
Title	The teaching and training of the female singers: A discussion with prominent Chinese voice teachers
Author(s)	Chia Wei Khuan and Li Xin
Source	<i>3rd Redesigning Pedagogy International Conference, Singapore, 1 - 3 June 2009</i>

This document may be used for private study or research purpose only. This document or any part of it may not be duplicated and/or distributed without permission of the copyright owner.

The Singapore Copyright Act applies to the use of this document.

The Teaching and Training of the Female Singers: A Discussion with Prominent Chinese Voice Teachers

Chia Wei Khuan & Li Xin

Introduction

The Western Classical Singing was introduced to China at the beginning of 20th century. Today, many Chinese singers have gained international recognition and status. From 1980 to 2000, singers from China have won 33 awards from 39 international vocal competitions (Ju 2002). These singers include Liao Changyong (廖昌永), Zhang Jianyi (张建一), Liang Ning (梁宁), Dilibaier (迪里拜尔), Deng Yun (邓韵), Peng Liyuan (彭丽媛), Song Zuying (宋祖英), Wu Bixia (吴碧霞) and others.

Many believe that there are likely many contributing factors which lead to such overwhelming success. The purpose of this study is to unfold the questions such as “What has contributed to the success of Chinese vocal arts?”, “How are Chinese singers trained?”, and “How do the Chinese voice teachers teach?”

This study has chosen to investigate the training and pedagogical approaches adopted by prominent Chinese voice teachers, particularly in the training of the female registration and range extension for the following reasons:

1. Western classical singing was introduced to China only at the turn of 20th century but the result of the teaching has had a great impact on the professional concert stage, both in China and worldwide. What are the predominant concepts upon which vocal pedagogy has been based?
2. A similar research has been conducted and published in the United States. It will be interesting to find out how different and similar the training and pedagogical approaches are in these two countries.
3. This research will be able to provide insight and understanding of the teaching of singing for vocal pedagogues in and outside China.

Methodology

The study replicated the research approach found in Elizabeth Blades-Zeller's *A Spectrum of Voices* (2002) in which prominent American voice teachers were approached to discuss the teaching of singing and how interviews can be utilized as a research tool in the field of vocal pedagogy. The procedures outlined in this book were summarized and used as a general guideline for conducting the interviews with the Chinese voice teachers.

It is noted that voice training is commonly offered in conservatories and universities that offer liberal arts and humanities in China. For practical reason, this writer has narrowed the list of teachers to seven major music institutions that are regarded as the most important and influential, the Beijing Central Conservatory of Music, the Shanghai Conservatory of Music, the China Conservatory of Music, the Tianjing Conservatory of Music, the Shenyang Conservatory of Music, the Sichuan Conservatory of Music and the Xinghai Conservatory of Music. The teachers, Guan Jinyi (管谨义), Lang Yuxiu (郎毓秀), Li Xinchang (黎信昌), Liu Dong (刘东), Liu Xianglin (刘湘琳), Qu Ge (曲歌), Song Yi (宋一), Sun Yufeng (孙雨丰), Wen Hengtai (温恒泰), Wen Kezheng (温可铮), Wu Bixia (吴碧霞), Yang Yan (杨岩), Zhao Yunhong (赵云红), Zhou Xiaoyan (周小燕) and Zhu Yiwei (朱以为), were selected according to the following:

1. Recommendation by other voice teachers.
2. Their track record of students who have attained national and international recognition.

To accomplish these tasks, two field trips were carried out to the selected major conservatories in China in December 2005 and May 2006 to interview the teachers. Each trip lasted about 3 weeks. The venues were chosen wherever most convenient for the teachers, at their studios, in their homes, or over a meal. The teachers were asked questions specifically concerning: (1) the general description of register; (2) the number of registers in voice; (3) the value of falsetto tone; (4) technical treatment; and, (5) blending of the registers.

