Curriculum Design in Tuba Teaching for First-Year Student in University

Gao Yansong and Karn Gularnupong
Bangkokthonburi University, Bangkok, Thailand
Corresponding Author, E-mail: nicha.musiced@gmail.com

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Abstract

In the music system of Chinese universities, many Tuba students who want to study Tuba systematically may need more time to understand the major and then seek professional teachers to learn. Because in terms of the overall teaching system in China, Tuba does not recruit many students every year, which involves the composition of the university teacher system. If a senior teacher is assigned, their class hours may be very limited. For schools, they are often unwilling to arrange so many Tuba or trombone teachers. They prefer to have a single teacher who can teach a variety of musical instruments, which is a practical situation. So this has resulted in many Tuba students in ordinary music colleges in China not having professional teachers. From the current situation, there is still a lot of misunderstanding, lack of understanding, and lack of clarity in the composition of Tuba courses, especially in the teacher system of music colleges. This often leads to insufficient professional teacher allocation in the teacher composition of music colleges. This article presented the curriculum design in tuba teaching for first-year student in university.

Keywords: Curriculum; Design; Tuba Teaching; First-Year Student; University

Introduction

Tuba is the instrument with the lowest vocal range in wind Band and symphony orchestras, and plays a very important role in playing the bass part in symphony orchestras. In 1835, German Wilhelm Wilhelm Wilhelm invented this instrument, which can be played in four different keys: E-flat, B-flat, C-flat, and F-flat. The sound of the tuba is very deep, playing the lowest part in the band. For the convenience of walking and carrying, the tuba is usually held in a harness and played on the chest. With the increasing variety of repertoire played by Tuba, modern Tuba performance is no longer just limited to orchestra. Norwegian tuba player Øystein Baadsvik has become the world's first professional Tuba player, turning Tuba, a symphony orchestra instrument, into a solo instrument. At the same time, F Tuba has become the most suitable instrument for Tuba solo.

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Tuba's warm up exercise

Breath control :The philosophy behind these exercises is that most of the job is done when inhaling, and the process of inhaling should therefore be trained carefully. The reason for the tie between inhaling and exhaling is that there should be little or no break between inhaling and exhaling. In "real life" the inhaling should also be done in the tempo of the piece that you are playing. In these exercises always go from empty lounges to full lounges and back to empty when breathing.These exercises can be done with or without instrument. If you chose to use the instrument you should merely blow air through it, not produce sound.

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Breath timing:Play relaxed and with "warm air". Rest the lips against the mouthpiece with just enough pressure to prevent the air from leaking from the corners. Breath in relaxed using the whole fifth beat. Remember to play mezzo forte. Listen for the relaxed centre of the tone where the lips vibrate freely. Play in tune (Getchell & Voxman, 1991).

There are many similar training methods for brass instruments, such as the Warm Up training for the horn, trumpet, trombone, and tuba. At the same time, some excellent brass instrument professors also use the Warm Up training method for vocal instruments in class, such as Professor Han Xiaoming, Round Horn Class of Tianjin Julia Conservatory of Music. He previously taught at the German Conservatory of Music and was inspired by vocal music. During class, Professor Xiaoming and his students discussed the issue of breath, and learned high-quality exercises with musical language through daily vocal practice. At the same time, a piano with good pitch is an important factor in improving hearing.

Professor Han Xiaoming's horn class adopts the popular vocal practice method in European music schools, where students perform daily Warm Up training through singing. The benefits of this training are:

1）By singing, find the vocal position and start practicing the instrument.

2）German brass instruments use diaphragmatic breathing, with the same breathing position as vocal instruments (note: American brass breathing is chest back+abdominal breathing)

3）students train their pitch accuracy, listening skills, and pitch awareness through singing and piano accompaniment

4） students can quickly understand music by singing sheet music. Music has emotions, and for the same song, every student's music expresses different emotions. So through singing, students can quickly inject their understanding of music into the performance of musical instruments.

