Frequently, this may be attributed to a director's limited experience with the instrument. An overwhelming amount of material for bassoon pedagogy is available, but not all is appropriate for use in a secondary school setting. Most of these materials were written for more proficient players than the typical middle or high school player. Consequently, directors may give their bassoon students music to learn without re-enforcing the fundamentals of the instrument. Woodwind methods books used in a mixed instrument class may ignore bassoon specific technique, such as "flicking", voicing, and reed adjustment. The purpose of this thesis was to provide a resource for band directors to assist them in helping their students make the transition to bassoon from another instrument. This resource contains information about the fundamentals of bassoon playing, as well as a list of appropriate method books and a corresponding list of techniques to work on with each exercise.

The specific problem of this study was to identify the obstacles facing students beginning to play the bassoon, and give an overview of the process for successfully switching students to the bassoon from another woodwind instrument. In order to address the problems of the study, college music education majors were surveyed to determine what was difficult about the bassoon from a clarinetist or saxophonist's point of view. Saxophonists and clarinetists were questioned, since these instrumentalists are a frequent source for bassoonists.

Method books were also evaluated to determine which exercises can be used to teach bassoon fundamental technique. The data collected was used to create a database of materials for properly teaching bassoon to secondary students.

Clarinet players found bassoon between "medium" and "most difficult" to play. They found it dissimilar to the clarinet, and indicated that learning the bassoon embouchure, voicing, and flicking were the hardest skills to master. The clarinet players also noted the bassoon felt awkward to hold and play.

Saxophone players found bassoon to be only "medium difficult" on average, and found the bassoon more similar to their own primary instrument than the clarinetists. They indicated that voicing and the bassoon embouchure were easier to learn, while flicking and half holing were more difficult to learn.

While having a musical background in any instrument is useful when learning bassoon, results of the survey suggest that saxophonists may have an advantage when switching to bassoon because of their experience with voicing, a similar embouchure with equal pressure from all sides, and holding larger instruments. Clarinet players, however, reported an easier time learning how to half hole than saxophonists, so they are not to be discouraged about switching to bassoon. Ultimately, the desire and motivation of the student to learn and practice will determine their success. Having prior single-reed experience, especially on saxophone, has shown to be helpful.

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DEDICATION

I would like to dedicate this thesis to my first bassoon teacher, Mr. Howard Rockwin. He instilled a love of music and bassoon playing within me, and imparted the skills necessary to thrive at the next level.

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I am indebted to my bassoon teacher, Prof. Daryl Durran, for the countless hours he has spent working with me during my career at Penn State. His teaching methods were the inspiration for this project.

CHAPTER I

INTRODUCTION

The Problem

A young girl was playing bass clarinet in the middle school band. After three years playing the clarinet, she wanted a new challenge. The band director suggested switching to bassoon since there were none in the ensemble. The music teacher did not have much experience playing or teaching bassoon, but was able to provide some starter lessons. It was recommended to the new student that she take a few lessons with a local professional before teaching herself the rest of the band music. The lessons went very well, and before long the new bassoonist decided to continue studying privately.

Within a year, the young girl had learned enough to be a competent player, and joined a youth orchestra and concert band. In her lessons the student worked on solo repertoire, technical etudes, and ensemble music. By the time she was starting high school, the student began making her own reeds with the guidance of her bassoon teacher. The school music teachers were very impressed with the girl's progress, but one of the band directors noticed that the student could not sustain long passages, or properly articulate very fast notes.

During her senior year of high school, the student auditioned at colleges and was accepted into several music schools and conservatories. At each audition though, professors commented on her absence of basic bassoon technique like "flicking" and "half holing". At one audition, the professor asked the student what she would like to

be different about her playing. The girl was not able to provide an answer, since she incorrectly assumed she was doing everything correctly.

This girl was me. I came to college very well versed in ensemble and bassoon literature, but lacked some basic fundamental skills on the bassoon. I spent my first semester of college re-learning fingerings, fixing major problems with tone production and breath support, and most importantly, learning to "flick" properly. My high school band director was on the right track when he heard me "cracking" notes and not being able to sustain long phrases, but as a trumpet player he was reluctant to give me guidance for how to solve these problems. With even the most basic knowledge of bassoon technique, any music teacher can set students up for a successful playing career. As my story has shown, it is equally important for bassoon specialists to review the fundamentals of the instrument before starting a new student. Aspects of bassoon playing I now take for granted, like half holing and flicking, seemed daunting when I first began collegiate study.

Skills such as these are important even for students who decide to not become music majors in college. The ability to play in tune without notes cracking is important when playing in ensembles, and will make the experience much more fun. Additionally, reinforcing the proper fundamentals from the beginning will make it easier for students to pick up the instrument again later in life if they so choose. Once the proper foundation is set students should have an easier time making and enjoying their music. Having students perform at their fullest potential and with greatest ease makes for a more enjoyable musical experience. I often found it frustrating that I was cracking notes

so often, but after diligently drilling my "flicking" exercises I saw vast improvements in my performance. Playing in ensembles was also a lot more fun when I was continuously getting the right notes out with ease.

Even with this omission in my training, I was among one of the lucky students who had the opportunity to study bassoon privately. I cannot thank my high school bassoon teacher enough for instilling a love of bassoon playing and music in me, and I grew tremendously as a musician during the time I studied with him.

Rationale

The bassoon is not nearly as difficult as many people seem to think it is. According to Barris and Jampole (1997), "It is the ungainly size of the bassoon that causes directors to assume incorrectly that it is difficult for students to play…The challenge with this instrument is to avoid forming bad habits that soon become ingrained problems" (p. 28). One of the largest obstacles I faced as a freshman in college was unlearning all of the bad habits I developed that my teachers had not noticed or corrected.

Some school districts provide small group lessons as a part of the instrumental curriculum. A benefit of starting a new student in such lessons is the opportunity to reinforce good habits and discourage bad habits. Teachers have the opportunity to teach this student all of the correct fundamentals! It is imperative to focus on bassoon specific technique with a beginning student, since "it doesn't work very well to give group lessons to beginning bassoonists along with students on other instruments" (Barris & Jampole, 1997, p.28). Appropriately working with students from the very first

lesson will help emphasize the importance of a solid foundation. Even with the challenges many persons associate with bassoon, it can be an especially rewarding experience for children who are looking to be unique, and stand out from the "pack" of flute and clarinet players in the band.

In my experience, it seems that many bassoon players lack the fundamental skills necessary to play the instrument at a high level of proficiency. Perhaps they were never taught these fundamental techniques as a beginner. Unless a student takes lessons from a professional bassoonist (who is diligent with drilling fundamentals) or a band director who has experience with bassoon pedagogy, it is likely s/he may never learn bassoon specific technique. In many "school ensembles, the bassoon is either misused, poorly played, or not used at all because of a lack of knowledge concerning certain aspects of the bassoon on the part of the instrumental teacher who needs to have more than just an elementary knowledge of the bassoon" (Spencer, 1958, p. 5). It is up to the teacher to ensure students receive proper instruction in the fundamental skills needed to play the bassoon well.

As a freshman college bassoonist, I did not know the proper fingerings for several notes and was using a very ineffective embouchure. It took me almost an entire year of study to break many of my bad habits. I still find myself having to address basic techniques such as "half holing" and attacks. Had I been made aware of these problems when I first learned bassoon, I might not be having these issues in my playing now.

Correctly teaching bassoonists from their first lesson will set students up for success later on in their musical careers. It will also limit the amount of frustration they

may encounter when trying to play properly. My situation is fairly common among bassoonists, and it is typical for high school bassoon players to be using improper reeds, embouchures, and fingerings. This conclusion is based on my own observations of students when I am asked to assist with orchestral bassoon sectionals. I am always amazed that students can play with cracked and worn out reeds, dented bocals, and leaky instruments. However, these students are compensating for these problems by using inefficient playing techniques like biting the reed, forcing air too hard, and using alternate (often accidentally found) fingerings.

Purpose

The purpose of this study was to assist instrumental music teachers in providing appropriate bassoon instruction by explaining the fundamentals of the instrument, detailing the process of switching to bassoon from single-reed instruments, and providing a list of resources that can be used to teach bassoon lessons.

Many band directors have little experience playing double reed instruments, so they may be hesitant to recruit and teach bassoon and oboe players. They may not even know where to look information about bassoon. The bassoon is an especially forgiving instrument, and will create sound even when a musician forces air, fingers notes incorrectly, and uses a poor quality reed. "All aspects of wind playing fall into four main categories: These are: (1) finger technique, (2) the use of the tongue, (3), the use of air, and (4), the embouchure…A few things will be taken for granted…the player is using the correct fingering…he has a fairly good reed" (Weisberg, 1975, p. 3).

The aspects of wind playing that Mr. Weisberg takes for granted are often overlooked in a school setting. Based on my own experience, a bassoonist using a reed purchased from the local music shop and using fingerings found in the band method book is not prepared for a successful beginning. Before I was able to work on fundamentals in college like using a proper embouchure and breath support, I first had to change the way I made reeds and fingered notes. My high school reeds, though adequate for school ensembles, did not allow me to play in every octave with good intonation. The fingerings I had been using did not incorporate resonance fingerings and alternate options for special situations.

For these reasons, it is especially important that band directors are aware of and teach sound fundamentals to their bassoonists. It is equally important that school instrumental music teachers assist their students in finding excellent quality reeds. These will never be reeds that were mass produced and sold to music retailes. Quality sources include collegiate bassoon teachers, local professionals, or advanced collegiate students.

Overview of Methodology

The purpose of this study was served by identifying several major bassoon fundamentals (Breath Support, Voicing, Flicking, Half Holing, and Instrument Carriage). In subsequent chapters, each concept is explained and strategies for teaching each provided. In addition, a survey was administered to single-reed music majors learning bassoon, and the results were analyzed to determine which of these five concepts were most difficult to learn and execute on bassoon. The survey also indicated what prior

knowledge from a specific single-reed instrument was helpful, and in some instances unhelpful. Finally, a sequence of method books and etude books are provided. Using these books and etudes will help teach the fundamentals discussed in earlier chapters, since exercises selected align with each fundamental skill.

This thesis focused on four potential issues facing beginning bassoonists (modified from Weisberg's analysis to reflect a more typical secondary situation):

1. Appropriate instruction focusing on fundamentals from the first lesson
2. Techniques that are similar and different for switching to bassoon from clarinet and saxophone
3. Resources to aid directors with limited double reed experience
4. Appropriate use of bassoon method books, and a preferred sequence of exercises to use

Overview of Content

Each chapter of the thesis is based on one of the four issues the author decided was important to the development of beginning bassoonists- Fundamentals-focused instruction, carrying over techniques from previous instruments when appropriate, providing resources for teachers, and using appropriate method book sequences. In Chapter Two I describe the fundamentals of the bassoon; how breathe support, voicing, flicking, half holing, and instrument carriage is done properly on the bassoon. Ways to teach these concepts to students, as well as diagnosing common problems in each category, are also included. In Chapter Three I provide an overview of how the research for the single-reed music major study was conducted- How participants were selected,

how tools were developed for surveying these participants, the processes followed, and how the data were analyzed are included. In Chapter Four the results of the questionnaire are presented to qualitatively explain collegiate clarinet and saxophone majors' views about the switch to bassoon, an instrument they learned in a techniques class. Problems these particular instrumentalists faced in their switch and recommendations they gave to students of their own instrument switching to bassoon are included. In Chapter Five I recommend methods books and suggest a sequence of use for beginning instruction. Chapter Six serves as a summary of the paper and details the conclusions reached regarding the use of fundamentals in learning bassoon, and process of switching to bassoon.

Limitations of the Study

Little scholarly research about the switch to bassoon from other instruments exists. In order to determine the issues facing instrumentalists switching to bassoon, a review of existing literature may not be enough. This project was designed to survey collegiate music education majors who have taken bassoon methods, a class that teaches how to play bassoon in half a semester. It is regarded as an extremely intensive class and as a final exam students are required to play a two octave chromatic scale and intermediate level etudes. Thus, these students are considered very prepared to teach bassoon with knowledge of what it is like to learn each bassoon specific technique from a particular instrumentalist's point of view. Brass players, woodwind players, percussionists, string players, and even vocalists have taken the course in the past. This

study was limited to single-reed major students that had taken the course within the past two years.

CHAPTER TWO

FUNDAMENTALS OF THE BASSOON

In this chapter five fundamental skills needed to play the bassoon well - breath support and embouchure, voicing, flicking, half holing, and instrument carriage - are explained. This serves the purpose of helping band directors teach each concept to new bassoonists. Each skill is defined and explained, and strategies for teaching it are given in each subsection of the chapter.

Breath Support and Embouchure

I grouped these two categories together because breath support and embouchure on the bassoon are very closely related. In woodwind and brass instruments, breath support refers to "the engagement of the abdominal muscles (including the sides and lower back) during exhalation" (Pimental, 2010, ¶ 1). This air is blown directly through the embouchure and into the reed to create vibrations, and ultimately sound. Breath support should not be vastly different between woodwind instruments, since each woodwind requires a steady stream of air to be played properly. Students changing from flute to bassoon may struggle with this concept at first because they are not used to having a reed in their mouth, or the resulting back pressure. However, successful flute players should overcome this initial obstacle since they are used to managing extremely large quantities of air, and controlling this air in a way to play long phrases on flute. "The flute requires an enormous quantity of air to play, more than other wind instruments, because there is nothing in or on the mouth to

inhibit the flow of the air. Therefore the flutist must master the process of using the air efficiently" (Dietz, 1998 p.166).

Just as brass players practice buzzing on mouthpieces, bassoon players should practice "crowing" on the reed, and playing on just the reed and bocal. To crow, tell students to "form the embouchure, and blow a steady stream of air into the reed to produce a noisy crowing sound" (Froseth, 2005, p. 6). This gives young bassoonists a way to check their embouchure and air stream without the added complexities of remembering new fingerings and holding the entire instrument. Crowing will remain important as the student advances, and is the first step in testing bassoon reeds. But for a beginner, crowing on the reed is a great way to ensure that the embouchure is loose enough. If a student bites on the reed while crowing only a high-pitched sound will result. A good crow has a mix of both low and high frequencies simultaneously (Durran, 1997). At this stage, it is important to remind the bassoonist that crowing is a test to see if the embouchure is too tight, and the reed balanced. A properly balanced reed will crow at an "F". Another way to practice getting the crow is "whistling a low pitch, and then rolling in the lips slightly with a finger" (Ewell, 2000, p. 37). Rolling the lips in is important for the double-lipped embouchure bassoon utilizes.

Once the student can get a good sound crowing on just the reed, it is time to add the bocal. Playing on the reed and bocal is an effective way to replicate the air and embouchure used on the full bassoon. The sound will be different, but the physical sensations should be similar. If the student is struggling with the entire instrument in later lessons, playing for a few minutes on the reed and bocal should also remind them

of the proper breath support and embouchure you taught them in their first few lessons. Before attempting to play on the entire bassoon the student should be playing on the reed and bocal assembly (Froseth, 2005).