The categories are found within the 'Concepts of Range' in Victor Alexander Field's *Training the Singing Voice* (1947), in which pedagogy concepts on range were presented. The same approach was also utilized in two subsequent studies, Burgin's *Teaching*

Singing (1973) and Monahan's *The Art of Singing* (1978), and a content analysis of the articles on vocal pedagogy in the *NATS Journal* by Chia (1993). Apart from interviews, an effort was made to compile teaching materials published by the teachers (Appendix A). These include VCDs or DVDs, books and journal articles. Two teachers even shared with this writer their personal unpublished hand-written teaching notes. In February 2007, a third field trip was made to confirm the finalized information.

These interviews collectively provide evidence on some of the prevailing pedagogical approach adopted and practiced by the voice teachers in China.

Registration Concepts of China and the United States Pedagogues

This section provides a comparison of the registration concepts advocated by the voice teachers in China and the United States in order to find out how different and similar the training and pedagogical approaches are. The views of the Chinese voice teachers are based on the data gathered from the interviews while the Americans' are the remarks from Elizabeth Blades-Zeller's *A Spectrum of Voices: Prominent American Voice Teachers Discuss the Teaching of Singing* (2002). Specifically, only information placed within (1) Registration (pp 41-56), and (2) Evenness through the Range (pp. 56-60), have been used in this comparison. In the process, additional vocal pedagogical views and writings are cited to substantiate or supplement the discussions only when necessary.

General Description of Register

Chinese Teachers' Remarks

Majority of the teachers concurred that registers exist among singers. Though speech and singing are somewhat correlated, they believe there are some fundamental differences between the two. For example, the sensation of placement of a singing voice and normal speech is not the same. Therefore, it is impossible to sing the entire vocal range from low to high, or vice versa, using a single approach. The voice consists of several registers and there are passaggios or breaks in between. Because of the passaggios, the voice is generally divided into low, middle, and upper registers. If the

transition from one register to another is not skillfully executed, 'breaks' occur in the voice and this is where attention in training is required.

Some teachers view register phenomenon as a result of mechanism adjustment of the vocal folds in the laryngeal area. The upper register is predominantly lighter while the lower register is heavier. When the switch becomes too abrupt, this is what is commonly known as register 'break'.

American Teachers' Remarks

Generally, American teachers defined a register as a group of consecutive pitch of a certain timbre produced by a certain relationship among laryngeal, resonance, and breathe adjustments. Some further described register as having change of vocal timbre, shifting of gears, or an adjustment that is audible to the ear when the vocal production comes out of the chest and into the middle, and another one when it goes from the middle into the head.

A few teachers viewed register 'break' or passaggio problems as coming from a lack of understanding of air flow and pushing too much air through passaggio. Physically, the existence of passaggios is due to different physical changes that happened in the throat and in the creation of a frequency or pitch. It is the physiology of the larynx and the muscle antagonism that takes place between the cricothyroid and the thyroarytenoid muscles.

Number of Registers in Voice

Chinese Teachers' Remarks

Altogether, there are three different opinions. First, the two registers view holds that as the physiology of each singer varies, the point of transition in the voice is also varied. Nevertheless, the transition only takes place once in the voice and this is often happened when one is bridging the middle to upper register because it is not so obvious from the low to middle register.

The second opinion considers that there are three registers in the voice. This view holds that the human voice consists of upper, middle, and low registers. Hence, from upper to middle, and middle to lower, each has a point of transition.

The third opinion believes that there are as many as four registers, namely, low, middle, middle-upper, and upper. Between each register, a point of transition exists.

American Teachers' Remarks

Majority of the American teachers believe that there are three registers while there are two mechanisms, the heavy mechanism and the light mechanism. However, the two mechanisms do mix together in the middle. Because of the overlapping, some disregard the middle as a register. The terminologies used to name these registers are: chest, middle, and head while upper, middle, and low are also common.