5）Through vocal warm-up exercises, students can more easily pay attention to their breathing position and adjust their breathing position.

The training method of lying flat is useful in vocal training because vocal music also requires the diaphragm to exert force, and the training method of lying flat on the bed through vocal music cannot be used. It has now been widely used in the teaching of music schools in Europe and America. This training method can help students find their breathing position faster, because vocal and brass instrument students are prone to tension when singing or playing instruments. In a state of physical tension, they will use chest breathing to inhale. The common problem of students shrugging their shoulders is rooted in breathing. Lie flat with your body in a sleeping position (our body is in a relaxed state when we sleep), and naturally open your mouth to breathe. The breath will not pass through your chest cavity. Because if we breathe through our chest while sleeping, our brain will lack oxygen. Lying flat breathing training can passively generate muscle memory in students' abdominal diaphragm muscles. Avoid training errors in breathing. After students find the correct breathing position, they need to use their usual singing or playing posture for breathing training, such as standing breathing exercises for vocal music and sitting breathing exercises for brass instruments. In vocal training, the pursuit is for smooth voice and unified timbre, and to achieve this requirement, special attention needs to be paid to the use of breath and resonance chamber. Breathing is the driving force behind singing and an artistic technique. "Sound is transmitted through air,"

which can make the sound more fluent and coherent, and make music more expressive. Therefore, it is necessary to master scientific breathing states and precise breathing techniques in singing.

Vocal breathing training technique: The chest is naturally raised, and the breath is slowly sucked into the lower part of the lung lobes through the mouth and nose. The diaphragm descends, and the rib muscles expand outward (i.e., the waist expands). The lower abdomen is slightly retracted inward, and then this inhalation state is maintained. The ribs and diaphragm are controlled, and the lower abdomen is pushed to slowly exhale the breath steadily, evenly, continuously, and coherently. Singing is to express emotions and to sing for others to listen to. When singing, one often faces a large audience and needs to spread the voice to every corner. Therefore, it is required that the voice has both a certain volume and a certain degree of intensity variation, and has the ability to sing for a long time. It is also required to control the delivery of breath according to the needs of the song, whether it is long, short, strong, weak, high, or low. To achieve these, it is not a simple task, and breath training is needed (Hunsberger et at., 1984).

There are two methods of breathing training:

Method 1: Smell the flowers, inhale through the nose, imagine yourself in a beautiful garden, and want to deeply smell the fragrance of the flowers. At this time, your whole body is stretched out.

Method 2: In a state of surprise, expand the waist and abdomen.

Through the introduction of vocal training methods and brass instrument methods, we can see that some of the methods used by the two majors in warm up training can be borrowed from each other.

Many vocal training methods are similar to brass:

In the basic skill training of brass instruments, there are also similar training methods. The advantages of this method are:

1 The venue is not limited, and you can find the inspiration position anytime and anywhere.

2 Stick out your tongue and passively open your mouth and throat to let the breath pass through your chest.

3. Breathe quickly and exercise diaphragm muscles

4 Training fast breathing is a very good training method for singing and instrument performance.

The aesthetic characteristics of unified sound effect in singing are: using different singing methods to achieve the unity of singing sound effect. When singing, it is required to have perfect connection between each voice to achieve the effect of unified timbre and pleasant sound. The ultimate goal is always to pursue the unity of sound effects. The unified aesthetic characteristics of sound effect in brass pipe performance are: when one voice is connected to another voice, the pitch and timbre have a natural, smooth and coherent sound effect.

In the performance of brass instruments, it is necessary to not only play sounds of different heights and colors, but also make these sounds perfectly connected and have a unified and harmonious sound effect. This is one of the biggest difficulties that every performer will inevitably encounter. Therefore, we should carry out unified articulation practice on the basis of correct mouth shape, trumpeter position, breathing method and pronunciation method. Its correctness determines the sound quality and musical performance

of brass instruments (Jacobs & Bell, 1960).