A good beginner reed and bocal exercise the author likes to use is long tone practice. Play a reference pitch of "C" on the piano or another instrument, and instruct the student to match pitch on the reed and bocal. Practice the "attack" with a light tongue stroke. Remind them you are not trying to violently "attack" notes; you are just beginning them with your tongue. Aim for a "C" that has a relatively even beginning and end. The lips and oral cavity should be in the same position as saying "dew". Once students can do this, challenge them to play longer and longer notes (while still maintaining the proper embouchure, oral cavity shape, and breath support!). Put the metronome on quarter note = 60, and use this to time each note. The goal of this exercise is to get students utilizing all of the air they take in, and expelling it at an even rate.

Band teachers will probably already have a favorite exercise to teach breathing, and most of these will probably work very well for bassoon too. Any exercise that emphasizes taking a controlled breath without raising the shoulders will help students with their long tone practicing. One particularly effective exercise is for the student to put the left hand on the chest, and the right hand under the ribs. During a proper inhalation you should feel the ribcage expanding in the right hand, and little movement in the left hand. If neither hand moves, the student needs to take a deeper breath. While perhaps not practical in a public school setting, it can be effective for the student

to actually feel how much expansion takes place in the teacher's ribcage. Again, this strategy would probably only be appropriate in a collegiate situation if both teacher and student are comfortable.

Do not try and introduce dynamics to new students right away, since trying to play very loud or soft can unknowingly cause the student to change some aspect of the correct embouchure. For at least the first month the student should be playing everything at a comfortable *mf* dynamic. "When starting practice, the hurdles to be overcome to this end should not be too high at a comfortable *mf*, avoiding extreme registers. Attention should be given to the balance between embouchure tension and breath control" (Klutsch, 2003 p. 6).

Finally, the bassoon embouchure should be as relaxed as possible while still maintaining a cushion of the lips for the reed to sit on. "In order to guarantee free vibration of the reed, the lips grasp it as loosely as possible without allowing air to escape" (Klutsch, 2003, p. 6). If the student can whistle, have him do so. This lip formation is very similar to the bassoon embouchure. If the student cannot whistle, have her make a "clown face" smile (with the lips drawn up in an exaggerated smile). Then have her pucker up, as if she is going to kiss someone. The "clown smile" embouchure needs to be avoided at all cost. It will result in the corners pulled back too far and tight. The "pucker" face is a much better example of what the embouchure should look like. If the student struggles with this, he can practice making both faces in the mirror until his muscle memory can recognize the proper "pucker" embouchure. If the proper embouchure can be set early on, student bassoonists will not struggle with

playing sharp down the road. (Durran, 1997). Former single reed players may be especially tempted to bite down on the reed from top to bottom or pull the corners back tightly.

The lips should be almost touching the first wire of the reed, but not quite. Having too much or too little reed in the mouth will greatly affect the pitch and response of the instrument. A good hint for students is to take in only as much reed as they need. In the lowest register (below the bass clef staff) it will be nearly impossible to play articulately and quietly with this much reed in the mouth. In this instance, it will be necessary to back off the reed and take in only about a quarter to half inch. In much higher passages (above the tenor clef staff) it may help the student to take in slightly more reed. "A 'hard' embouchure, close to the first wire, brings an easier response in this register" (Klutsch, 2003, p. 21) However, the lips should never actually be on the wire. Not only will this hurt intonation and response, a rough or sharp wire could result in a painful cut to the lip.

Voicing

Voicing on the bassoon is also directly related to breath support and the embouchure. Voicing refers to the shape of the interior oral cavity when playing. "The mouth, throat, and even the vocal chords, must provide a resonator of appropriate size and shape to reinforce the pitch being fingered on the bassoon" (Durran, 1997, p. 9). Different vowel shapes (aah vs. eew) have different effects on pitch. This is comparable to the technique a brass player would use to activate different partials with the same fingering. A trumpet player must increase air speed and direction, decrease the lip

aperture, and use an “ee” sound to play high. Likewise, to play in the low register, it is common for brass players to use slower, “warmer” air, a larger lip aperture, and an “eew” or “ooh” vowel shape.

While bassoonists do not have to negotiate different partials to get the right note to speak, they deal with quite a bit of pitch flexibility. This is both good and bad, since advanced players can use this to match pitch in ensembles. For the beginning student, this flexibility is often confusing. A note can be fingered and any variety of sounds might come out! Voicing properly is very important for consistency in pitch and response, and should be taught from the very first lesson. Remember, “the student does not actually *voice* the vowels, rather they form these vowels in their oral cavity” (Ewell, 2000, p. 41).

As discussed in the “*Embouchure and Breath Support*” section, the first step to teaching voicing is playing on the reed and bocal. With an “eew” voicing and proper attack, the student should be able to sound a middle C. The student should be able to maintain this C without changing the oral cavity shape. But like the trumpet, not every note on bassoon uses this “dew” voicing. The student will have to remember which notes use each voicing. At first this can seem daunting but the proper voicing will soon become automatic, if the student is diligent in using them each time he practices the instrument.

The next step is to have the student voice “doe” and play into the reed and bocal. He should discover this voicing lowers pitch by about a half step (a B natural should sound). Now have him voice “dew” again, and he will hear the pitch raise one

half step back to C. The student should then try the same exercise with “dee”. The pitch will raise another half step, up to about a C sharp. The ability to make these seemingly small changes in pitch will pay dividends later (Durran, 2000). If the student is making the voicing changes but still cannot achieve these pitch changes, their air speed is likely not fast enough.

Continue to have the student play these “dew” “doe” “dew” “dee” “dew” patterns. She will need to remember the feeling of each vowel in order to replicate them on actual notes later. Remind students that intonation is controlled with a balanced reed, correct air speed, and proper voicing. If students struggle with this concept, having them sing each voicing may help them feel how the mouth should be shaped when playing.

When diagnosing intonation problems on bassoon it is important to remember that several factors contribute to pitch. The instrument, reed, bocal, air speed, and voicing all effect pitch and a problem with one can make playing in tune very difficult. Also, “there is a hierarchy to methods of pitch control which students must follow…Breath support comes first…then adjust the vowel in the mouth, and only at the end temper the intonation with an embouchure adjustment” (Ewell, 2000, p. 42). It is tempting for students, especially those switching from clarinet or saxophone, to want to control pitch with top to bottom embouchure and jaw pressure. Remind these students that air speed and voicing on the bassoon are what control intonation, and do not let them bite the reed. If students still become quickly fatigued after weeks of playing, this is a good indication they might be biting too hard (or are playing on heavy/imbalanced

reeds). Another sign of using too much biting pressure are marks left on the inside of player's lips.

In addition to teaching the student proper voicing and embouchure control, it is also important at this stage to remind the student how to control attacks. As discussed in the previous section, the tone should be started by a light tongue stroke, "the sound must not 'burst out'" (Klutsch, 2003, p. 7). As the student becomes more advanced, these note beginnings become even more important, especially in an ensemble setting. "The ability to commence a note *pp* and without an accent not only opens up possibilities for fine musical nuances, but also makes ensemble work considerably easier for all bassoonists" (Klutsch, 2003, p. 7). These attacks are only possible with a controlled tongue stroke.

Vibrato is a "regular pulsation in the sound, brought about either by a change in pitch or a change in volume" (Weisberg, 1975 p. 57). Jaw vibrato (manipulating the jaw to change pitch) is customary on certain instruments, but is not appropriate for the bassoon. More advanced saxophone players may be using a jaw vibrato, and this will have to be unlearned when playing bassoon. A certain amount of debate exists among bassoonists whether a throat or diaphragm vibrato is best, but it is universally held that jaw vibrato or voicing changes should not be used on bassoon. Clarinetists may have the advantage here, since they often (some clarinetists do use vibrato) do not have any vibrato habits that will need to be unlearned or modified.

A student should not be taught vibrato until she can sustain pitches in each register comfortably, usually about a year into private study. This "firm base is

necessary before trying to alter the steady beat by putting a vibrato on top of it" (Weisberg, 1975, p. 59). The most common approach is to use a diaphragmatic vibrato, which uses the same muscle groups associated with breathing. Have the student inhale with his hand on his abdomen. The muscles that are activated are the same muscles that will be "pulsed" later on to produce the change in volume.

To teach vibrato for the first time, put a metronome on quarter note = 60. This will serve as the baseline for all vibrato practice. The student should already be accustomed to practicing long tones with the metronome clicking quarter notes to mark time, but now the click will indicate a "pulse" of the diaphragm muscle. At first, practice pulsing quarter notes with the metronome. Once the student can do this comfortably, have her pulse eighth notes to each click. Finally, have the student pulse sixteenth notes to the metronome click. Once students can do this on individual notes, they are ready to begin practicing this metered pulsing in music. This "faster vibrato will 'lock in' and become embodied into one's playing". (Dietz, 1998, p. 20-21). Weissenborn (1940) etudes from the beginning of the book are excellent for this purpose. These can also be "practiced on long notes, then in a piece like the Handel C minor oboe concerto (1st Movement). The vibrato is, of course, slower in the lowest register than the highest" (Apfelstadt, 1993, p. 38). Students should practice these etudes (or solos) with the metered sixteenth note pulsing to develop their vibrato. After practicing in this manner for several months the vibrato will almost naturally lose its rhythmic intensity, and the previously mentioned register-related vibrato speed will start to happen. Students will

need to keep experimenting with faster and slower speeds of vibrato, but this is an excellent way to begin study.

Former saxophone players may need to be extra cautious when first learning bassoon vibrato to make sure they are keeping their jaw stationary, as jaw vibrato is the most common vibrato technique used by saxophonists. It may be tempting to use the same sort of pitch fluctuation, but this is not appropriate for classical bassoon playing. Clarinet players are likely not used to using vibrato at all, but jazz clarinet players may also have to "unlearn" this jaw movement.

Flicking

Flicking is another bassoon specific technique that is often overlooked. "Most young players and many non-bassoon-playing teachers are wholly unaware of flicking" (Durran, 1997, p. 13). It is possible to play the bassoon without flicking, but notes at the top of the staff will repeatedly crack. Even with flicking these notes can still crack, and the correct manipulation of the half hole and voicing must be exact for crack-free playing. Flicking, also called "snipping", "sniping", or "venting", is crucial for accurate bassoon playing. It is possible to play notes at the top of the staff without flicking, but excessive embouchure pressure and air speed would be necessary (making the pitch go sharp). "Given the difficulty of the task, students often question the necessity of mastering the flicking technique. Take time in this lesson to carefully explain the reason for flicking . . . the student will be much more likely to put in the necessary time to master the technique" (Ewell, 2000, p. 39).

Another way to describe this technique is “the gliding thumb” (Huddleston, 2004). The left thumb must be extremely mobile when playing bassoon, something that will likely be new to both clarinetists and saxophonists. Even though both of these instruments use some thumb motion to manipulate an octave or register key, proper technique on both single reeds involves limited thumb motion. The bassoon does not have a permanent octave key, so “briefly opening one of the thumb keys on the wing joint to temporarily serve as an octave key” is necessary (Durran, 1997, p. 13). Consequently, the bassoon requires the player to constantly be pressing the whisper key, lifting off, and lightly depressing (flicking) another key. This coordination will require much slow and repetitive practice.

As soon as top of the staff notes are taught to students (A, A#, B, C, D) flicking must also be taught. Different keys will need to be flicked for each note as follows: When playing top of the staff A, the A key must be flicked. When playing A#, B, and C, the C key must be flicked. When playing D above the bass clef staff, the D key should be flicked. However, not every student model instrument has this extra key (a fourth key above the whisper key). If the student’s bassoon lacks this key, flicking the C key when playing D is acceptable. The next time a new bassoon is purchased, a high D key would be a very desirable option

Flicking will often require “leaving the whisper key, flicking, and returning to the whisper key” (Durran, 1997, p. 13). Teaching students to not latch on to any one key will help them keep their thumb moving lightly and accurately. Certain passages will only call for flicking and lifting off, but many are far more complicated. Sometimes,

flicking will be impossible because the left thumb will be engaged with another key. In these instances only, it is acceptable to not flick and instead only use faster air and more embouchure pressure to "force" the note into the correct register.

Air speed will also need to be changed when playing wider interval leaps. The higher an interval becomes, "Notice your air must be slightly stronger and that your embouchure must be a little firmer around the reed" (Huddleston, 2004 p. 25). Keep in mind this change is minimal though; increasing either air or embouchure pressure too much will result in sharp pitch.

Specific intervals will even require the simultaneous opening of a half hole and flicking of thumb keys. This is what may make the bassoon seem more difficult than its woodwind peers, and why "young bassoonists feel like small muscle athletes" (Huddleston, 2003, p. 46).

Half Holing

Half holing, coordinated with flicking, is necessary for playing at even a competent level. (Durran, 1997). Just as clarinet players must play across the "break" of their instrument when playing up to a B natural, bassoonists must navigate a break of their own. As in playing from an almost open A sharp to all fingers down B in clarinet, the bassoon has a register break between fourth line F and F sharp. Besides the addition of seven fingers to the note, the bassoonist must also properly manipulate the "half hole" in the index finger of the left hand.

The technique of "half holing requires the left index finger to vent the E hole with a downward rolling motion towards the second finger. In order to properly

execute this technique the E hole should be covered only with the finger's upper portion" (Ewell, 2000, p. 39). Single reed players might have been taught to use the very center of the finger's pad to cover tone holes on their instrument, so this may be a problematic change for those instrumentalists. It is important to use the top of the finger only to cover the first hole, or a much larger part of the finger would have to be moved in order to half hole. However, clarinetists may already be familiar with the basic half holing motion. Opening and closing the bassoon half hole is similar to the rocking of the index finger when playing to [one finger] A on the clarinet (Durran, 2000).

Because a new bassoonist has so many other fundamental skills to be working on "beginner bassoonists should not play at all above open F3 . . . in addition, the pitches over the break of the bassoon use half hole techniques that are uncomfortable for beginners" (Barris, 1997, p. 31). One reason the skill of half holing seems so difficult is "for anatomical reasons. The vertical tipping of the forefinger on the left hand does not come as easily as the horizontal movement of the other fingers" (Klutsch, 2003, p. 14). It may be best to hold off teaching these notes to new bassoonists until they have sufficient finger technique (about a month or two of study). However, this may become problematic in the band rehearsal. Elementary and secondary band bassoon parts are often similar to the trombone part. These parts may go into the half hole range, since it is quite easy for a beginning trombonist to play a "bassoon half hole G" in fourth position. It may be necessary to do some editing to the bassoon part so it contains only F3 and below for the first month of study.

Once students are ready to learn half hole notes, it is crucial to teach how much hole to actually open for each note. The "G" must have more than half of the tone hole open (see Figure 2.1). This note will "produce a growling sound if the student does not open enough of the half-hole with the first finger of the left hand" (Fetters, 2008, p. 61). Coordination between finger movements must also be perfect, or the note may crack. Train your students to have their "fingers move together and perfectly in rhythm" (Huddleston, 2004, p. 22).