One teacher, Oren Brown, cited terms devised by Harry Hollien and his research group in Florida. The researchers coined "loft, flute, modal, and pulse" as registers based on scientific instruments that can measure voice qualities. So there are now four registers, with "one" as the lowest, "two" as speaking voice, "three" as falsetto, and "four" as the very highest. However, there are at least two teachers who recognized the existence of registration but prefer to address it through teaching strategies instead of thinking of it in terms of numbers.

Value of Falsetto Tone

Chinese Teachers' Remarks

In general, they believe falsetto does not exist in the female voice. Most prefer to call it head voice for women. However, the two terms appear to be interchangeable throughout the interview. Nevertheless, whenever "falsetto" is mentioned, most of them would reiterate it as a voice production which is produced by the light mechanism, the Bel Canto head voice. It is not the unsupported, thin production. They unanimously agreed that when the head voice is correctly produced, it is a predominantly light mechanism voice production which enables the singers to bridge the registers with ease. In other words, it allows singers to attain some form of vocal balance in phonation, resonance, and breathe management. Many teachers find this an effective tool to coax students into establishing a "mixed" voice. Hence, it is commonly used in the teaching of range extension and registration.

The teachers also spoke about the necessity of having good breath support and resonance balance in order to attain the optimal "mixed" voice. If the so called "pure"

falsetto is employed, the ideal mixed voice would be difficult to produce because it is a phonation whereby there are only peripheral vibrations in the vocal folds.

American Teachers' Remarks

The American teachers rarely mentioned the value of falsetto tone in registration. They do touch upon the importance of establishing a good "mixed" voice when approaching the upper register from the middle register. However, in their discussion only terminologies such as head voice or the light and heavy mechanisms are engaged. In just one instance, when referring to the use of "voix mixte" in men especially, one believes falsetto perhaps could be a "possible way to introduce the head voice in the male."

Technical Treatment

Chinese Teachers' Remarks

Although the detailed procedures may vary from teacher to teacher in teaching of registration and extending range, many principles are, in fact, common.

The most fundamental issue is breathing. Many teachers consider breathing the foundation to all good singing techniques. Almost every aspect of singing is directly or indirectly linked to and built upon it. For example, it can be assumed that when good breath is attained, the body is also in a well-balanced and proper aligned posture. This posture in turn can enhance coordination of all body parts, including the stability of the larynx, as well as other vocal apparatus. One teacher explicitly uses pulling the thread through the eye of a needle to describe the function of the breath in registration. When the 'thread' (breath) is moving through the eye of the needle (point of transition), the body is properly aligned and without rigidity. Failing which, a smooth transition will be difficult to achieve. The key is to sing softer rather than louder.

Another technical treatment is the establishment of an appropriate middle register. Many teachers view this as one of most important steps in voice training. It is the foundation on which voice extension into the upper register is built upon. Again, the devices of attaining it are highly varied. It can be the learning of specific laryngeal adjustments, discovering the "mixed" voice, finding the crucial balance of light and heavy mechanism, or sensing the resonance balanced, to name a few examples.

There are general consensuses on where the passaggios or breaks occur, but slight variations prevail. They would help students identify the passaggios and then provide some form of training to bridge them. Because of the existence of passaggios, almost every teacher believes that registers exist in the voice. Since every student is different, the treatment is devised accordingly.

In order to overcome the passaggios or breaks, technical exercises are prescribed. These exercises can be introduced as vocalises combining vowels in the form of a scale or arpeggio. Regardless of how they are sung or introduced, the ultimate goal is to ensure proper registration training and cultivate certain relationships between breath, pitch, and vowel that control different registers. The teaching approaches are quite diverse. Some teachers monitor it aurally, others instruct student to sing with an 'open throat', relaxation, tonal image, or resonance balance, still others adopt 'covering' or vowel modification. Sometimes, it is a combination of all the above mentioned approaches. When exercises are sung, care is also given to ensure breath is appropriately engaged, the posture is well-balanced, and that there is no excessive tension in the vocal apparatus.