Through the above, we will compare some basic elements of vocal music and brass pipe performance to illustrate the similarities or differences in some aspects of brass pipe performance art and vocal music singing art and their causes, which will help us understand the relationship and differences between brass pipe performance and vocal music singing, help us understand the similarities and differences between brass pipe performance and singing methods, and grasp its essence and regularity, So as to improve the efficiency and level of brass pipe performance.

The advantages of current breathing practice methods

For the current breathing method, my students use abdominal breathing method, which is used in most music schools in Germany. Therefore, I think this method is more suitable for Asia. If you breathe from the abdomen, you can effectively open up your body every day and also help students master this practice method better and faster. The advantage of this practice method is that it can keep the breath in the same position as our breathing. When we speak normally, we actually use one breath from the abdomen to breathe above the diaphragm. However, when playing, we exaggerate this breathing, which is actually the same position. Whether we run, swim, or speak, we use the abdomen to breathe. The advantage of abdominal breathing is that it can quickly find the position in various parts of the piano room. For students, especially those with basic knowledge, the importance of position is very important. Correct positioning is crucial. After finding the breathing position, It can help them improve their playing techniques and provide more assistance in playing music. Because many students, whether they are from Europe or China, have obvious respiratory problems. When I teach these students expert and master classes, many times we are adjusting their breath positions and information positions. Even if they know how to proficiently use them, including chest and abdominal breathing, we emphasize that the position of each breath is the same when breathing in the abdomen. This is different from American breathing, which combines chest and abdominal breathing to breathe in its high, medium, and low frequency ranges (Morris, 2006). Its mouth shape is completely changed, but in the German system, abdominal breathing and abdominal breathing are in the same position. At the same time, its high, medium, and low frequencies are changed by the number of breaths, not by the change of mouth shape. In terms of control, these two playing methods have completely different aspects, and for Asians, it is more suitable to wear abdominal breathing, A state that is closer to the normal breathing of us normal people. So when students practice, they can quickly and conveniently find a suitable position to start practicing. So in our previous chapter, we mentioned how to find such a position. Compared to American chest and abdominal breathing, it is more direct and convenient to find a position to practice, so that students can maintain a good position to practice. This is very important and also better forms the memory of the diaphragm and the muscle memory of mouth breathing. This is very important in playing, because when many new students use American breathing techniques, they need to exert force on both their chest and abdomen at the same time. It is very likely that they are only using one area to exert force, especially the chest abdominal breathing technique, which uses the front half of their chest instead of the lungs to breathe. For a new wind instrument student, this understanding is very difficult, and it is very likely that during practice, their breath is easily sucked into their chest, causing their brain to lack oxygen when playing the instrument,

affecting their practice effectiveness. So for every chest and abdominal breathing, I recommend students with a certain foundation to use this method when they need to advance in solo performance. Because in the use of the chest cavity, if you do not have good support from the diaphragm, it is easy to wash into the lungs, which completely affects the training state of students. When we can hear the bass part of the tuba playing heavily, it must be that your entire body is in a relaxed state. The diaphragm needs to be completely relaxed and absorb more breath to play the bass and treble parts. The same problem applies. If your voice becomes narrow when playing the treble, it must be due to a problem with your breath, which is common among most students. So, what about your breath? The use of breath is very important. If you use this method of chest and abdominal breathing, it is likely that it will not become so rich in the high frequency range. If your breath is not enough, your high frequency will be narrow and accurate. So the abdominal training method and abdominal breathing method that I am currently using for students are very suitable for Asian students to learn, as well as for basic students to learn. They are also very suitable for many university students and music school students nowadays, as they can use this method to solve the breathing problems they encounter. So abdominal breathing is aimed at most students, and your chest abdominal breathing is more suitable for advanced students. The disadvantage of this training method is that when you need more strength, you may need more coordination and cooperation from other positions. Of course, some German musicians use chest and abdominal breathing when playing difficult tuba pieces in modern times, because in more difficult pieces recently, various parts of your body need to be supported. That's why? Many wind musicians tend to have a slightly overweight physique because they require more abdominal breathing during difficult and challenging performances and symphonic orchestra segments. This practice can be based on many foundations, and many basic and general exercises can effectively solve students' problems. Advanced practice requires some physical support, so I recommend the chest and abdominal inhalation technique (Pilafian & Sheridan, 2008). Bardswick, a Norwegian tuba player, studied undergraduate in Europe, and his breath changes directly affected his tuba solo works. His real transformation was when he went to the United States to learn a new breathing method, which is commonly known as the American breathing method. After that, he laid a good foundation in Europe and underwent excellent breath upgrading training in the United States, which enabled him to perform many difficult works on the tuba, including many violin pieces that can be played on the tuba.