Figure 2.1- Left Hand position for "half hole G"

For other notes, the term "half holing" can be misleading. F sharp and A flat in this octave also require a fraction of the E tone hole opened- but not half! For F sharp, slightly more than half of the hole should be opened for crack free sounds (see Figure

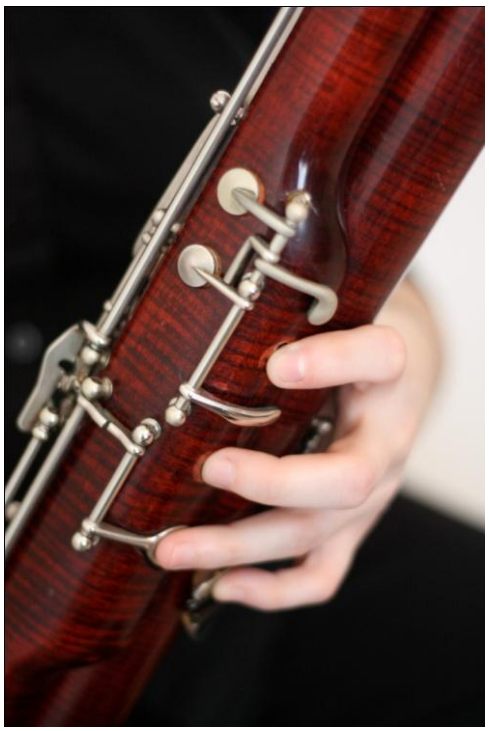
2.2). It may be necessary to open about 2/3 of the hole for both G and F sharp (Durran, 1997). While having too small of an opening may cause the note to crack, having too large an area open will cause the pitch to become sharp. It is a delicate balancing act of having just enough open for free response and even intonation.

Figure 2.2- Left Hand position for "half hole F sharp"

When playing the note A flat, it is particularly important to not have too much hole open (see Figure 2.3). To "play G sharp/ A flat with a clean beginning, you will only open a quarter of the tone hole" (Huddleston, 2004, p. 22). If more than a quarter of the tone hole is open for this note, the beginning of the note will almost certainly crack. This is especially true for the A flat/G sharp in the higher octave. In this high register, it is actually possible to play this note with about only 1/8 of the hole open (see Figure 2.4).

Figure 2.3- Left Hand position for “half hole G sharp/A flat”

Figure 2.4- Left Hand position for “high G sharp/A flat”



Instrument Carriage

Properly holding the bassoon is another aspect of bassoon playing that does not often receive appropriate attention. "Bassoon teachers do a good job of teaching how to form an embouchure and blow into the instrument and finger the notes and play the music, but rarely do they actually teach how to hold the instrument" (Owen, 2001, p. 3). The bassoon might seem intimidating to young students at first, since it must be assembled from five pieces. Saxophone players especially might have trouble understanding why it is important for proper wing joint placement; clarinet players have some experience with assembly from lining up the bridge key on their instrument (see Figure 2.5 for wing and boot joint assembly). All students will have to master putting the bocal in at the proper angle for comfortable and in tune playing.

Figure 2.5- Lining up the bassoon wing joint and boot

It is extremely important to teach young players how to carefully assemble their instrument during the first lesson. The bassoon is a very delicate instrument, and repairs can be costly. "Probably the most important factor contributing to the long life and continued usefulness of an instrument is proper daily care and handling" (Spencer, 1958, p. 19). To properly assemble the instrument: "Insert the wing joint, and twist it to achieve a comfortable adjustment of the whisper key mechanism . . . so that the groove running the length of the wing [lines up with] the boot. After achieving this position . . . the bass joint is inserted in the boot joint. The player should be extremely careful when using this method of assembly, since carelessness can damage the keys or the tenons on the wing and bass joints" (Fox, 2000, p. 6). Lastly, the bell, and then the bocal can be added. Each time the bassoon is assembled, cork grease should be used if the tenons fit tightly. Bear in mind that cork grease should never be used on tenons with cork wrapping. If wrapped tenons are too tight, simply remove string. If wrapped tenons are too loose, more string should be added and sealed with a thin coating of paraffin wax. A twisting motion should always be used for each piece of the bassoon, regardless of tenon style. When putting in the bocal, "be careful to grasp it near the large end. If the bassoon is to be carried any distance, the bocal should not be left in the bassoon" (Spencer, 1958, p. 19). The bocal should be removed and placed tip down into the bell. It will not fall into the bell, and this is the safest place for the bocal when walking with the instrument.

Once the instrument is properly assembled, students must be able to hold it in a balanced position that will facilitate playing the instrument with ease. "Most American

bassoonists hold their instrument with the aid of a seat strap" which is "hooked into a hole on the metal cap of the boot joint. The strap is laid on the seat and the student sits on the strap with the bassoon resting against the right thigh. Student may employ a neck strap…most professional players however find that balancing the instrument with just a neck strap is rather awkward" (Ewell, 2000, p. 36). Using a neck strap results in the reed and bocal entering the mouth at a different angle than using a seat strap alone.

Posture is also important when holding the bassoon. "The best and most relaxed way to play the bassoon is in a seated position . . . where the reed enters straight into the mouth" (Ewell, 2000, p. 37). "Because the bassoon rests on the strap, the body is free of any extra weight" (Vonk, 2006, p. 69). This means there is also less weight for the left arm and hand to support, decreasing the chances for tendonitis or carpal tunnel to occur. Students should sit comfortably straight, with their back away from the back of the chair. This "active" sitting enables the musician to take good breaths, and relieve back strain (Vonk, 2006). The instrument should then be brought into the playing position, with the player looking at the music over the wing joint side of the instrument. "It is important for a player to bring the instrument to his mouth, not the mouth to the instrument" (Barris, 1998, p. 30). The position of the seat strap also affects the playing position. Students should "bring the bocal to his/her mouth by adjusting the height of the instrument via the seat strap . . . A correct angle can be attained by adjusting the position of the seat strap from front to back on the chair" (Durran, 2000, p. 6). See Figure 2.6 for the proper position of the seat strap on the chair, and Figure 2.7 for an illustration of improper position. This is another reason why a seat strap is preferable to

a neck strap- “neck straps . . . cause the instrument to fall at an awkward angle” that cannot be adjusted (Barris & Jampole, 1998, p. 29).

Figure 2.6- Position of the seat strap to create the proper playing position

Figure 2.7- Incorrect position of the seat strap on the chair

There are three contact points between the bassoonist and bassoon. "The most passive is the outside of the right thigh. The leg helps balance the instrument in conjunction with the left hand. The point of contact on the left hand is the corner of the palm at the base of the index finger . . . The right hand is to keep the bassoon from rotating on its axis to the left and away from the player" (Durran, 1997, p. 6). Obviously, the mouth is also in contact with the bassoon via the reed, but this should never be thought of as a way to control the instrument's position. See Figure 2.8 for a visual of the correct bassoon playing position.

Figure 2.8- The bassoon in the proper playing position

The left hand plays a large role in how the bassoon is held, and proper left hand position can also assist with half holing technique. With the left hand in the correct spot, rolling the index finger down to half hole is much easier. Students should know the left hand "index and middle finger will be markedly curved. The end of the middle finger, rather than the flat of the finger (as in clarinet), should cover the second tone hole. The ring finger will be rather flat to reach its tone hole" (Durran, 2000, p. 7). This gets the hand in the correct shape for supporting the instrument. Students should also make sure they are using the correct muscle in the left hand when half holing. To find this muscle, "hold your *left* hand as if you were going to shake someone's hand. Maintain this position while moving the index finger up and down. The index finger should move in a scissor-like motion from the palm" (Durran, 2000, p. 11). Students should practice this exercise frequently to build up this fine motor control. It is important not to pick up the left hand index finger when playing bassoon, and rolling the finger down using this muscle will ensure the finger stays down.

Performing all of these tasks at once can seem daunting. "Managing to balance the bassoon and to play an instrument that has such extraordinary coordination demands can be a very challenging endeavor. A bassoon instructor must be constantly vigilant when teaching the student to hold the bassoon in a well-balanced position while still maintaining a relaxed posture" (Huddleston, 2004, p. 44). It is helpful for students to watch themselves in front of a mirror while practicing. This way they can monitor their own half holing, instrument and hand position, and even embouchure when their teacher is not watching.

Another position students can watch while practicing in front of a mirror is the shape of their fingers. As stated before, only the first and second fingers will be arched. To reach the tone hole, the third finger will need to be significantly less arched. (see Figure 2.9). Having the index and middle fingers laying flat across the instrument will make it difficult to play technical music at higher speeds. This will also help maintain stability in the left hand and thumb, since the tone holes will be fully closed. When all fingers are flat it is more difficult to get a good seal over the tone holes, and the resulting adjustments will create instability in the fingers. (Huddleston, 2004). Clarinet players are used to having to seal tone holes with the pads of their fingers, and saxophone players are used to keeping their fingers arched to facilitate technical playing. This may be one area in which single-reed players have a head start in learning bassoon.

Figure 2.9- Left Hand position for non-half hole notes

There is some debate about the usefulness of a hand rest for the right hand. Some believe a "hand rest on the boot joint will be invaluable in helping to maintain the correct position of the right hand" (Pence, 1999, p. 2). "A somewhat greater number of bassoonists, including myself, do not use the hand rest, preferring the freedom of motion without its use. Particularly, with young players, the hand rest never seems to be the proper height nor placed in a comfortable position. Also, the resultant sharp bend in the wrist when using the hand rest gives me concern about carpal tunnel syndrome" (Durran, 1997, p. 6). Generally, the most comfortable option will be what

students are used to. Given the possible health problems related to hand rest usage, it may be in the student's best interest to forgo using the rest.

Finally, it is important to add that the "resting" position (carriage of the instrument when the student is not actively playing it) for the bassoon is crucial to ensure water does not collect in the tone holes. Flute, clarinet, and even former saxophone players might be used to a "concert rest position" (when the instrument is laid across the lap when sitting for long periods of time). This will not work for the bassoon for two reasons: laying the bassoon down across the lap is difficult because of its length. Unless the student sits at the end of a row, there will be no room to sit with the bassoon in a position matching that of the other woodwinds. More importantly, laying the bassoon down horizontally will cause condensation in the bocal and wing joint to run down into the tone holes. This water can be a nuisance when it leaks out, and will cause extremely frustrating "gurgling" sounds on certain notes. There is no way to get rid of this accumulated water besides loudly blowing out (into) the affected tone hole. Repeated exposure of the tone hole to water may cause the finish of the instrument to wear off. Additionally, this condensation can run into the unlined section of the boot, leading to irreparable dry rot. Therefore, "always keep your bassoon in a vertical (upright) position" (Froseth, 2005, p. 3). This also means that bassoon students should swab out and return their instrument to the case during rehearsal breaks. Not only is laying the instrument across two chairs asking for disaster, it could result in watery tone holes and ruined pads!

A wealth of information is available pertaining to bassoon instruction, but not all of it is easily accessible by music educators. Busy band directors may not have the time to locate and read through all these materials when starting new students, so the most important concepts have been identified and discussed here. By focusing on these fundamental skills from the initial bassoon lesson, students can get set up for long-term success on the instrument. Emphasizing proper breath support, voicing, flicking, half holing and instrument carriage ensures beginning students have the proper tools to play the bassoon at a high level of proficiency.

CHAPTER III

METHODOLOGY FOR SURVEY

In this chapter I explain the methodology for the survey to determine what single-reed players found challenging about the bassoon coming from their previous instrument. The survey inquired about the techniques that are similar or different between single-reed instruments and bassoon, and specific difficulties encountered by participants. Participant selection for the survey is discussed, as well as the rationale for certain questions. Survey question development was based on the "Fundamental Skills" identified and discussed in Chapter 2. The processes followed to qualify for Human Subjects-based research are provided, and Pennsylvania State University IRB certification information is given. Finally, the processes followed to collect and analyze the collected survey data are provided so this study may be replicated.

Design

The purpose of this portion of the project was to question single-reed players learning bassoon to determine what they found most challenging about bassoon, and how they thought playing their instrument was similar or different to playing bassoon. The design was descriptive and each respondent was asked the same series of multiple choice and open ended questions. The results were compared and analyzed to see if any similarities existed among players of the same instrument who were learning bassoon. Four persons were asked to participate; two clarinetists and two saxophonists. Three of the four respondents were Penn State School of Music students at the time of survey administration, while the fourth was a recent graduate of the program.

Participant Selection

The selection of participants was based on several factors. Participants needed to be single-reed music majors who had taken a bassoon techniques course in the past three years, and not been more than one year removed from their collegiate study. Every student who met these criteria was invited to take part via an initial email. No flute players were available to participate. Of the eligible single-reed players, two clarinetists and two saxophonists were willing and able to participate. Gender was not a consideration for this study, but both responding saxophonists were male, and both clarinetists were female. All of the participants were between the ages of 20 to 30. Participants were invited to give their contact information for possible participation in a follow up interview, but both clarinetists declined. Therefore, it was not appropriate to conduct a follow up interview of only saxophone players, since no accompanying clarinet data would be available for comparison.

Questionnaire Development

The data used for the study were collected by using a 2 part questionnaire, which included two open ended questions for the respondent to elaborate on what they personally found most challenging about bassoon and suggestions for someone who plays their own instrument when learning bassoon. All participants were asked the same questions, regardless of their major instrument.

The questions were designed to purposely correlate with the fundamental skills described in Chapter 2. Since the purpose of this thesis was to assist band directors or teachers of bassoon who are not bassoonists themselves, it made sense to thoroughly

explain each concept and strategies for teaching it before mentioning it in survey data. This also made it possible for teachers switching a particular instrumentalist to use the survey as a guide. The teacher could determine what specifically might challenge their students, and then obtain resources and identify strategies for teaching those challenging skills in the same document. The questionnaire distributed to participants in the study can be found in Appendix A.

Questions 1 and 2 were designed to collect basic information about each respondent, including their primary instrument and when they took a bassoon techniques course. This ensured that the person submitting the survey met the participation criteria. Question 3 asked about the overall level of perceived difficulty of bassoon, which could then be compared to how difficult other aspects of bassoon playing were. Questions 4 through 7 asked about embouchure and breath support, and how similar, different and challenging this was compared to their primary instrument. Questions 8 and 9 dealt with voicing in the same fashion, again asking if it were similar, different from their own instrument. Participants were able to answer "N/A" to this question if they did not utilize voicing on their own instrument. Questions 10 through 12 pertained to flicking, while questions 13 to 15 asked about half holing. Questions 16-18 asked participants about instrument carriage on the bassoon, and which support system (if any) they use for their own instrument and bassoon. Questions 18 , 19 and 20 asked participants about articulations on bassoon and their primary instrument.

Each of the preceding questions was answered with a four-point Likert scale. This scale was chosen in place of a five-point scale to force participants to make a

decision for each question. Instead of selecting "3", or "no opinion", participants had to take a side for each issue presented.

Two final open-ended questions were also included on the questionnaire. The first question asked the participant to make suggestions for someone playing their instrument who is learning bassoon. The second open-ended question asked the participant to describe in further detail what they found most challenging about bassoon. These responses may give music teachers and students a better idea of what to expect when teaching or learning bassoon.

Procedures

In accordance with the Office for Research Protections guidelines, it was noted on the questionnaire and invitation to participate that all questions were optional. To align with research guidelines, participants completed an "Informed Consent" form before proceeding with the questionnaire. A sample copy of this Informed Consent form is provided in Appendix B.

Participants arrived at the online survey from the recruitment email. Each eligible participant was contacted and given an individual link to the questionnaire. Each participant had unlimited time to complete the questionnaire, and had the option of finishing it at a later time. Participants were told to print a copy of the informed consent form for their own records from the starting page at Survey Monkey.

Before survey participants completed the online questionnaire, it was piloted by a Music Education brass major. This person took the same version of the questionnaire

as the actual participants to ensure the questions were clear and all links functioning. During this stage, I also took the questionnaire several times to confirm accuracy.