'Covering' is another term surfaced often in interviews when dealing with registration. The teachers advocate that an element of covering is needed as a form of preparation for the upper register. Once it is successfully done, there is a sensation of singing in the mask. This means one senses sympathetic vibrations in the sinuses. However, the head voice is anchored to the breath that is deep in the body. A good head voice is sung with an appropriate open throat (nasal-, oral- and laryngeal-pharynx), relaxed jaw and tongue, and raised soft palate. The sensation may vary slightly according to individual. Some feel it in the mask, some in the ridge of the nose or between the eye brows, while others sense it more in the head. Nevertheless, there is no forcing or pushing throughout the transition process.

Last but not least, several teachers are fond of helping students discover an ideal "mixed" quality speaking voice in the middle register as a means in registration. This form of treatment is said to have been borrowed from some of the traditional Chinese operas. The approach begins with finding a good "mixed" voice. Using this as the basis,

coupled with breath support, the singer enunciates the dictions with clarity and high placement.

American Teachers' Remarks

The technical treatment employed by the American teachers, in general, is similar to those of the Chinese teachers. They discussed the same vocal issues such as breath, phonation, passaggio, resonance, and laryngeal adjustment that are also addressed by the Chinese teachers.

For example, when dealing with breath, some teachers taught how breathe pressure changes for different registrations, as well as a greater lift or flow in breath—and less pressure—is used for a higher register. Also, not one but several teachers believe that when close and round vowels are introduced (as from [a] to [ɑ], or [ɛ] to [e], etc.), it helps the singer make the transition from a lower to a higher registration easier.

Quite a few teachers found a relaxed neck and a slightly tilted head position help avoid a jutting chin and unnecessary tension on the throat-neck area. This in turn helps the singer to negotiate a passage with ascending pitches that move from a lower to a higher registration. It further attests that posture and alignment are important to singing.

When dealing with a laryngeal problem, they often do not make students aware that it is a laryngeal problem. For that, they may use a variety of exercise to overcome the problem. For instance, a four tones (1-2-3-4-3-2-1) ascending and descending on [a] is introduced to prevent students from locking if they sing on a five tones exercise. Sometimes, sequence such as 1-3-5-6-5-3-1 on an [a] is sung so that students can get through the fifth without thinking that it is a high note. The aim is to make students avoid over stressing the fifth.

If a high laryngeal position for a high voice causes difficulty due to a function of registration, the teacher may have students work low in their range and then do the exercise an octave higher to establish the feel of the same throat position. It makes a real impression on them because then they begin to feel the larynx release.

An approach which may be known to the Chinese teachers but not mentioned is working with “messa di voce” exercise. Singer learns to make register adjustments on

the crescendo—diminuendo by changing the vowel (resonance adjustment) and breathe pressure. This exercise allows the student to experience that a single pitch can be sung in more than one register. Further incorporating different vowels into this exercise enables the student to understand how vowel production relates to pitch and how this knowledge can be transferred to singing songs.

American teachers share the same opinion that developing uniformity of sound starts in the middle register, somewhere in the middle of the range. They are quite fond of using closed vowels to help the adjustment as the pitch goes higher. To prevent sudden changes or shift of tone quality when ascending, they try to get student to go through a little mixture, the “mixed voice”, half step by half step until the a smooth transition is finally attained. The teachers unanimously stressed the import of achieving a good “mixed voice”. This can be interpreted as achieving an ideal laryngeal adjustment, a well balanced light and heavy mechanisms. Again, to what extent, it is considered ideal, the views are slightly different. Some provide only general description; others work according to a rigid ratio. The consensus is, singing from the middle to lower register, chest voice prevails while from the middle to upper, more head voice is incorporated.