Practicing instrument Tuba mouth

Dynamic flexibility; Remember to start all notes piano and don't play louder than forte. Be accurate about the tempo. When playing a fast crescendo there is always a risk of pressing the lips to hard against the mouthpiece. This can cause the pitch to raise or damage the tone quality. Compensate for this by allowing the instrument to move away from you as you play the crescendo.

About 5 minutes of Mouthpiece practice every day is used to start training. Our daily practice should start from the most basic level and be in a state of 1+1. For many students, starting practicing from the horn of an instrument every day is a great start. I strongly encourage students to use horn practice because it allows them to better feel the coordination between breath and instrument horn without relying on the instrument. The earliest horn practice was started by Professor Tuba from a music school in the United States, who used a piano and horn to produce accurate pitch through the vibration of the horn. This is a very

difficult exercise, and what we are going to talk about now is practicing lip movements. If many music school students, I would encourage them to start with pure lip movements, then their muscles will be under more pressure during practice. The simplest principle is that when our lips can vibrate and produce pitch, the horn is just a tool for lip vibration after practice. Tuba is only a larger vocal period, so step by step, the practice of lip vibration is the most difficult. Today, we will talk about the practice of horn, which is also something that many ordinary students can do on a piano. When you press a note on the piano, use the horn to blow out the corresponding pitch, which is a very good practice. When your horn can vibrate to produce accurate pitch, our pitch accuracy will be relatively smoother when we play. Practice may seem simple, but in reality it requires a lot of difficulty. The first thing we need to do when practicing is to vibrate our lips without instruments, so the breath will flow faster and disappear faster (Schuller, 1968).

Practicing with a horn is more tiring than playing an instrument because it does not have a large resonance carrier to retain sound and breath in a large container. For example, the Tuba trumpet's own instrument is semi sealed, so when our breath enters the instrument, there is a certain vibration, and the sound will have feedback and resistance. Practicing with a horn quickly vibrates, allowing the breath to dissipate faster, but it is very direct for horn practice. The oral cavity, entering the air through the horn, shortens its distance, indicating that to play a pitch, it requires more effort and muscle support, and is more prone to fatigue than when we play the horn normally. So this is also a great exercise for exercising the muscles of the mouth. We always need to find ways to increase the intensity of our exercises during the practice process. Generally, 5 minutes is enough for mouth exercises. If you want to make your lip muscles concentrate faster, better, and more powerful, it can be extended to a range of 10 to 15 minutes for practice.

Our so-called mouthpiece practice starts at the beginning of each day. When you are able to blow the pitch accurately, I suggest that students move on to the second step of practice. The second step is when you inhale, you need to be in a relaxed state to inhale and exhale, and all your attention should be focused on the position of the breath, all facing forward. So when practicing to compare scales, we start blowing from the lower notes to the higher notes. The fundamental notes become higher and higher, and usually when we play an instrument, students tend to get nervous, causing their breath to rise.