Data Analysis

Responses were then downloaded by the Primary Investigator and reviewed to determine any recurring trends, similarities, and differences between clarinet and saxophone participants' responses. Answers to the multiple choice questions were compared individually by instrument. Clarinet and Saxophone responses were then compared as well.

All participants answered all 22 questions. Two clarinet players and two saxophonists completed the questionnaire. Results are presented in Chapter IV. The clarinet player's responses were compared and analyzed and are reported in the "Clarinet" subsection, and saxophonist's responses in the "Saxophone" subsection. The clarinet and saxophone data were compared against each other and results of this comparison can be found in the "Synthesis" section.

CHAPTER IV

SWITCHING TO THE BASSOON

The purpose of distributing the questionnaire to single-reed players was to determine the challenges they face when switching to bassoon. Questions attempted to establish which, if any, skills from the previous instrument carried over to bassoon, and which of these skills were helpful. By knowing specifically what fundamental bassoon skills single-reed players found difficult, band directors can tailor bassoon lessons to students based on the instrument from which they are switching. Each clarinetist and saxophonist's answers were analyzed and are summarized below. To protect the identity of each participant, a letter was assigned to each clarinet and saxophone player. Every participant completed the same questionnaire from the online provider Survey Monkey.

From Clarinet

Two clarinetists completed the questionnaire for this study. Both were current Penn State students at the time of the survey. Both clarinetists also happened to be female, but gender was not an intended variable for the study. One clarinet player took the bassoon techniques course as a senior in the Music Education program, while another took the course as a junior. One participant has had experience performing with bands, orchestras, and chamber groups, while the other student's experience is mainly with concert bands. Both clarinet players have had experience playing the auxiliary clarinets, including bass, alto, and E flat soprano clarinet.

Clarinetist "A"

Clarinetist "A" began playing clarinet while a student in public school, and had no experience playing or teaching bassoon before taking the bassoon techniques course. Overall, "A" indicated learning to play bassoon was "medium difficult". "A" also responded that bassoon was "not similar" to their primary instrument, clarinet.

This student found the bassoon embouchure different from what was learned and practiced for clarinet, indicating that the embouchure was "not similar" to the clarinet embouchure. However, "A" said certain similarities existed between the clarinet embouchure and learning the bassoon embouchure, but did not elaborate. This is one area in which having a prior background in another instrument may help the beginning bassoonist. Making connections to already acquired skills could lessen the overwhelming aspects of learning a complicated and new instrument.

Clarinetist "A" also wrote that the breath support used for bassoon and clarinet are the same. Clarinetist "A" utilizes voicing as a part of clarinet performance, but said that voicing on the bassoon is "not similar" to voicing from the primary instrument. Overall, "A" found voicing on the bassoon to be "medium difficult".

When asked about flicking, "A" indicated the need to "flick" or vent keys on the clarinet to improve pitch or response, and found bassoon flicking to be "medium difficult". "A" also noted that an improvement in playing was heard when flicking diligently.

Half holing was "medium easy" for Clarinetist "A", but they found nothing similar to manipulating a half hole on the clarinet. The only other wind instrument in existence

today that requires the use of a half hole is recorder, so most band students will come to the bassoon completely new to this skill.

Clarinetist "A" responded that they use a neck strap to assist with holding the clarinet, and that holding and playing the bassoon felt "very awkward". "A" also used a short reach (keyed 3rd tone hole) bassoon which limited the distance the left hand ring finger has to stretch. This keyed mechanism, in theory, reduces the stress on the left hand since a more natural hand position can be used. With an open third tone hole, the ring finger must reach much further down the length of the wing joint to completely seal the bore.

In the course of the techniques class, "A" found that articulating on the bassoon and clarinet were similar, since contact needed to be made on a specific part of the reed. The participant did not indicate which part of the reed was used on clarinet, but in the bassoon course students are instructed to articulate just to the left of center on the reed. "A" found this bassoon articulation to be "medium easy".

Finally, "A" said the most helpful suggestion they would make to a clarinetist learning to play the bassoon is to "make sure you practice every day". Careful and slow repetition is taught as a part of the techniques course in order to ensure students are progressing in the right direction. "A" also stated that the most challenging aspect about learning bassoon was "keeping the fingerings straight because they don't seem to make logical sense". This is especially true in the third octave of the bassoon, where most of the solo repertoire is written. The lower two octaves actually are quite logical; as fingers are added, the tube is lengthened and lower pitches are achieved. The flick

keys are also logically arranged, since each successive flicking note uses the next highest "flick" key.

Clarinetist "B"

Clarinetist "B" commented in a way similar to Clarinetist "A". Some aspects of bassoon playing were found difficult, especially the ability to flick, hold the instrument properly, and remember fingerings.

"B" participated in bassoon techniques class the same semester as "A", so both had the exact same bassoon instruction. "B" found playing the bassoon harder than Clarinetist "A", rating it "most difficult". "B" also found it more unlike clarinet than "A", indicating bassoon was "not similar at all" to clarinet.

When asked about the bassoon embouchure, Clarinetist "B" said it was "not similar at all" to the clarinet embouchure. Unlike "A" however, "B" did not find any similarities between learning the clarinet embouchure and learning the bassoon embouchure. Clarinetist "B" also indicated that the breath support used on bassoon was different, since playing bassoon "requires a deep breath for an effective sound". This seems to suggest that bassoon may require more air than a clarinet player is accustomed to using.

"B" also found that voicing on the bassoon was "similar" to the voicing used on clarinet, but still found it to be "medium difficult". Voicing on the bassoon requires a slight change in the oral cavity shape for each note, while traditional clarinet voicing only changes in the throat based on register. "The mechanism of the instrument, plus a small, nearly automatic throat opening for the clarion notes, will produce the required

register" (Anderson, 1996, p.24). "Clarion" refers to the middle register of the clarinet that utilizes the register key.

In regard to flicking, Clarinetist "B" also indicated the need to flick keys to improve pitch on the clarinet, and found this task "medium difficult" on the bassoon. "B" also noted an improvement in her bassoon playing when flicking versus not flicking. Clarinetist "B" indicated no need to manipulate a half hole on the clarinet, and found this task "medium difficult", harder than "A" found the skill.

"B" also uses a neck strap/harness system to support the clarinet, but only found the bassoon to be "awkward". This participant also learned bassoon on a short reach model. Like Clarinetist "A", "B" also found articulating on bassoon to be "medium easy".

Remembering the fingerings was hardest for Clarinetist "B". She stated that bassoon "requires a lot more work and thought when learning fingerings" than clarinet, and that "fingerings were very difficult for me to understand and process mentally". Both clarinetists found this to be an area of adversity, so instrumental music teachers may want to focus on reinforcing the correct fingerings in addition to the previously mentioned fundamental skills.

Both clarinet players experienced similar problems when learning bassoon and their answers to the multiple choice questions were similar. Additionally, learning the correct fingering was a cause for concern noted by both clarinetists. This was not one of the anticipated problem areas, although some other predicted tasks were mentioned as

being difficult. Fundamental bassoon skills both clarinet players reported as being at least “medium difficult” or “medium awkward” were flicking and instrument carriage.

From Saxophone

Each saxophonist surveyed for this project was a Music Education major at the Penn State School of Music at one point, and one of the participants was a recent graduate. Both took bassoon techniques within three semesters of each other, and the same material was covered in both classes. Both Saxophonists “A” and “B” have experience playing in concert and jazz ensembles, and both have extensively performed on alto and tenor saxophone. Saxophonist “B” has had more performance experience on baritone saxophone.

Saxophonist “A”

Saxophonist “A” found that playing the bassoon overall was “medium difficult”, but “similar” to playing saxophone. Saxophonist “A” also found the bassoon embouchure “similar” to the saxophone embouchure. “A” stated that “more than half of the embouchure was comparable to playing the saxophone. The only difference was the double lip instead of only one lip and resting my teeth on the top of the mouthpiece. The way in which I formed my embouchure however [was different] with equal pressure on all points of the playing apparatus”.

“A” also found breath support between saxophone and bassoon to be similar, saying “the support required to set the reed or lips into motion is very similar. In playing saxophone it requires minimal air to set the reed into vibration but much more substantial breath support to keep it there, and I found this very similar to producing

sound on the bassoon". "A" observed that it takes minimal air to start producing a sound on bassoon, but the class is taught to build up air pressure in the mouth prior to starting a note. This build up of air causes the cheeks to inflate, and quite a bit of air pressure is expelled at the start of the note. This build up of pressure, however, means that a smaller quantity of air needs to be used.

Voicing was "very similar" for Saxophonist "A". He further explained that "saxophone requires a great deal of voicing, both in extended technique, but also in centering this pitch and creating a mature tone quality. On bassoon this is also true in creating a good tone as well as centering pitches on specific notes". In the techniques course, voicing was taught as a means of stabilizing pitch and tone on the instrument, not to achieve an altissimo register as "A" was initially used to. From the author's perspective, saxophone playing requires a greater deal of oral cavity shape change to impact sound, especially when trying to expand into the altissimo range. Bassoon uses a comparatively minor vowel change to focus the tone and center pitch. "A" found voicing on the bassoon to be "medium easy", probably because he was already accustomed to changing vowel shapes in the oral cavity.

Saxophonist "A" indicated the need to flick/vent keys on the saxophone to improve pitch, and found flicking on the bassoon to be "medium easy". "A" also noticed an improvement in bassoon playing when flicking- especially with fewer cracked notes. Saxophonist "A" found bassoon flicking to be "medium easy".

"A" did not think of any technique on saxophone that was similar to half holing on the bassoon, and thought this skill was "medium difficult" on bassoon. Saxophonist

"A" also uses a neck strap when playing alto and tenor sax, and found the bassoon playing position "awkward". "A" used a short reach bassoon, and had the added benefit of not having to use a more open left hand position.

Articulating on bassoon and saxophones were similar for Saxophonist "A" "in that I am applying my tongue directly to the reed to stop the vibration. It was different in how much closer to the tip I had to be when articulating on bassoon as opposed to the saxophone". This is especially true in the low register of the bassoon (under the bass clef staff), since students must greatly back off the reed to allow for free vibrations. It is also important to note that the sound never should be stopped using the tongue except to create a special effect. The bassoonist should instead taper off the air to stop a note from sounding. Articulating on bassoon was "medium easy" for this participant, across all ranges of the instrument.

Saxophonist "A" said "the major difference is dealing with open tone holes . . . Pushing the right buttons on saxophone is much easier than on bassoon because of the fact that all of the tone holes are covered. Also, the manipulation of the oral cavity does not occur to such an extent on the bassoon as it does on saxophone, so over voicing could be a problem". "A" made the same discovery as the author (when learning saxophone) that the voicing changes on saxophone need to be much more exaggerated. Band directors need to remind advanced sax players that the voicing concept is the same between instruments, but the execution is much different.

The largest obstacle Saxophonist "A" faced was the "very uniqueness of the instrument was very challenging to get used to . . . Half holing and flicking were the two

[skills] that I had to get used to the most, and these are where I could foresee students getting hung up on when learning the bassoon". These observations may be very useful for band directors, either bassoonists or other instrumentalists. A bassoonist may not be able to recall what exactly was so "unique" about the instrument when first learning it, while another musician may not know what skill is the most difficult to master.

Saxophonist "B"

Saxophonist "B" found playing the bassoon overall to be "medium difficult", and "not similar" to playing saxophone. "B" also discovered that the bassoon embouchure was "not similar" to his saxophone embouchure, since she was used to "having my teeth placed on top of a mouthpiece". This double-lipped embouchure is a new sensation for most players, excluding the few clarinetists who use a double-lipped embouchure. Saxophonist "A" mentioned this double-lipped saxophone embouchure is "completely unheard of", so it's unlikely this would be a familiar sensation for student saxophonists.

Saxophonist "B", like "A", claimed that bassoon and saxophone use similar breath support. This seems to be one constant skill between bassoon and saxophone for students. Clarinetists however, indicated differences between the amount of air needed to play bassoon and clarinet. One possible reason for this is the difference in bore shape between instruments, but further research would be needed to determine correlations between bore tapers and air resistance. Both saxophone and bassoon have conical bores that flare in dimension from end to the other, but the clarinet has a cylindrical bore that is consistent in diameter throughout the length of the instrument.

This might impact resistance, and therefore the amount of breath support needed by students to play each instrument.

In regard to voicing, Saxophonist "B" found the skill on saxophone and bassoon to be "very similar". He stated, "tongue position in the oral cavity was an important factor in voicing on my instrument and the bassoon". "B" also said that bassoon voicing was "medium easy". This may be an easy concept for saxophonists to learn because they might already be using some form of voicing on their primary instrument. "B" did not mention the problem of "over voicing" that Saxophonist "A" raised, but it is important to remind saxophone players accustomed to voicing not to overdo it on bassoon.

Saxophonist "B" indicated he has to flick or depress keys on saxophone to improve pitch and responsiveness, just as top of the staff notes on bassoon need extra keys vented to speak properly. "B" did find this bassoon skill to be "medium difficult", probably because flicking on bassoon requires much more thumb mobility. The thumb must often start on the whisper key, depress one of the flick keys, and return to the whisper key for the next note. This maneuverability is typical for advanced saxophone players, but the thumb is still only required to operate one octave key. While saxophonists may be accustomed to technical passages utilizing a variety of fingerings, learning to keep the thumb mobile is a new skill. "B" also indicated a difference when flicking versus not flicking on bassoon, showing how important this skill is to achieve a good sound.

Saxophonist “B” had no need to manipulate any sort of half or open hole on the saxophone, and found this fundamental skill “most difficult” on bassoon. “B” uses a neck strap to help support the saxophone, and said holding the bassoon was “not awkward”. “B” did not have the opportunity to play on a closed third hole “short reach” bassoon, so instrument carriage may have actually been hardest for this participant. “B” indicated instrument carriage was not a problem in spite of this, so his experience switching from baritone sax and other large instruments might have been a helpful influence. Alto saxophone and clarinet players especially may have a hard time at first balancing such a large instrument diagonally across their body.

Saxophonist “B” found no similarity between articulation on bassoon and articulating on saxophone, indicating this skill as “medium difficult”. This may be related to the way the lips and jaw are situated on bassoon, since the teeth are not in contact with the mouthpiece.

“B” made the suggestion that student saxophonists learning bassoon obtain a copy of the “Bassoon Methods 154” book from Daryl Durran, Professor of Bassoon at Penn State. “B” recommended this book “instead of their regular [band method] book”. Saxophonist “B” would also “tell them [students] that the breath support is the same, as well as the voicing”. Making these connections between instruments can help simplify the amount of information students studying bassoon must learn.

The hardest skills for Saxophonist “B” when learning bassoon were half holing and flicking, since “I wasn’t used to half holing or flicking on the saxophone, so having to do that was difficult to do when I first started bassoon. It was a little odd not having a

neck strap, but I was able to find a comfortable position with the chair strap quickly". It may be awkward for students to not have a neck strap initially, but it is important to insist on using the seat strap. As discussed in Chapter 2, the use of a neck strap on bassoon changes the angle at which the reed and bocal enter the mouth. This difference in angle has the potential to drastically change pitch on certain notes, and the neck may also have to be held at an uncomfortable angle to accommodate this setup. Using a seat strap from the start might make it easier for students to get used to instrument carriage on the bassoon. Trying to change from the neck strap may be harder later on once students have established a playing position.