Similar to the Chinese teachers, the Americans teachers believe in helping students understand the area between the first and second passaggios. Many issues surrounding the passaggios are discussed extensively because passaggios are related to registration. These include what happens in terms of vowels as one ascends; what happens in terms of mouth opening; and what happens in terms of what refer to as “moving to a thinner string” while retaining resonance balance. Every topic requires a lot of time as training can proceed in many different ways.

Why is passaggio an area of concern? It is mainly due to expert singers often using descriptive terms such as “frontier, more nasal, narrower, more mask-y, shallower,” to relate their own perception in overcoming passaggios. These descriptions can be rather abstract and intangible.

As for other technical treatment, besides those stated earlier, most teachers would prescribe specific vocal exercises to address the registration needs. These exercises can be short or long scales, arpeggios, or a combination of both. They are utilized to fulfill

one objective, overcoming the “breaks”. When it comes to the minute details, many teachers adopt their own special approach. Such devices take the form of vowel usage, opening of certain resonance cavities, singing with “inner smile”, or a yawn with a smile.

As stated earlier, some Chinese teachers use speech as a tool for registration training. The American teachers also utilize the similar device. Several teachers use [ʌ] vowel as a vocal onset to discovering an appropriate speech sound. Other speech training includes using rather dramatic, colorful speech in different registers. Students are asked to experiment through speech and different pitches, but not by raising anything. Therefore, one learns to raise the pitch of the voice by changing the registration, not by reaching for it. Eventually, the student will find that he or she can sing higher with right quality. By discovering different qualities in the dramatic intensified speech, the student will gradually find freedom in different areas of the singing voice.

Blending of the Registers

Chinese Teachers' Remarks

It is noted that when discussing the topic of blending the registers, some teachers inevitably relate it to technical treatment.

In general, most teachers concur that an ideal vocal register blend is a singing range that shows no trace of breaks when singing in different registers. However, many try to express the similar idea but put in slightly different words. An ideally blended register can be summed up as a voice that is, or has:

1. seamless with no apparent change in the vocal quality.
2. non-existence of different registers.
3. no trace, or no gap in the passaggios.
4. a gentle, traceless register transition from the low to the middle, and from the middle to the upper.
5. a perfect adjustment of the heavy and light mechanisms.

Apart from the above views, the teachers also spoke about the importance of establishing an ideal mixed vocal quality in the middle register to ensure that transition

takes place smoothly. When the well coordinated mixed voice is attained, the ideally blended vocal registers will occur.

Many teachers reiterate that the role of the teachers is highly important during this phase of voice training. Again, many aspects on training were mentioned. They are supposed to:

1. provide sound technical guidance for students.
2. impart and appreciate the correct tonal concept.
3. understand and teach according to individual's aptitude and capability.
4. use good aural skill to determine the appropriate technical approaches.
5. unlock unnecessary muscular rigidity through good breathing and breath support.

Two teachers, in fact, thought the best approach to blending the registers is not to over-emphasize the technical issues of registration and simply work on the fundamentals of singing such as breathing, phonation, and resonance. Once the psychological barrier of registers is removed, the registration in voice training can be resolved easily. They felt that students often get unduly nervous when vocal register is stressed too frequently.

American Teachers' Remarks

In many ways, the views of the American teachers on blending of the registers are rather similar to the teachers in China. Most teachers agreed that an ideally blended vocal register is an even, healthy sound that is: "free, bubbling, without tension, has a vibrato that is an asset rather than a noticeable liability, and results in perfect intonation and a well-placed, even scale."

They agree that a singer with a unified voice is one that can go from high to low without an obvious change to the audience. One usually feels that tonal production is the same through the range. No big readjustments are needed because the sounds sound as if they are connected physically.

To prepare students for this aspect of training, some teachers believe that it is the responsibility of the teachers to let students be aware that the voice sounds differently in different sections of the pitch range. A recorded audio recording sample can be very helpful in teaching instead of solely go by feel, or how it sounds in their ear.