However, through practicing with the horn, as each note continues to rise, we can intuitively see that our breath is still facing forward. This can effectively solve the problem of students using their bodies to squeeze the horn and the sound when playing high notes. Many times, when playing high notes, they feel that the high notes are problematic because their breath positions have changed. Practicing with the horn can help us unify the bass, midrange, and treble zones. When playing in each zone, we can refer to the mirror and think about our bass, midrange, and treble zones through our consciousness. Are all areas facing forward with breath? This is a very good thing in practice, So compared to when we go to play the trumpet, we play musical instruments and need to think about the notes written on the music sheet. We need to think about rhythm, pitch accuracy, musicality, and whether our fingerings are correct. However, the trumpet can solve many basic problems for us. What are basic problems? Is our breath correct when we are playing a piece of music? So when we practice, during our warm-up exercises, the first thing we do is to play the horn and find the same habitat for the high, medium, and low ranges. We use the piano to adjust our pitch. When our horn can play very

accurately, our pitch becomes relatively uniform when we enter the instrument playing stage.

Tuba Performance

Smooth articlulation

Look at each line as two long notes split up by careful use of the tongue. Use a fast tongue action and try to touch the upper teeth on each note. In the lower register the tongue naturally touches the lower teeth as well as the lips. Maintain a smooth air stream at all times. Train by doing this exercise without the instrument. Blow on a piece of paper that you hold up 15-20 cm in front of your face. Make sure the paper doesn't jump more than necessary.

Chromatics:Inspired by Herbert L. Clarke, these soft chromatic passages are an outstanding way to start a day of playing. Movement first thing in a workout promotes finesse and flexibility throughout the day. The indicated soft dynamic range is imperative in order to access the benefit this exercise offers.

1)Tips and Suggestions:Smooth air movement -- constant and even walls of musical air!

2)Air is always moving. Use the entire rest to inhale evenly in an "Oh" shape.

3）Clean and smooth connections between each note

4）Confident fingers -- in order to avoid rough slurs, use marcato fingers in legato music. Armando

5）Stay within the indicated dynamic range throughout the exercise.

6）Imagine playing this exercise as smooth and connected as a fine pianist, then change your sound achievement by imagining this exercise performed on a fretless string instrument such as the cello or string bass.

Soft Touch：This exercise should be performed as softly as a clean articulation can be achieved to promote a soft, clear articulation right from the beginning of the day.

Playing softly is not holding air back. Rather, it is blowing air slowly. Relax in all registers to stay resonant on every note (Young & Wesley, 2007).

Tips and Suggestions:

1)Try wind patterning this exercise first. Use your hand to monitor the quality of your air movement and timing.

2)Always perform this exercise staccato. Take time to direct your attention to your ears by imagining the perfect staccato from other instruments like an oboe, muted trumpet or xylophone. Do this imagination exercise before each scale is performed.

3)Choose different keys every day and vary the type of scales to stay fluent in your harmonic knowledge. Do at least two to three different scales each workout

Tonguing studies:I picked the following quarter note study because it can be divided into two parts. The first part is in thirds,and starting with the 12th measure it becomes a study offourths. With the many tonguing patterns I have indicated, the student has the choice of extensive repeti- tion by using one pattern for the entire study or changing midway.

The advantage of working out complex rhythmical and tonguing patterns by use of this type of exercise will soon become apparent. One of the benefits is the range and length of the study. Another is that the act of repetition son removes fingering and pitch hazards. The player is then free to concentrate on the rhythmical factors of tonguing, which are complex enough without adding hazards of reading new pitch or fingering patterns at the same time.

There are differences in people's tongues, so what is proper placement for one will interfere with the tongue musculature of another.

Before starting to practice the tuba, the instrument is like starting a car. Our body has already warmed up after warm up, and the instrument also needs it. Therefore, starting the exercise is also an important part of the practice.

For the beginning of practicing the tuba, I usually like to start with the long note practice. Long note practice is more focused and can improve pitch accuracy. Through long note practice, the instrument temperature can be raised, allowing for faster practice of fast exercises. After long note practice, I will practice legato to, allowing the breath of the instrument to turn on in the sound. This practice can make the sound more unified and the music sound more coherent. Then there is scale practice, which allows for quick finger movements.