Synthesis

After analyzing the individual survey responses, some trends were noticed regarding which skills participants found most easy or difficult to learn. The answers were similar based on the participant's major single reed instrument. Clarinet players seemed to find the same skills difficult, while both saxophonists found other skills difficult. As a whole, the clarinet players thought bassoon was harder than saxophone players.

When asked about the overall difficulty of bassoon, the clarinetists answered "medium difficult" and "most difficult". Both saxophonists answered "medium difficult". When asked about overall similarity to the primary instrument, the clarinetists both answered "not similar at all". The saxophonists answered "similar" and "not similar". From these answers alone, it seems that students switching from

saxophone would have an easier time learning bassoon due to the perceived similarities between instruments.

When asked about specific skills on the instruments, the clarinetists and saxophonists again gave similar answers based on their primary instrument. The clarinetists found that the bassoon embouchure is "not similar" and "not similar at all" to their clarinet embouchure. The saxophonists said the embouchure was "similar" and "not similar". Again, saxophonists switching to bassoon may have an advantage, since the embouchure for both instruments utilizes consistent pressure on all sides of the reed or mouthpiece. Clarinet players may be accustomed to playing with more pressure against the lower lip and bottom of the reed and mouthpiece. This "biting" sensation may inadvertently carry over to bassoon where it inhibits the vibration of the double reed.

Almost all of the participants found that breath support between their own instrument and the bassoon was the same. One clarinetist stated that more air was needed on bassoon than clarinet, but the other three participants all claimed no difference in the amount of air and support needed to play bassoon well. This is one of the few areas in which a teacher may be able to instruct students not to change anything from the previous instrument when learning bassoon.

Voicing, however, is another area in which saxophonists seem to have a clear advantage. The clarinetists thought voicing was "not similar" and "similar" to the voicing done on clarinet, with both saxophonists answering that the bassoon voicing was "very similar". Additionally, the clarinetists both found this skill "medium difficult".

Both saxophonists said bassoon voicing was “medium easy”. The clarinet players were not accustomed to using vibrato for each note, since they tend to use slight adjustments in throat opening to help each register speak (Anderson, 1996). The saxophone players questioned in this study are used to a more pronounced change in oral cavity shape for each register change, especially in the altissimo register. Additionally, these saxophonists indicated they use voicing change as part of their vibrato. As saxophonist “A” said, “we use voicing for everything”. It is important to remind saxophonists switching to bassoon that although the concept and execution of the skill are the same, the actual cavity change required for bassoon is quite small compared to saxophone. As long as saxophonists are reminded not to “over voice” this is another area in which prior saxophone experience can be helpful.

In regard to flicking, both clarinetists indicated having to “vent” keys to improve pitch, but did not have to systematically depress keys for notes across the break in order to get them to speak clearly. Saxophonists also indicated having to depress keys to improve response for certain notes. Both clarinetists said that flicking on bassoon was “medium difficult”. The saxophonists claimed flicking was “medium difficult” and “medium easy”. This is a fundamental skill in which it does not seem to matter on which instrument students have experience. Generally, the participants found the skill to be somewhat difficult, and no other single reed instrument requires the use of such systematic key venting for certain notes. It is worth noting that all participants found flicking for top of the staff notes on bassoon improved sound and response. In the author’s experience, students who have not been taught flicking from the start often

claim hearing no difference in the sound whether using the technique or not. These students may get used to the initial crack sounding during articulations, so it is especially important to teach these pupils to listen for subtle differences in tone and response when flicking versus not flicking.

When asked about the difficulty of learning how to half hole on bassoon, the clarinetists seem to have had an advantage. They reported not having to manipulate a half hole on their instrument, but one found the skill to be "medium easy", while the other thought it was only "medium difficult". The saxophonists thought half holing was "medium difficult" and "most difficult". Although the clarinet players did not report having an easy time learning this skill, they certainly struggled less than the saxophone players did. The saxophone players are not even used to having to cover open tone holes like clarinetists, so trying to properly cover fractions of the hole may seem arduous. This is one situation in which clarinet players seem to have an easier time learning a fundamental skill. Although the clarinetists involved in the study did not indicate so, other clarinet players sometimes employ half holing when playing legato into their altissimo. "This 'half hole' technique is needed when playing intervals of a fourth or more to the altissimo register so to avoid the sudden change in air direction and pressure that produces a 'pop' when this finger is lifted completely open…produces a more effective altissimo due to a more proper vent size" (Anderson, 1996, p. 34). The clarinet players surveyed are used to having to cover open holes, and so learning a technique on bassoon that is similar to one used by certain clarinetists might seem more straightforward.

All of the musicians participating in the survey reported using a harness or neck strap to help hold their instrument when playing. The clarinet players said that compared to their primary instrument, holding the bassoon in the playing position was "awkward" and "very awkward". The saxophonists claimed holding the bassoon was "awkward" and "not awkward". The clarinetists had to deal with more of a change when learning bassoon, since their primary instrument is much smaller overall. Even clarinetists that have experience with bass clarinet need to get used to holding and playing an instrument held at an angle across the body. The saxophonists likely held their alto saxophones in this manner as younger students, and may not have been as distracted by securing a bassoon in this position. The saxophonist who reported having the easiest time with instrument carriage on bassoon actually was the only participant that had to use an open left hand third hole bassoon. This participant's extensive experience playing baritone saxophone might have prepared him for the challenge of holding a bassoon diagonally across the body while maintaining proper finger position to seal off each hole. Instrument carriage is one more fundamental area in which saxophonists seem to have the advantage from skills learned and transferred from their primary instrument.

In regard to articulating on the bassoon reed, each participant provided generally the same answer. They said it was similar to bassoon, and "medium easy", except for one saxophonist that thought it was "medium difficult". Compared to the perceived difficulty with other fundamental bassoon skills, articulation seems to be one area in which students are able to quickly grasp and execute the proper technique.

Articulation appears to be a skill in which it does not matter from which single-reed instrument the student is switching, since both clarinets and saxophonists generally do well learning to correctly articulate on a bassoon reed.

After analyzing the survey data, it seems that saxophonists have a slight edge when transferring to bassoon, since more of their skills are applicable and helpful when learning bassoon. They reported an overall easier experience when learning bassoon. Clarinet players are not to be discouraged though, because their background in covering open tone holes seems to give an advantage when learning to half hole on bassoon. Saxophone players reported having an easier time learning and executing voicing and instrument carriage, while single-reed players all faced equal difficulty learning flicking. However, most participants indicated that breath support for bassoon was the same as support learned for their primary instrument. The participants also discovered that articulating on bassoon was very similar to articulating on their primary instruments. See Table 4.1 for which single-reed instrument has the "advantage" for each aforementioned skill. Though bassoon may seem like a completely unnatural and strange instrument, single-reed players may already have some prior knowledge to apply to bassoon study.

Table 4.1: Skill Advantage by Single-Reed Instrument

SKILL	INSTRUMENT WITH "ADVANTAGE"	RATIONALE
Breath Support	N/A	Similar across all instruments
Embouchure	Saxophone	Equal pressure from all sides, no top to bottom "biting"
Voicing	Saxophone	Acclimated to frequent oral cavity shape changes
Flicking	N/A	No similar technique exists for either single-reed instrument
Half Holing	Clarinet	Experience with covering open tone holes
Instrument Carriage	Saxophone	Accustomed to holding heavier instruments (tenor, baritone sax) diagonally across body
Articulation	N/A	Similar across all instruments

CHAPTER FIVE

COMMON BAND METHOD BOOKS

Instrumental music teachers, especially those in elementary and junior high settings typically use some sort of method or technique book with their students. These books provide a means to ensure that each student is exposed to the same musical material. Moving through the book sequentially also ensures that students learning different instruments are simultaneously learning similar notes, rhythms, concepts, and pieces. This similarity helps the teacher in the event that lesson groups are not homogenous (groups that are comprised of several different instruments). While helpful in these heterogeneous settings, this "one size fits all" approach may not be advantageous when teaching bassoon lessons. In this chapter, band method books are evaluated based on their appropriateness for teaching fundamental bassoon skills. A list of specific exercises that can be used to teach half holing and flicking is provided after each method book review. Table 5.2 (at the end of the chapter) lists specific exercises from each method book that address these fundamental skills.

Most bassoon teachers will use a book dedicated to teaching bassoon when starting new students. "The most important and universally recognized bassoon method is the *Practical Method for Bassoon* by Julius Weissenborn" (Dietz, 1998, p. 74). Every exercise in the book considers the technical challenges of the bassoon, and the book moves at a much slower pace at first than many of the "traditional" band methods. However, students must have previous knowledge of musical notation. The book does not include the fundamentals of written music, so if the student is a "true

beginner, a suggested course of study is the *Elementary Method for Bassoon* published by Rubank" (Dietz, 1998, p. 74). Dietz also suggested moving students out of the Rubank method and into the Weissenborn book as soon as possible.

Even though these homogenous method books (such as Rubank) may not be best suited for bassoon study, the teacher can still adapt these books by taking the most useful exercises (from a bassoon technique point of view) and supplementing them with examples from the Weissenborn book. In this chapter, I identify several common band method books, and systematically evaluate them from a bassoonist's perspective. Exercises from each book are listed based on what technique they could be used to teach or reinforce (half holing, flicking, voicing). Comparable pages for the Weissenborn book are also provided so the teacher may easily refer students to similar exercises with notes the students already know. While the band method book may be lacking bassoon specific exercises, the Weissenborn book could be overwhelming to new students because of its depth. Using a combination of these books may be the happy medium a beginner bassoonist needs. Information is provided after each method book example to detail how the book might be used in a complimentary manner with the Weissenborn book. Doing so will enable the teacher to more thoroughly focus on fundamental bassoon technique.

"Weissenborn Method for Bassoon" Julius Weissenborn, 1940, rev. 1996

This is "the most important and universally recognized bassoon method" (Dietz, 1998, p. 74). The standard "New Enlarged Edition" also contains 25 studies in all keys by Ludwig Milde, and "Fifty Additional Studies" by Weissenborn. These extra etudes are

very technically challenging, and as such should not be used with a beginner bassoonist. The first (and largest) section of the book, named “Practical Exercises” however, is excellent for teaching the fundamentals.

The first note taught is second space “C” on the bass clef staff, a very stable note on the instrument. Besides being well in tune, this note is easy for a beginner to play because it uses four left hand fingers. This enables students to get a good grasp on the instrument, and hold the bassoon comfortably. It is significantly harder to do this with notes like “F”, where only one left hand finger is used. Balancing the bassoon without the use of other fingers may seem initially awkward, and might even cause students to form improper instrument carriage habits.

However, students must have previous knowledge of music notation and theory. Students switching from another woodwind instrument may not know the names of bass clef notes, so practice without the Weissenborn book may need to be focused on note names. The book also uses a great variety of modes and meters. Within the first 22 pages, the following meter signatures are utilized: 4/4, 3/4. 6/4, 6/8, 2/4, cut time, 3/2, 4/2, and 4/8. All of these meter signatures are typically not taught in most elementary and middle school instrumental settings. This text provides an opportunity for students to learn a variety of meter signatures from the start, and so it may be necessary to skip certain exercises with younger students until they can comprehend the rhythms. Younger students have the ability to learn these meter signatures, but the goal when using the Weissenborn book is to isolate difficult aspects of bassoon

technique. Compounding note reading and fundamental technique mastery with unfamiliar meters may not be appropriate at this early stage of instruction.

While the rhythms used in the Weissenborn book are considerably harder than those found in a traditional band method book, notes are introduced at a much slower pace. Half hole notes are purposely not introduced until page 25, which could represent several months of study (if the student is assigned one-two pages a week). Easier notes are introduced and reinforced before more advanced techniques are introduced. Band methods, especially those for heterogeneous lesson settings, may inadvertently introduce half hole and flicking notes before bassoon students are ready.

These multipurpose books are used to teach bassoon, trombone, and euphonium in the same course. While the Weissenborn book quickly begins to focus on the lower register of the bassoon because of its ease of fingerings and embouchure, young low brass players usually find these notes difficult. Playing at the bottom of the bass clef staff may be relatively simple for a new bassoonist, but not so for a new trombonist. Comparatively, playing at the top of the bass clef staff is common for beginner trombone and euphonium students, and the first pitches produced should be between F3 and Bb 3 (Whitener, 20007). However, these same notes present a special flicking, voicing, and half holing problem for bassoonists. Using Weissenborn exercises helps keep the student bassoonist in a friendly register.

Another pedagogically helpful aspect of the Weissenborn book is the frequent duets included. Both “student” and “teacher” lines are provided with the teacher’s part

containing faster and chromatic notes. Consequently, these duets sound more advanced, and can help motivate students to learn additional notes.

Chromatic notes are introduced to students one at a time. On bassoon, a chromatic note may require the addition of a very complicated fingering, and it could take time to fluently play these. When flicking notes are introduced at page 33, they are taught from their bottom octave fundamental. This is much easier than requiring students to cross the break and flick simultaneously. By limiting the use of these flicking notes at first to only moving the left thumb, flicking may seem like a much more manageable skill. An especially useful octave flicking exercise is provided on page 43, where students should focus on changing the voicing and flicking for each note to reach the desired octave.

Other bassoon-related concepts like note ornamentation (baroque and classical) and tenor clef reading are also included in the Weissenborn book. These skills will be especially important to bassoonists who wish to play in orchestras or chamber groups. Only one other evaluated method book reviewed included a section about tenor clef reading, the "Rubank Elementary Method". All other books remained entirely in bass clef. However, these tenor clef and ornamentation exercises from the Weissenborn book should only be taught once students have a solid foundation on the instrument to "avoid further complication[s that] arise with the use of the tenor clef…the student must simultaneously learn the most complicated fingerings on the bassoon and alternate notation for each note. It can be a very stressful time for the bassoonist who struggles with this 'double whammy'. The process of learning tenor clef is similar to

learning a new language, and young bassoonists need to be reassured over time" (Dietz, 1998, p. 62-3).

The Weissenborn book, like most band methods, also contains scale studies, and major and minor arpeggios. The Weissenborn Method contains exercises in every major and minor key, and uses more advanced notation such as double sharps and flats, and tenor clef.

The Weissenborn Method comes with a very complicated fingering chart that should not be used with beginning students. The notation is difficult to understand, and some of the fingerings are explained in German. A more user-friendly chart can be found in Durran's 1997 book (See Appendix C).

"Premier Performance", Bassoon Book 1, Ed Sueta, 1999

This method book provides a description for how to safely assemble the bassoon, complete with pictures. However, the first note introduced is "E". This is a very unstable note on the bassoon, and is usually flat. Trying to get this first note in tune (especially with a student quality reed) may cause beginners to form bad embouchure habits, like biting, from the first lesson. Students may also find this note awkward to finger, since only two fingers are being used to support and hold the instrument.

If using this method with the band, I recommend starting with exercise number 5, on "C". Half holing is introduced fairly early, so it may be wise to supplement this book with exercises from early pages of the Weissenborn book. The back of the book contains major and chromatic scales for a limited range typical of a beginner. There are

special “premier technique” pages dedicated to teaching bassoon skills, and suggestions are given to students about how to practice them.

A fingering chart is provided, but I recommend using the fingerings provided by Durran in his 1997 book. Durran’s chart contains the proper “long” fingerings for each note (See Appendix C).