Another approach is the establishment of freedom. As the resultant voice production involves breath management, vibration, and resonance, if one has the freedom of the vibrator, proper coordination between the breath control and that vibrator, and the balanced resonance, one is going to have freedom in every part of the voice.

The ultimate freedom in fact comes through the posture: the way a singer stands. When good balanced posture is achieved, the laryngeal position is also stabilized. An ideal blend vocal register can be more easily produced because the “attitude of the larynx and the position makes a difference in sound.”

Interesting, one teacher illustrated the mix of head and chest according to the ratio of percentile. Though in actual practice it is difficult to obtain the ideal mix, the use of the approximate percentage ratio seem to help clarify the registration issue for the singers, especially in the areas where there are voice breaks.

Conclusion

Teaching of singing can be regarded as rather subjective, especially as there is a wide spectrum of views. Sometimes some of the views may or may not be fully in agreement with one another, as noted from the eminent voice teachers who were interviewed in this study during three separate field trips. However, it should be emphasized that the intent of this study was not to evaluate the quality of the teaching of singing of these teachers. Instead, the purpose is to present some of the prevailing pedagogical approaches adopted and practiced by the voice teachers in China. This perhaps is also the first time that vocal pedagogues outside China are given an opportunity to understand how voice teachers in China teach. Based on the interview data and comparing the views of Chinese and American teachers on registration, we are now able to provide answers which are relevant to the research questions pertinent to this study stated above.

The first question concerns the predominant registration concepts upon which the voice teachers in China have been based. This writer would like to point out that there are both similar and contrasting views, in agreement and disagreement. Such finding will

surprise no one as they are not unusual in the teaching of singing. The book by Fields (1947), *Training the Singing Voice*, has compiled and shown that there were as many diversified theories, methodologies and procedures used in the teaching of singing. Five other publications, by Burgin (1973), Miller (1977), Monahan (1978), Chia (1993) and Blades-Zeller (2002) all reflect the same diversity of views. In her book, Blades-Zeller stated that “teaching voice and vocal performance is by nature a subjective and amorphous pursuit. Only singers and teachers of singing can really understand that. But in any area where diverse opinion coexists, healthy controversy signifies vitality.”

The second research question attempts to find out how different and similar the training and pedagogical approaches are found in China and the United States. To answer this question, a summary of the register concepts of the Chinese and American voice teachers is provided below.

The teachers in China interviewed by this writer do concur that one of the primary concerns in the teaching of singing is extending the vocal range to meet the demands of artistic singing.

They recognize that vocal register exists in the human voice. Helping students to overcome registration is of utmost important in the training process. On the description of register, in general, they agree that a register consists of a series of tones of similar quality within a compass of a voice. This view is common to the standard definition advocated by 19th century teacher, Manuel Garcia (1855), and has been agreed upon by most pedagogues. They also recognize that in singing, a particular adjustment of the vocal folds at certain points might result in a change of register.

In terms of the number of specific registers one has in the voice, the teachers may seem to have provided slightly different views. Most teachers stated that there were three registers, head, middle and chest, or upper, middle and low. Those who mentioned that there were two registers did so mainly because they found the transition from the low to middle register was not problematic and therefore disregarded it. When registration becomes a none-issue, there is only one register. This is the rationale of the one register view. Upon close examination, it is inevitable that one notes that, regardless of varying opinions on how many registers are found in the voice, the guiding principles

for bridging the register stated by the teachers are in general in agreement to each other. The slight contrast in view can be attributed to their previous vocal background, adaptation of technical definitions, and approach to technical treatments prescribed in teaching.

As for the value of falsetto, most teachers regard this term that pervades the literature of vocal pedagogy as sometimes causing more confusion than benefit. However, they are still fond of the term and use it freely in their teaching. It is obvious that from the data gathered the falsetto discussed by the teachers is not referring to the unsupported breathy and weak voice production which uses occasionally for comical or other musical effect, but a legitimate head voice which is predominated by the 'light' mechanism and well supported breath.