Scale practice is a very important practice method. Scale practice can be very slow, for example, many American and Japanese musicians like to practice scales at a speed of 30-60, and all scales go at the same speed

Slow scale practice can effectively exercise students' concentration and also test their proficiency in scale practice in various modes. Japanese students and teachers will have students practice from F major, followed by G major, and then the ascending scale of the chromatic scale. Quickly familiarize yourself with the finger techniques of various modes, practice at a slow pace to improve concentration, with a speed of 50. Practicing all scales once takes about 20 minutes, which is a long and tedious exercise that tests attention during practice,

F , bG, G, bA, A, bB, B, C, bD, D, bE, E, F, It is just a practice sequence for the major scale, without incorporating the practice of the minor scale, which greatly tests the patience of practitioners. Japanese students test their attention during practice, for example, if a Japanese student starts in F major and makes a mistake when playing in B major, then this Japanese student will punish themselves for repeating the mistake by starting from F major again. Only by demanding such high standards of oneself can one better exercise and reduce the error rate during solo performances. Through practice, it has been found that when the error rate decreases, it means that with a lot of practice, the finger muscles have developed mechanical memory, and at this time, the error rate of your scale practice will be very low.

When your error rate decreases, students can start the second stage of practice at a speed of 50, focusing their attention on their own tongue, paying attention to the position of the tongue, making it more forward, and making their speech clearer. This is a great advanced exercise that can be used to practice the clarity of sound. When you can play the scale without any errors, it means that your tongue and finger memory have become very proficient. Even if your brain is blank, you can still accurately play the scale, which means your brain can be liberated. At this point, you can start focusing your attention on your tongue, starting from 50 speed and continuing until 120 speed. The process of accelerating speed is also a process of increasing the strength of the tongue. If you want to practice quickly and still make your speech very clear, you need to train your tongue muscles. If you finish practicing at 50 speed and practice at 120 speed quickly, students will find that the speed becomes faster, the speech is not clear, and it is difficult for the tongue to reach the front position. When practicing, students must practice from slow to fast. This is a training mentality exercise, and you cannot be in a hurry. At the same time, the speed must be slow. From slow to fast, it is also a process of training your tongue from slow to fast. In this training, the muscles of the tongue will

slowly grow. This is a long-term training plan that cannot be solved in a day. Students need patience and a training plan when training. I believe that training in various variations of scales can effectively solve some of the problems that students encounter when performing solo.

When students' pronunciation becomes clearer and their practice speed becomes faster, they can start the third stage of training. Require all scale exercises to use Legato practice, which requires a high level of breath and familiarity with the scale. Focus all your attention on your breath, and give it your all with every breath. This practice will make students' bass, midrange, and treble sounds more unified.

After completing the first three stages of training, students can move on to the fourth stage of practice, such as playing the ascending scale in F major and the descending scale in B major. This exercise tests students' reaction ability and familiarity with scales. For students, this is very difficult and requires a high level of familiarity with the scale. At the beginning, it must be very challenging and may lead to errors due to slow reactions. This is a process that is great for students to practice. I suggest that students use a metronome to practice as soon as possible after adaptation, and change in rhythmic exercises. This will become very interesting and tense because the metronome will not stop thinking about a certain sound, and students must passively think faster and keep up. Many of their thinking time becomes regular due to the metronome.

Conclusion

In conclusion, the curriculum design for tuba teaching, particularly for first-year university students, emphasizes the importance of breath control, dynamic flexibility, and mouthpiece practice as fundamental elements in building a solid foundation. Breath control, incorporating both abdominal and diaphragmatic techniques, mirrors practices in vocal training, providing students with effective methods for achieving pitch accuracy and sound consistency. Integrating singing into tuba practice, a method popularized by Professor Han Xiaoming, enhances breath management and musical interpretation. Moreover, the focus on dynamic flexibility through mouthpiece practice strengthens the lip muscles, promoting efficient sound production. The combination of these techniques not only aligns with global standards but also offers a comprehensive, structured approach that is particularly well-suited to Asian students, fostering improved technical skills and musical expression in tuba performance.

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