- Weissenborn etudes to supplement Sueta’s book: Any 4/4 , 3/4, or 2/4 exercise from pages 10-25 (before Lesson XI) to align with the concepts and difficulty of the “Premier Performance” book.
- Flicking exercises from this book: Lines 41, 42, 43, 44, 47, 57, 78, 83, 84, 86, 89, 92, 103.
- Half holing exercises from this book: Lines 20-30, 34-36, 38, 40-43, 47, 48, 53, 55, 57-61, 65-69, 71-74, 76, 78-80, 83-86, 89, 90, 103, 105-108, 110, 115, 124.

“Premiere Performance”, Bassoon Book 2, Ed Sueta, 2002

This method picks up where “Book 1” left off. Previously learned fingerings and scales are reviewed before new notes are introduced. The book includes key signatures of up to four flats, but does not include any excerpts in sharp keys. It would be practical to include Weissenborn etudes that utilize the sharp keys so student bassoonists have experience in them. The key of A flat major present a specific problem, since the student must play D flats and Cs. Going between these notes may be tricky, since the left thumb must alternate between several keys. These excerpts should be practiced

slowly making sure the thumb does not lift off the whisper key. Exercise 17 "Tutu Maramba" requires the use of the front F sharp and back A flat fingerings.

This book also contains a "Premier Technique" section that focuses on scale patterns and intervals. However, it only includes scales up to A flat major. Again, provide students with Durran's 1997 fingering chart (see Appendix C).

- Weissenborn etudes to supplement this book: Any in sharp keys up to page 40 (Before Lesson XIX).
- Flicking exercises from this book: Lines 5, 9-13, 40, 41, 55, 65, 71, 85, 109
- Half holing exercises from this book: Lines 5, 9, 10-13, 17, 20, 25, 28, 40, 41, 53, 55, 63, 85, 108

"Accent on Acheivement", Bassoon Book 1, O'Reilly and Williams, 1997

This two part series includes CD accompaniment for students to practice with. The authors state that students should begin by crowing on the reed, but does not give explicit instructions on how to do so properly. Instruct students that "the reed should be placed into the mouth far enough for the upper lip to almost touch the first wire…Take a full breath of air in through the mouth, form the embouchure, and blow a steady stream of air into the reed to produce" a crow. (Froseth, 2005, p. 6). The O'Reilly and Williams book introduces the notes D and E flat first, which are difficult to play in tune, and awkward to finger for beginners. Again, teach students second space C first before moving onto the other notes.

This method remains in a beginner friendly register until page 13, which may be several weeks of study into the book (if students are assigned one or two pages a week). If students need more time in this easy register, exercises from Weissenborn can be used to supplement lessons until students are ready to move on to more challenging half hole and flicking notes on pages 14 and above.

Etudes of comparable difficulty from the Weissenborn book are up to page 30, before Lesson VIII. Focus on etudes in a variety of time signatures and sharp keys to compensate for a lack of such exercises in the O'Reilly method.

Rather than list all exercises in this book that use half holing and flicking (most later exercises in the book do), exercises with specific merit will be mentioned.

- # 43, "Accent on Bassoon" is the first opportunity for students to practice playing over the break to G.
- # 59, another "Accent on Bassoon" lesson works on left hand technique. If students are tense in their instrument carriage and hand position, they will probably not be able to play this exercise fluently. Watch the whisper key to make sure it stays down for the duration of the excerpt.
- # 60, "Another New Note" should be used to introduce the varied half hole sizes between G and A flat.
- # 74 is another "Accent on Bassoon" and drills half holing with G's and A flats. Watch to ensure the G half hole is more open than the A flat half hole. The octave slurs in this line will also require voicing changes to make the notes speak clearly.

- # 86 “Tone Builder” should be used to stress the importance of intonation on top space G’s. If student are not already using it, teach the G fingering that adds the E flat key in the LH pinky. It brings down pitch, in addition to the “doe” voicing students must use on half hole notes.
- # 100/101 can both be used to practice playing over the break. Watch the student’s hands from F to G, making sure the addition of eight additional fingers is smooth, and half hole placement accurate.

The book includes major scales and triads at the end, and a compilation of the “Accent on Bassoon” exercises. These exercises are in keys up to 2 flats, with a few lines going up to 4 flats. A brief description of flicking is given on page 43, and students are reminded which flick keys are to be used with each note.

“Accent on Achievement”, Bassoon Book 2, O’Reilly and Williams, 1998

This book begins with a review of notes, key signatures and meter signatures from Book 1. Book 2 moves more quickly into half holing and flicking than the first book, and includes key signatures of up to five flats. Like several other heterogeneous band methods, it does not utilize sharp keys, so more advanced students should be given etudes out of the Weissenborn book in sharp keys. Most lines in this book use either half holing or flicking technique, so particular sections of merit for teaching fundamentals will be noted.

Weissenborn etudes of similar difficulty are up to page 48 (Before Lesson XXII). After this, much higher notes are introduced. These require special attention from the teacher to find alternate fingerings for pitch and facility.

- # 23 “Zum Gali Gali” is a duet, but only the top part requires rapid manipulation of the half hole. Students can start with the bottom part and work up to the higher part when they are ready to combine flicking with half holing.
- #’s 29-31 introduce sixteenth notes to students. Remind students to use a light articulation on the reed, contacting the “very tip of the lower reed blade to the left of the reed’s centerline. Tonguing at the reed’s centerline will result in heavy articulation” (Durran, 1997, p. 16). This skill can be practiced on the reed and bocal alone if the fingerings prove too difficult while tonguing quickly.
- # 49 is the first exercise that includes low E below the bass clef staff. Teach students to close the LH pinky D flat key when playing this note to lower pitch and focus tone.
- # 55 uses A flat and F sharp, so introduce the new “front F sharp” and “back A flat” to increase facility. Students can alternate fingerings for these notes on each side of the bassoon.
- # 67 uses lots of flicking, and this can be used to reinforce left hand thumb technique.
- # 76 may be difficult for beginners. There are several large interval jumps, and flicking notes on different keys in quick succession. This should be practiced slowly at first to facilitate correct thumb movement.
- # 77 introduces low D, which “tends to be very sharp on most bassoons. There is really no trick fingering to lower the pitch” (Williams, 2007 ¶ 6). Students must drop their jaw and relax the throat to keep pitch down.

- # 83 and 84 require students to play notes at the top of the staff at a mezzo piano dynamic. Flicking is even more important here since a large increase of air pressure alone into the reed will cause the notes to sound too loud.
- # 94 may be difficult for students to play because of the frequent jumps from F to A flat. While not a large interval, this note requires students to add nine fingers to the initial F, one of which is a half hole note. Practice playing between these two notes before attempting the excerpt.
- # 107 introduces high F. The given fingering in the book works well as the default fingering for this note. Make sure students are changing the voicing to an "ee" sound for this register.

The end of this book also contains a section compiling the "Accent on Bassoon" exercises and scales. Only scales up to 5 flats (Major and minor) are included. Supplement these with scale pattern etudes from the beginning of the Weissenborn book so students are exposed to a greater variety of key signatures.

"Basic Training Course for Bassoon", John Kinyon (1970)

According to the title page, this book can be used in a variety of settings- private lessons, homogenous instrument classes, heterogeneous method classes, and beginning bands. The book begins with a review of the bass clef notes and staff so no previous knowledge of musical notation is needed by students. An easy to read fingering chart is provided, although the "high D" key (the fifth key up from the whisper key) is not included. This key is on some student model bassoons, and if present, should be "flicked" for D's above the staff.

The first notes introduced are D, E flat, and F. Show students second space "C" first, and when teaching E flat, instruct students to add the RH thumb B flat key and middle finger to the given fingering to improve pitch. This is the default E flat fingering provided by Durran in his fingering chart (see Appendix C). Half holing is introduced on page eight, so it may be necessary to spend time working on early Weissenborn etudes until students have the finger dexterity to begin half holing. Top of the staff notes are introduced on page 12 without any mention of flicking, so remind students which keys will need to be vented for proper response. The book includes keys of up to four flats, but does not include any exercises in sharp keys.

Students are asked, "how fast can you play this?" on page 15, line three (Kinyon, 1970, p. 15). Disregard this statement, and tell students to play it at any tempo where they can keep their left hand relaxed and not lift off the whisper key. Watch the whisper key pad to make sure it does not come up between notes when students are playing. This technique is referenced again on page 22, line four with chromatic notes around C.

F sharps and A flats are first used in the same measure on page 15, line two. This is a practical time to introduce students to the alternate front F sharp and alternate back A flat fingerings. This can help them play these notes without "hopping" over keys, similar to how a clarinetist would alternate notes on the left or right side of the instrument. See Appendix C for these alternate fingerings provided by Durran.

Major scales are written out at the end of the book up to D flat Major. Introduce students to sharp keys as well, since bassoonists will need these more often in orchestra than the flat keys.

- Weissenborn etudes to supplement this book: Any easy etude in a sharp key, up to page 25 (Before Lesson XI).
- Flicking exercises from this book: Lesson 11 (Flicking notes introduced). Lesson 12 (Several flicking notes in succession, so students must jump between flick keys. Practice very slowly at first). Lesson 18 (D above the staff is introduced. Remind students to flick the D key (if equipped, or C key, for it to speak clearly). Lesson 20 (Combines flicking multiple keys and half holing).
- Half holing exercises from this book: Lesson 7 (G and A flat are introduced together- emphasize that G needs a larger half hole open). Lesson 8 (#4- Expanding intervals also on page 20 and 26). Lesson 20 (Combines flicking multiple keys and half holing). Lesson 24 (#4- ensure students are also closing the LH pinky E flat key to keep the pitch of the G down. Encourage them to use the "doe" voicing for this note as well).

"Rubank Elementary Method for Bassoon", J.E. Skornicka (1935)

This book begins with a very basic explanation of written music and the bass clef notes. The introduction also emphasizes the importance of having bassoon students sing each excerpt before attempting to play them. The first note taught is "F", which is unstable to play and hold, since only one finger is in contact with the instrument.

Students should be taught second space C, and only learn the notes on page two once the C is stable.

The method uses a varied selection of modes and meters, and employs sharp keys almost as often as flat keys. Scales in the back of the book include G flat major and E major, and the relative minors for each.

Larger intervals such as fourths and fifths are introduced very early (pages 1 and 2), and students will need to be able to recognize note names in the staff. While a lot of material is covered quickly, the first line of each new lesson is a review from the previous lesson. Like the Weissenborn book, complicated rhythms are introduced early, and beginning students may not be immediately ready to execute triplets, dotted rhythms, and compound meters on the bassoon. If this is the case, easy Weissenborn material can be used to supplement the Rubank book. Flicking and half holing are introduced relatively soon as well, so time can be spent working on the lower register Weissenborn excerpts if needed.

Higher notes are introduced on page 10, so remind students to flick the D key (if equipped) for D's above the bass clef staff. Voicing for all notes above D should be an "ee" vowel shape. High F is introduced on page 12. Make sure the student's reed is well balanced and does not have a tip aperture (opening) of more than 1-2 millimeters before attempting to play in this register. When high G is introduced on page 30, students should again use a "doe" voicing, as this note tends to be sharp on the bassoon. To keep pitch down students should support the air stream from the stomach, and limit the pressure put on the reed by the mouth.

A sharp key signature is first used on page 16, so teach the front F sharp fingering at this time. "Most bassoon makers tune F# so that the little finger right hand fingering F# [front F sharp]is slightly flatter than the thumb F#" (Williams, 2007, ¶ 12). It should be stressed to students that front F sharp is the optimal fingering for this note, except in cases where A flat should be played on the front side. The alternate back A flat fingering should be taught concurrently.

A two octave chromatic scale, representative of a fairly ambitious range for a beginner, is included at the end of the book. Major and minor scales up to 6 flats and 4 sharps are included.

When tenor clef is introduced on page 35, try to have students stop looking at the bass clef answer key as soon as possible. One possible strategy is to put a piece of masking tape over the bass clef staff. It makes it difficult to see the bass clef notes, but not impossible in case students needs to refer to them. In time, with repeated note name drilling, students will become fluent in tenor clef.

- Weissenborn etudes to supplement this book: Pages 10-72 if students can read tenor clef. If students have a limited high range or can't read tenor clef, use exercises up to page 48 (before Lesson XXII).
- Flicking exercises from this book: Flicking is introduced very early, and continues throughout. Some examples of note are listed here; there are many others included. Page 5 "Octave Study"- the fingerings are the same, just have students speed up air and depress the flick key. Page 17- flicking several different notes in

succession. Page 18- difficult flicking exercises in numbers 3 and 4. Page 20 and 28- scale patterns that require flicking for repeated notes.

- Half holing exercises from this book: Half holing is introduced very early, and continues throughout. Some examples of note are listed here; there are many others included. Page 4- "Difficult Intervals". Flicking and Half Holing are combined starting on Page 5 number 2. Page 17- Flicking and half holing through scales and arpeggios. Page 18- half holing over the break, and across difficult intervals. Page 20 and 28- playing between F and G. Page 30- A flat introduced, so remind students to open less of the half hole for this note than G.

"Go for Technic! ", Bassoon Book 1, James Swearingen (1990)

This method book series is designed to complement the "Medalist Band Method", a full band song book. These "Technic" books contain instrument specific as well as exercises and etudes for a homogenous teaching setting. Students will need general background knowledge of written music, especially relating to note names, time signatures, and accidentals. The first note introduced is an E flat, a rather unstable note on the bassoon. Remind students about proper hand position and posture, especially since half hole G is introduced on the first page. If the left hand becomes tense, students will not be able to properly manipulate the half hole.

A fairly limited range is used throughout the first 6 units. There is no need for flicking technique except for occasional B flats above the staff. This range is typical of a beginner trombone or baritone book (Whitener, 1997), so it would be extremely beneficial to spend time working out of the Weissenborn book for excerpts in a

friendlier bassoon register. Since only keys up to three flats are used, it may also be useful to pay particular attention to Weissenborn etudes in sharp keys.

The end of the book has "Individual Studies for the Bassoon" that focus on flicking and playing over the break. Scale patterns and thirds are also written out with several different articulation patterns. Scales and arpeggios are only written out in B flat and E flat major, so provide students with written out scales in other keys. A fingering chart is provided at the end of the book, but remind students to only use fingerings from Durran's chart (see Appendix C). Fingerings from this book leave out the whisper key in several important places, and supply only "short" fingerings for other notes that may cause students to play out of tune.

Practical Usage

Each method follows a specific progression to teach key signatures, meter signatures, note names, and other fundamentals of music. These skills are usually easy to distinguish by "Unit" or "Lesson", but finding exercises specific to bassoon techniques may be more difficult. See Table 5.2 for a listing of exercises that can be used to work on bassoon fundamentals. This table may be useful to teachers as a practical guide when looking for particular skills.

In addition to the preceding method books, there is an abundance of information relating to woodwind pedagogy, bassoon etudes, solo bassoon literature, and reed adjustment. These resources may also be of assistance to band directors when teaching bassoon. See Appendix D for an annotated bibliography of bassoon pedagogical materials.