On the topic of laryngeal function, they are more inclined to adopt the terms 'heavy mechanism' and 'light mechanism' in the discussion of certain physiological function of the vocal folds, but other terminologies such as head, high, middle, mixed, chest, low and falsetto, are used frequently during interviews. When referring to vocal folds adjustment, rarely did they use 'predominantly cricothyroid' or CT, for the head voice or light mechanism, and 'predominantly thyroarytenoid' or TA, for the chest voice or heavy mechanism. This is where they differ most with non-Chinese vocal pedagogues. Many teachers share the same idea that certain conditions have to be established to help the singer negotiate passaggios and the changes of register. Hence, falsetto can be utilized as a means to accomplish it. In addition, for some singers, falsetto is an effective inducer for the light vocal quality, eliminating the over involvement of the heavy mechanism.

On the topics of technical treatment and blending of the registers, data gathered seem to overlap each other. Most teachers felt that technical treatment or blending of the register involves skillful adjustment and mixing of the heavy and light mechanism. This means establishing an ideal 'mixed voice' that is neither too heavy nor too light. In other words, it is a process of maintaining some of each quality in each tone one makes, leaning toward the light mechanism for higher tones and toward the heavy mechanism for lower tones. The entire process is regarded as highly complex and demands skillful coordination of the instrument, involving subtle adjustments of the breath, phonation,

resonance and vowels. All these elements are fundamentals to achieving a smooth vocal range. It is noted that the teaching approach utilized by the teachers are largely empirical in nature, using observation or practical experience rather than relying on scientific principle, even though a few of them do use scientific information to substantiate their empirically-based teaching.

Teaching of singing is highly individualistic, be it from the standpoint of the teacher, or the student. Therefore, it is noted that the teaching approaches of the teachers may be tailored or varied to a certain extent to meet the individual need. This is the general impression this writer perceived during the three field trips. However, they do conform and adhere to the principles of sound vocal pedagogy practice outside China.

On the other hand, the American teachers views, as stated in Blades-Zeller's book, are similar to those of this writer has gathered. She also reported that sometimes it is difficult to separate other vocal elements from the discussion of registration. She summarizes the main concepts of the American teachers as follows (Blades-Zeller, 2002, pp. 41-42):

1. Opinions vary regarding how many registers of the voice exist.
2. Sensations of "placement" change as the singer goes through changes of registration.
3. Teachers work for freedom through registration change.
4. Resonance and registration are linked.
5. Certain conditions can be utilized to help the singer negotiate passaggios and changes of register.
6. Vowel work is an important key to registration adjustment.
7. Smooth changes of registration involve subtle adjustments of breath, phonation, and vowel resonance. Coordination of these elements is a fundamental part of vocal training.

On the topic of evenness through the range which involves attainment of evenness through area between registers, she also found that resonance and registration are closely interconnected to each other in discussion and are difficult to separate. The following are the general observations (Blades-Zeller, 2002, p. 57):

1. Unification of sound results from equilibrium among such factors as the balance of breath pressure with intensity, laryngeal stability, and resonance adjustment.
2. A unified vocal sound seeks a blend or even “mix” throughout the range of the voice.
3. Voice teachers use a variety of methods to help students achieve such evenness through the vocal range.

Based on the summaries given, it is quite clear that there is not much difference in the teaching of registration and there are more areas that are in common. However, this writer did find that during interview, some of the Chinese teachers express certain pedagogical thoughts using poetic rhymes in Chinese words and thus was not easy to interpret and translate them word-for-word into English.

In summary, it is obvious that although teaching of singing can be regarded as rather subjective, especially when there is a wide spectrum of views, the Chinese teachers are adopting a way that is generally in alignment with the teaching methods of the Western teachers with some customized alternatives to fit the local environments and targeted students. Hopefully, there will be more publications similar to this which enable vocal pedagogues outside China more opportunities to understand how voice teachers in China train the students.

Bibliographies:

Blades-Zeller, E (2002). *A Spectrum of Voices: Prominent American Voice Teachers Discuss the Teaching of Singing*. Lanham, Md: Scarecrow Press, Inc.

Burgin, John Carroll (1973). *Teaching Singing* Metuchen, N.J.: The Scarecrow Press, Inc.

Cao, Meiyun (2001). *The History and Appreciation of Chinese Music*. Hangzhou: University of Zhejiang Publishing House, 9.

Chao, Pian Rulan (1995). China: General History. *Grove Dictionary of Music and Musicians*. S. Sadie, ed., McMillan Publishers, 248-250.

Chia, Wei Khuan (1993). *A Content Analysis of Articles on Vocal Pedagogy in the Magazine of the National Association of Teachers of Singing, 1944-1992*. Dissertation, University of Cincinnati.

- Fields, V. Alexander. (1970). Review of the Literature on Vocal Registers. *The NATS Bulletin*. Oberlin: The Association, 26: 37.
- _____. (1952). *The Singer's Glossary*. Boston: The Boston Music Co.
- _____. (1947). *Training the Singing Voice*. New York: King's Crown Press.
- Fong, Wenci (1998). *Musical Exchange between China and Other Regions*. Hunan Education Press.
- Garcia, Manuel (1855). *The Art of Singing, Part 1*. Boston: Oliver Dictson & Co.
- He, Honglu (2003). *General Knowledge on Chinese Music*. Zheng Zhou: Southern River People Publishing House, 8.
- Ju, Qihong (2002). *A History of Chinese Music: 1949-2000*. Changsha : Hunan Fine Art Press.
- McClosky, David B. (1978). *Your Voice at Its Best*. Plymouth, Boston, MA.: The Boston Music Co.
- Miao, Tianrui., Ji, Liankan., & Guo, Nai'an (1984). *A Dictionary of Chinese Music*. People's Music Publications.
- McKinney, James. C. (1994). *The Diagnosis and Correction of Vocal Faults*. Nashville, TN: Broadman Press.
- Miller, Richard. (1989). Sotto Voce: 'Covering' in the Singing Voice. *The NATS Journal*. Jacksonville, Fl: The Association, 46: 14.
- _____. (2000). *Training Soprano Voices*. New York: Oxford University Press.
- _____. (1977). *Techniques of Singing: Italian, French, English and German Schools*. Metuchen, N.J.: Scarecrow Press.
- _____. (1986). *The Structure of Singing: System and Art in Vocal Technique*. New York: Schirmer Books.
- Monahan, B. J. (1978). *The Art of Singing: A Compendium of Thoughts on Singing Between 1777 and 1927*. Metuchen, NJ: The Scarecrow Press, Inc.

Appendix A: Interviewees' Publications and Audio-Visual Materials

Guan, Jinyi; Sun, Chongyin, and Qiao, Hongdi (2000). *The Art of Singing*. Beiyie Press.

Guan, Jinyi (2003). Resonance and its Application in Singing. *How to be a Better Singer*. Chen Li, ed. Beijing: Huayue Press, 51-61.

_____. (2005). *The History of Western Vocal Arts*. Beijing: People's Music Publisher.

Li, Xinchang. *Training Soprano Voices*. VCD, Beijing: Central Conservatory and Universal Audio and Video Production.

Liu, Xianlin (2004). The Professional Preparation of Voice Teachers. *Journal of Contemporary China Music Education*. April, 65.

_____. (2004). A Psychoanalysis of the Singing Voice. *Contemporary China Music Education*. March, 63.

_____. (2004). Artistic Singing. *Asian Journal of Education*. May, 9.

Zhou, Xiaoyan. *Voice Training Series by Zhou Xiaoyan: Soprano*. VCD, Beijing: Central Conservatory and Universal Audio and Video Production.