Table 5.2: Listing of Method Book Exercises by Skill

METHOD BOOK NAME	FUNDAMENTAL SKILL	LINE NUMBER/LESSON
Premier Performance Book 1	Flicking	Lines 41, 42, 43, 44, 47, 57, 78, 83, 84, 86, 89, 92, 103.
	Half Holing	Lines 20-30, 34-36, 38, 40-43, 47, 48, 53, 55, 57-61, 65-69, 71-74, 76, 78-80, 83-86, 89, 90, 103, 105-108, 110, 115, 124.
Premiere Performance Book 2	Flicking	Lines 5, 9-13, 40, 41, 55, 65, 71, 85, 109
	Half Holing	Lines 5, 9, 10-13, 17, 20, 25, 28, 40, 41, 53, 55, 63, 85, 108.
Accent on Ach. Book 1	Flicking	Numbers 75, 77, 81, 84, 86, 90, 91, 95, 101, 103, 111, 115, 116, 120, 124, 128, 134.
	Half Holing	Numbers 37-40, 42-44, 50, 57, 60-64, 67-70, 72-75, 77-81, 83, 84, 86-93a, 95, 100-105, 107, 108, 111-113, 115, 116, 118, 120, 121-124, 126-131, 133.
Accent on Ach. Book 2	Flicking	Numbers 11, 12-15, 18, 23-27, 29, 30, 31-33, 39, 40, 42, 43, 45-47, 49, 51, 53, 55, 57, 59-62, 65-67, 70, 74-76, 78-81, 83, 84, 86, 89, 91, 92, 94, 95, 97-111.
	Half Holing	Numbers 6, 7, 10, 11-15, 16-19, 22-27, 29-47, 50-53, 55-57, 59-68, 70, 73-76, 78-81, 83, 84, 86, 89-92, 94, 95, 97-106-111.

Basic Training- Bassoon	Flicking	Lesson 11, 12, 18, 20.
	Half Holing	Lesson 7, 8, 20, 24.
Rubank Elem. Method	Flicking	Lessons 4, 5, 7-9, 11, 12, 14-17, 20-22, 24-41.
	Half Holing	Lessons 3-5, 7-21, 23-33, 35, 39-41.
Go for the Technic!	Flicking	Unit 5 (2-4, 8). Unit 6 (1, 2, 4, 9, 10). Unit 7 (2, 10, 13). Unit 8 (1-6, 9, 13-15). Unit 9 (1, 2, 7, 9, 16).
	Half Holing	Unit 1 (3-16). Unit 2 (1, 3, 5-7, 9-14). Unit 3 (3, 6-11, 15). Unit 4 (4, 5, 7, 10, 11, 13, 15, 16). Unit 5 (1-4, 6, 8, 11-13, 15, 16). Unit 6 (1, 2, 4, 5, 7-10, 15, 16). Unit 7 (5-10, 12, 13, 15). Unit 8 (1-6, 9, 11, 13-16).

CHAPTER SIX

SUMMARY AND CONCLUSION

Summary

The purpose of this thesis was to provide band directors with a resource to help students making the transition to bassoon from another instrument. Band directors desire ensembles with complete instrumentation. However, if they have limited experience on the bassoon they may not be able to appropriately guide young players on this instrument. In addition, they may be reluctant to recommend that young instrumentalists switch to the bassoon making an ensemble with full instrumentation difficult. The experience of students in the ensemble may be compromised as a result.

An overwhelming amount of pedagogical bassoon material is available, but not all materials are appropriate for use in a secondary school setting. This thesis may provide band directors with a concise guide to several elements of fundamental bassoon technique, and strategies for teaching these techniques. These fundamental techniques should be emphasized to students when teaching beginning lessons on the bassoon.

The purpose of this project was to assist instrumental music teachers in providing appropriate bassoon instruction by explaining the fundamentals of the instrument, detailing the process of switching to bassoon from single-reed instruments, an providing a list of resources that can be used to teach bassoon lessons. The following points in question guided the research: 1. Appropriate instruction focusing on fundamentals from the first lesson. 2. Techniques that are similar and different when

switching to bassoon from clarinet and saxophone. 3. Resources to aid directors with limited bassoon experience. 4. Appropriate use of bassoon method books, and the best sequence of books to use.

The purpose of this study was served by identifying several major bassoon fundamentals that emerged from the pedagogical literature (Breath Support, Voicing, Flicking, Half Holing, and Instrument Carriage). To address the first point above, each concept was explained and appropriate strategies for teaching each were provided in Chapter 2. Additionally, a questionnaire was administered to single-reed music majors learning bassoon to determine which of these five concepts were perceived as difficult to execute on bassoon, thus addressing the above research point two. Results from the questionnaire also indicated if prior knowledge from a specific single-reed instrument was helpful, and in some instances unhelpful. Finally method books were evaluated based on their appropriateness to teach beginning bassoon and the fundamentals of the instrument. Additional resources, including woodwind pedagogy books, bassoon etude books, easy solo bassoon music, and bassoon reed making guides were compiled and listed in Appendix D. These evaluations and additional resources served the last two points in question. Because the questionnaire provided much detailed and helpful information to this study, those results are discussed in more depth below.

Results of the Questionnaire Phase of the Study

These questions guided the survey research:

1- Does previous single reed experience help when learning bassoon?

2- Are there any perceived similarities between single-reed instruments and bassoon?

3- Do any skills transfer from single-reed instruments to bassoon?

4- What are the most difficult aspects of bassoon playing from a beginner's perspective?

Two clarinet and two saxophone majors participated and took the same questionnaire from SurveyMonkey.com. Overall, the participants reported that learning bassoon was difficult, but some skills from their primary instrument transferred over and were helpful.

The clarinet players found bassoon "medium" to "most difficult", and "not similar at all" to clarinet. They also indicated the bassoon and clarinet embouchures were not similar. Clarinetists indicated a similarity between breath support on their primary instrument and bassoon. Clarinet players said they use voicing for register changes, but did not find it similar to the voicing they had to use for pitch and tone control on bassoon. When asked about flicking, clarinet players said the skill was "medium difficult" to learn. Clarinetists reported half holing to be only "medium easy" to "difficult", partially due to their experience covering open tone holes on their primary instrument. Both clarinet players reported using a neck strap to help support their

primary instrument, and used a seat strap when playing bassoon. Compared to clarinet, the bassoon was “awkward” to “very awkward” to hold.

The saxophone players found bassoon “medium difficult” and “not similar” to “similar” to their primary instrument. They found their saxophone embouchures similar to embouchure for bassoon. Just as the clarinet players, saxophonists discovered the breath support between their instrument and bassoon was similar. When asked about voicing, both saxophonists indicated it was “very similar” between instruments. One saxophonist pointed out it was important to not “over voice” on bassoon, since the vowel change required for saxophone voicing is much more pronounced. The saxophonists disagreed about the difficulty of flicking; one said it was “medium difficult”, the other “medium easy”. Both saxophonists agreed half holing was difficult, one classified it as “medium difficult”, the other “most difficult”. Finally, the saxophonists both reported that holding the bassoon was only slightly awkward. Both participants have performed on the larger saxophones, so holding and playing a large instrument was not a novel experience.

When the answers were compared, it was discovered that previous single-reed experience is in fact helpful when learning bassoon, and several perceived similarities existed between single-reed instruments and bassoon. Clarinet players reported their previous experience was helpful when learning how to support the bassoon air stream. They did not have to do anything different from what they had already learned. When learning half holing, the clarinet players were already used to maintaining a curved hand position to cover open tone holes. Rolling the left hand index finger open was less

difficult because of the familiar sensation of covering open tone holes. Very advanced clarinet players may already be utilizing some sort of "half hole" technique to execute alternate fingerings in the altissimo register.

Previous saxophone experience was helpful when learning other skills. Saxophonists claimed they did not have to alter their embouchure drastically when picking up bassoon. It was relatively easy for them to form an embouchure with equal pressure coming in from all sides. Just as the clarinet players, saxophonists reported not having to change the way they approached breath support when playing bassoon. Voicing was another skill where previous saxophone experience was useful. Advanced saxophonists may already be using this skill for intonation, register changes, and vibrato. Incorporating vowel shapes into bassoon playing was relatively easy for these participants. Saxophone experience, particularly with the larger saxophones, was helpful when adjusting to the larger size of the bassoon. Saxophone players were already used to holding an instrument off to the side and supporting the increased weight and bulk that comes with a tenor or bass instrument.

The most difficult bassoon skills from a beginner's perspective were also determined. Regardless of previous instrument, participants said that flicking and half holing were somewhat troublesome at first. Both clarinet and saxophone participants claimed flicking was about "medium difficult". Keeping the left thumb mobile was a new technique for all participants. They were accustomed to manipulating only one octave or register key, and did not have to leave and return to any other key with the thumb.

While clarinet players reported an easier time learning to half hole than the saxophonists, no group found the skill to be “easy”. Even clarinet players struggled at first opening the half hole enough for certain notes, then rolling the hole closed without lifting the index finger. The saxophone players reported an even harder time learning half holing, in part because they had to first adjust to the sensation of covering open holes.

Necessary caution must be exercised when interpreting these results. They are the result of only one small scale study. Additionally, only single-reed players were questioned, due to a limited number of Music Education majors who play woodwind instruments at Penn State in recent years. As a result, fewer student musicians were qualified to take part in the study, since brass, string, and percussion majors only had a rudimentary knowledge of bassoon from the basic woodwind techniques course. It was decided that older students from the previous Bachelor of Science program at Penn State were too far removed from bassoon methods to give an accurate description of the instrument-specific problems they encountered with bassoon.

A flutist has not taken bassoon methods since the new Music Education curriculum was initiated in 2008. Rather than question flute players who happen to double on bassoon, it was decided not to include this instrument in the study. Future studies could expand the scope of the research to include flute players. Oboists were purposely not included in the study because this is generally not a switch that is made in secondary bands. If a director has switched a student to oboe, it is unlikely that this student will switch a second time to bassoon.

Finally, only two clarinet players and two saxophone players were questioned for this study. It would have been preferable to include more than two in each category, but again, personnel issues resulting from current enrollment and instrumentation prevented this. Future studies should include more participants with broader instrumental backgrounds than single-reed players only.

Recommendations

For teachers. It is the author's opinion that any school student wishing to learn bassoon should be given the opportunity to do so. Self-motivated students with no experience probably have a better chance at success on a complicated instrument like the bassoon than an inattentive single-reed player. However, a single-reed student's chance at success on bassoon may be augmented if attention is paid to techniques they may have already learned on their first instrument. In some cases, these are extremely helpful. Other instances may require students to learn a new way of executing a familiar skill. Such is the case with clarinet players learning the bassoon embouchure- they must be sure not to carry over "biting" habits.

When starting a new student bassoonist, it is important to teach the instrument fundamentals along with the method book and concert band music. Recommendations for how to incorporate fundamental instruction into common band method books were provided in Chapter 5. Watch students closely when they play, since just one misplaced finger can have a huge effect on tone quality and pitch on bassoon. If at all possible, model for students on bassoon yourself. Seeing some of these techniques in action may help visual learners pick up skills such as flicking.

Encourage clarinet players to play with a full sound and supported air just as they did on Bb soprano clarinet. Remind them that covering bassoon tone holes is very similar to covering clarinet tone holes. In particular, watch the angle in which they hold the bassoon, and their hand position. "Clarinetists have difficulty with the bassoon's hand position; some of the bassoon's weight rests on the left hand, which can lead to cramps and tension" (Coppenbarger, 2006, p. 62). Make sure students are as relaxed as possible with their hand position while still keeping the wrists straight and tone holes covered.

Encourage saxophone players to keep playing with a full sound and proper breath support as well. They should also be reminded about the similarities in embouchure, and not to increase jaw tension on any one side of the reed. When it comes to voicing, remind saxophonists that the theory is the same- small changes of the oral cavity will affect pitch and tone color. Emphasize "small"! Some saxophonists may feel the need to over exaggerate bassoon voicing the way they do on sax (Saxophonist "A"). Have patience with saxophone players trying to combine flicking and half holing. Both of these are very different from saxophone technique, so students will essentially be starting from scratch. Emphasize slow, correct practice to avoid forming bad habits in this early stage. Remember there are many other techniques saxophonists already know that are helpful when learning bassoon. Some think the switch from sax to bassoon is "the easiest switch of all" (Coppenbarger 2006, p. 62).

For future research. How students learn wind instruments is a very interesting topic with little scholarly research, especially relating to the learning of bassoon.

Further study could question larger groups of bassoonists to discover what they found easy or difficult when switching to bassoon. Since bassoon is a large and complex instrument, few students are introduced to it as their first instrument. Therefore, making connections between other band instruments and bassoon is even more important since most bassoonists end up learning another instrument first. It would be interesting to poll a large number of current bassoon players to see which instrument they started on, and how easy or difficult they felt the switch to bassoon was. The results could be sorted by initial instrument and compared to find any recurring trends.

Conclusion

The purpose of the project was to assist instrumental music teachers in providing appropriate bassoon instruction by explaining the fundamentals of the instrument, detailing the process of switching to bassoon from single-reed instruments, and providing a list of resources that can be used to teach bassoon lessons. Discovering what students found difficult may help school music teachers teach bassoon from a more informed perspective. Even though there is a wealth of information relating to bassoon pedagogy, much of it is intended for advanced students, not those beginners making the initial switch.

The participants surveyed are all very experienced single-reed players, and have majored in either saxophone or clarinet. They are by no means musical "beginners", though they were learning bassoon for the first time in a music education techniques class. In each case, participants found their primary instrument experience helpful to bassoon playing in some way. The perceived benefit was not the same for each

participant, but every participant surveyed made some connection between the skills they had to learn on bassoon and skills they already possessed from years of musical study.

The bassoon is not an “easy” instrument. The participants indicated this, and more than one mentioned that it took a lot of time and effort just to remember the fingerings. Students looking for instant gratification should not take up the bassoon. However, for those students who desire a challenge, learning the bassoon can be a life enriching experience.

In my own switch from clarinet to bassoon I encountered some difficulties, namely with the “foundation”, or fundamentals, of my playing. Even now I still must watch to make sure I do not fall back into bad habits I learned during my transition to bassoon, like biting the reed to force notes to speak. But when I am conscientious about my technique, playing feels effortless and fun.

Switching to bassoon has no doubt changed my own life; it gave me the opportunity to major in Music in college. I did not even know what a bassoon was until a middle school band director encouraged me to try it. Perhaps one of your students will discover a love of music through an instrument they did not know existed!

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Appendix A:

Survey Questions

1. Page 1

1. What is your primary instrument?

- ◯ Flute
- ◯ Saxophone
- ◯ Clarinet

2. How long ago did you participate in MUS 254E (bassoon methods)

- ◯ This semester
- ◯ Spring 2009
- ◯ Fall 2008
- ◯ Spring 2008
- ◯ Before Spring 2008

3. On a scale of 1 through 4, how difficult did you find playing the bassoon?

◯ 1- easiest ◯ 2- medium easy ◯ 3- medium difficult ◯ 4- most difficult

4. On a scale of 1 through 4, how similar was bassoon to your primary instrument?

◯ 1- not similar at all ◯ 2- not similar ◯ 3- similar ◯ 4- very similar

5. On a scale of 1 through 4, how similar was your bassoon embouchure to your primary instrument embouchure?

◯ 1- not similar at all ◯ 2- not similar ◯ 3- similar ◯ 4- very similar

2.

6. Did you find any similarities between your primary instrument embouchure and learning the bassoon embouchure?

- ◯ Yes
- ◯ No

Why or why not?

7. Is your breath support for playing bassoon different from your primary instrument?

- ◯ Yes
- ◯ No

If yes, how?

8. On a scale of 1-4, how similar was bassoon voicing compared to your primary instrument voicing?

- ◯ 1- not similar at all
- ◯ 2- not similar
- ◯ 3- similar
- ◯ 4- very similar
- ◯ N/A- primary instrument does not use voicing

How was voicing on bassoon similar or different?

9. On a scale of 1-4, how difficult did you find voicing overall?

- ◯ 1- easiest
- ◯ 2- medium easy
- ◯ 3- medium difficult
- ◯ 4- most difficult

10. Do you ever have to "flick" or vent keys to improve pitch or response on your primary instrument?

- ◯ Yes
- ◯ No

3.

11. On a scale of 1 to 4, how difficult did you find flicking?

- ◯ 1- easiest
- ◯ 2- medium easy
- ◯ 3- medium difficult
- ◯ 4- most difficult

12. Could you notice an improvement in your playing (less cracked notes/ better tone) when flicking versus not flicking?

- ◯ Yes
- ◯ No

13. Do you need to manipulate a "half hole" on your primary instrument?

- ◯ Yes
- ◯ No

14. On a scale of 1-4, how difficult did you find half holing?

◯ 1- easiest ◯ 2- medium easy ◯ 3- medium difficult ◯ 4- most difficult

15. If you manipulate a half hole on your primary instrument, how is it similar or different to bassoon?

◯ N/A- primary instrument does not use half hole

(answer only if primary instrument utilizes half hole)

16. Do you use a neck strap or harness to support your primary instrument?

◯ Yes

◯ No

4.

17. On a scale of 1-4, how awkward did you find holding the bassoon in the playing position?

◯ 1- not at all awkward ◯ 2- not awkward ◯ 3- awkward ◯ 4- very awkward

18. Did you play on a "short reach" bassoon? (key over 3rd tone hole instead of an open hole)?

◯ Yes

◯ No

If no, did you have a hard time keeping the third hole completely covevred?

19. Did you find any similarities between articulating on your primary instrument and articulating on bassoon?

◯ Yes

◯ No

How was articulating on bassoon similar or different?

20. On a scale of 1-4, how difficult did you find articulating on the bassoon?

◯ 1- easiest ◯ 2- medium easy ◯ 3- medium difficult ◯ 4- most difficult

5. Open Ended Questions

Final two questions

21. What helpful hints or suggestions would you make to someone that plays your instrument who is learning bassoon?

22. Please elaborate on what you personally found to be most challenging about the bassoon.

23. Please provide your contact information if you wish to participate in the follow up interview.

Name:

Email Address:

Phone Number:

Appendix B:

Informed Consent and IRB Documentation

IRB Approval granted 23 November 2009, #32507

Informed Consent Form for Social Science Research
The Pennsylvania State University

Title of Project: A Review of Bassoon Pedagogical Materials

Principal Investigator: Katie O'Brien
437 Oakwood Ave, State College PA 16803
(516) 398-xxxx
kao5047@psu.edu

Advisor: Dr. Linda Thornton
233 Music Building I, University Park 16802
(814) 863-xxxx
lct12@psu.edu

1. **Purpose of the Study:** The purpose of this research is to write a guide for instrumental music teachers about how to teach bassoon, a unique double reed instrument. This guide will be a resource for teachers that gives instruction about how to switch students from other instruments, what books to use, and what fundamentals to stress in the initial lessons.

2. **Procedures to be followed:** You will be asked to answer an online survey of 19 multiple choice and 2 short answer questions. You will also be called by telephone asked several additional questions in a follow up interview with the Primary Investigator based on the telephone number you provide at the end of the survey. This follow up interview will be audio recorded. The questions will only ask you about your experiences learning and playing bassoon. You do not have to answer any question you do not wish to answer.

3. **Duration/Time:** The initial online survey will take about one half hour, while the follow up verbal interview may take up to 45 minutes. This participation will not extend beyond April 2010.

4. **Statement of Confidentiality:** Your confidentiality will be kept to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet by any third parties. The data and telephone recordings will be stored and secured at the Primary Investigators locked apartment in a password protected file. Only the primary investigator will have access to these recordings. The primary investigator will transcribe your recording into a Word document, and your name will not be associated with your response. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared. To protect your confidentiality, a

pseudonym will be assigned to each participant. If you are ever referred to directly in any publication, this pseudonym will be used, and not your real name. The only person having access to the pseudonym's identity will be the Principal Investigator. This information will also be kept in a password protected file and destroyed after the research is completed. All recordings and transcriptions will be destroyed by 2012 by complete erasure of the drive they are to be stored on.

5. **Right to Ask Questions:** Please contact Katie O'Brien at (516) 398-xxxx with questions or concerns about this study. You may also call this number if you believe this study has harmed you.

6. **Voluntary Participation:** Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer.

You must be 18 years of age or older to consent to take part in this research study. Your completion of this online survey and follow up interview implies your consent to participate in this research.

Please print a copy of this form for your records.

Email Recruitment Material:

The following message was sent to prospective research participants.

Dear School of Music student,

My name is Katherine O'Brien and I am a senior music education major in the Schreyer Honors College. I am writing my undergraduate thesis about bassoon pedagogy, and am requesting your participation in an online survey about your experience learning the bassoon (in MUS 254E). The survey should not take more than 15 minutes, and all questions are optional. Your participation will enable me to write a thesis instructing current teachers how to better teach this unique instrument. During the online survey, you will be asked for your telephone number so I may contact you to ask a few (optional) follow up questions. Thank you for your time!

This study is being conducted for research purposes.
This research is affiliated with Penn State. Katherine is a PSU undergraduate Music Education major writing a thesis about bassoon pedagogy.

Sincerely,

Katherine O'Brien

Appendix C:

Fingering Chart from Prof. Daryl Durran, The Pennsylvania State University


arpeggio
scales
3

Appendix D:

Annotated Bibliography of Bassoon Resources

While several basic method books have been evaluated, there are many other resources including etude books, solos, and wind pedagogy books that may be of use to school music teachers. Some of these books are intended for bassoon specialists, but still contain pertinent information about bassoon that school music instructors may find useful. This section includes Tables B.3-B.6, which contain a listing and brief description of bassoon books, etudes, beginning solos, and reed making processes.

TABLE D.3- WOODWIND AND BASSOON BOOKS

TITLE	AUTHOR/PUBLISHER INFO	CONTENT	INTENDED AUDIENCE
The Art of Wind Playing	Arthur Weisberg, Schirmer Books, NY. (1975)	Fundamental aspects of woodwind performance- including breathing, technique and facility, vibrato, tonguing, and intonation.	Professional wind players; though instrumental music teachers may find useful teaching strategies
Woodwind Anthology; A compendium of WW articles from The Instrumentalist	The Instrumentalist Publishing Co., IL. (1992)	Articles written by respected bassoonists about how to buy a bassoon, how to start a student, how to teach bassoon.	High school band directors
Bassoon Technique	Archie Camden, Oxford University Press, NY. (1962)	A supplement for bassoon teaching- assembling the instrument, scale study, order of notes to teach, intonation and articulation.	High school band directors (part of a series of wind/brass books)
Let's Play Bassoon!	Hugo Fox, Fox Products Corporation, IN. (2000)	Supplied with every new Fox bassoon. How to assemble/take care of instrument, fingering chart for initial range.	New students, band directors that must teach bassoon.
The Art of Bassoon Playing	William Spencer, Summy-Birchard Publishing Co., IL. (1958)	Guidelines for buying an instrument, maintenance, bocals, how to select a reed, reed adjustment, embouchure and tone, flicking, repertoire listing.	Intermediate to advanced students, and teachers.

TABLE D.4- ETUDE BOOKS

TITLE	COMPOSER/EDITION	CONTENT	DIFFICULTY
18 Studies for Bassoon	G.B. Gambaro, International Music Co. (1951)	Relatively simple keys, exercises focus on rhythm and technique. Scale-based and chromatic.	Intermediate to Advanced players: 3+ years of study
Six Intermediate Bassoon Exercises	Carl Jacobi, TrevCo Music. (2003)	Focus on technical facility and rhythm. Large interval leaps, arpeggiated patterns.	Intermediate to advanced players: 3+ years of study
Bassoon Studies for Advanced Pupils	Julius Weissenborn, Universal Edition. (1987)	Variety of modes and meters. Easy through difficult key signatures. Flicking and octave jumps.	Advanced high school: 3+ years of study
Concert Studies, Op. 26	Ludwig Milde, Carl Fischer Publications. (1948)	Exercises focus on scales and intervals. Equal emphasis on slow and fast etudes in many keys.	Advanced high school: 3+ years of study
42 Caprices for bassoon	Ozi, Leonard Sharrow edn. (1974)	Simple key signatures- up to 4 sharps and 4 flats. Frequent trills and ornamentation.	Intermediate students: 1 to 2 years of study
26 Melodic Studies	Eugene Jancourt, Universal Bassoon Edn. (1987)	Progressively difficult etudes in all keys	Advanced high school: 3+ years of study
25 Studies in All Keys	Ludwig Milde, Carl Fischer Publications. (1940)	Odd numbered etudes are scale based; even numbers arpeggio based. Keys get progressively more difficult	Intermediate: 2+ years of study
50 Bassoon Studies	Julius Weissenborn, Cundy Bettoney edn. (1940)	Progressively difficult- early etudes are short and in simple keys. Late exercises become extremely difficult.	Beginner to advanced

TABLE D.5- SOLO REPERTOIRE

TITLE	COMPOSER/EDITION	CONTENT	DIFFICULTY
Romanza for Bassoon and Piano	Leonard Ball, B&D Publications. (1994)	Originally written for oboe- simple piece, modulates twice. Optional lower part.	Beginner: 1+ year
Song and Dance for Bassoon and Piano	Warren Benson, Boosey and Hawkes. (1955)	Slow introduction, long phrases. Student must be able to voice and flick to make slow section sound musical.	First or second year student
Classics to Please	Sergio Azzolini, Musikverlag. (1996)	Simple bassoon and piano parts based on well known Baroque through Romantic music.	Second year student
Bassoon Junior	Jean-Michael Damase, Henry Lemoine edn. (1985)	Single movement, some tenor clef with an optional high C. Many major 4^{th} interval patterns.	Second or third year student
Aria et Ruade	Pierre Max Dubois, Gerald Billaudot edn. (1981)	Rhythmically simple, easy piano part. Downslurs in bassoon part to low C. Some treble clef. "Ruade" rhythm- represents a horse kicking.	First year student, middle school
Ballad and Waltz	Arthur Frackenpoel, Viento Edition. (2005)	2 dance movements, opening ballad and waltz. Triplet rhythms, and many ascending slurred arpeggios. Student must be flicking and voicing properly.	Third year of study and beyond.
Cinq pieces faciles pour bassoon	Claude-Henry Joubert, Robert Matin edition (1982)	Baroque style pieces, fifth movement has difficult rhythms. Very little tenor clef.	First or second year of study
Concert Piece for bassoon and strings	Burrill Phillips, American Composer's edition. (1940)	"Jazzy" sounding, dotted rhythms. Some tenor clef and meter changes. Optional piano part	First or second year- middle school

Arioso and Humoresque	Julius Weissenborn, Cundy-Bettoney Co. (1967)	Difficult downslurs in "Humoresque", lots of flicking. No tenor clef.	Second year of study, middle school

TABLE D.6- REED ADJUSTMENT

TITLE	AUTHOR	CONTENT	INTENDED AUDIENCE
Advanced Reed Design and Testing Procedures for bassoon	Mark Eubanks, Arundo Research Co. (1986)	Several reed tests to diagnose and fix reed problems. "Harmonic tests" to find heavy or out of balance areas.	Advanced reed makers
Bassoon Reed Making	Mark Popkin and Loren Glickman, Charles Double Reed Co. (2007)	Addresses all stages of reed making, from initial profiling to tip finishing. Also contains reed testing exercises.	Novice to advanced reed makers, and teachers who must adjust reeds.
Bassoon Reed Making: An Illustrated Basic Method	Christopher Weait. (2008)	A step by step guide, complete with photographs.	Beginning to advanced reed makers
Bassoon Reed Making (DVD)	Beth Giacobassi. UW-Milwaukee. (2007)	Start to finish video guide, includes a section about "hand profiling"	Intermediate to advanced reed makers

Appendix E:

Academic Vitae

ACADEMIC VITAE of KATHERINE A. O'BRIEN

437 Oakwood Ave, State College, Pennsylvania 16803
katieobrien516@gmail.com kao5047@psu.edu www.kao5047.weebly.com

Education: **The Pennsylvania State University, The Schreyer Honors College**
University Park, PA 16802
Bachelor of Music Education, Honors in Music
Performer's Recognition Award, bassoon

Thesis Title: **"A Fundamentally Sound Switch to Bassoon"**

Supervisor: **Dr. Linda Thornton**

Presentations: **The Pennsylvania State University Undergraduate Exhibition**
April 7, 2010, University Park Campus
First Place Winner, Arts and Humanities Division
University Libraries Citation for Information Literacy

Student Teaching Experience- State College Area School District, Pennsylvania

- Instrumental Music (February 15- May 7, 2010)
  -Mount Nittany Middle School, 7th and 8th grade bands
  -Mr. John Kovalchik, cooperating teacher
  -Planned and delivered instruction for sectional pull-out lessons and large ensemble rehearsals daily.

- General Music (January 4- February 12, 2010)
  -Park Forest and Mount Nittany Middle Schools, 7th and 8th grade classes
  -Mrs. Carolyn Gardner, cooperating teacher
  -Planned and implemented instruction and assessment for two periods of seventh grade and three periods of eighth grade classes daily.

Professional Experience:

- Freelance Bassoonist
  -Substitute Musician, Altoona Symphony Orchestra (2009-2010)
  -Substitute Musician, Pennsylvania Chamber Orchestra (2006-2010)
  -Substitute Musician, Nittany Valley Symphony (2009-2010)

- Section leader/Group Chaperone on Long Island Youth Chamber Orchestra North Atlantic Circle tour

Personal Musicianship:

- Senior Recital
  Works by Mozart, Robert Clerisse, Torriani, Telemann, and Stravinsky. (14 November 2009, Penn State School of Music)

- Junior Recital
  Works by René Duclos, Nazzareno Gatti, Hartley, Weber, and Michael Curtis (11 April 2009, Penn State School of Music)

- Sophomore Recital
  Works by Vivaldi, Donizetti, and Richard Faith (10 February 2008, Penn State School of Music)

- Woodwind Jury Honors, Fall 2008- awarded by faculty for superior performance

Professional Development and Honors:

- Performer's Recognition Award, School of Music Award for exceptional undergraduate performers (2009)
- Pi Kappa Lambda National Music Honor Society
- Pennsylvania Music Educators Association
- PA Collegiate Music Educators Association, PSU Chapter Treasurer (2008-2009)
- International Double Reed Society conference performance, 2007
- Recipient of the Bryce and Jonelle Jordan Memorial Scholarship
- PSU School of Music Scholarship Award
- Arts and Humanities Division, First Place- Penn State Undergraduate Exhibition 2010
- Honorable Mention, University Libraries "Information Literacy" for excellence in research (2010)