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The Development of Opera Mezzo-Soprano Teaching Manual in Chinese Undergraduate Music Teaching

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ABSTRACT

The current study employs a mixed-methods approach, integrating both quantitative and qualitative research, to achieve these objectives: (1) to develop a teaching manual for the mezzo-soprano part in opera for Chinese undergraduate music teaching, and (2) to evaluate and recognize the teaching manual designed for the mezzo-soprano part in opera for Chinese undergraduate music teaching. The study utilizes research methods such as literature review, performance observation, expert interviews, thematic analysis, and statistical evaluation to examine mezzo-soprano training comprehensively. The findings include a textual analysis of mezzo-soprano roles in Chinese and Western opera, expert feedback on the current situation of mezzo-soprano instruction, and an assessment of the newly developed teaching manual by five experts. This research contributes valuable insights to music teaching, providing guidance for both students and educators while promoting the development of bel canto vocal training in China. Additionally, the study highlights potential areas for further research, including expanding the range of examples and incorporating interdisciplinary content to enhance mezzo-soprano pedagogy.

Key words: Mezzo-soprano Pedagogy, Opera Training, Chinese Undergraduate Music Teaching, Teaching Manual Development, Bel Canto Vocal Training

INTRODUCATION

Statement of Problem

Opera is a comprehensive stage art form that encompasses music, literature, drama, dance, and visual arts. It not only conveys a wide range of emotions but also reflects philosophical and social issues. As an essential genre in Western music, opera has a rich history spanning several centuries, undergoing significant historical evolution and fluctuations. It serves as a reflection of human civilization and social development within specific historical contexts and plays a crucial role in the history of music (Yang, 2022). The New Grove Dictionary of Music and Musicians, a highly regarded international reference, defines opera as "a general term for musical dramatic works in which actors sing part or all of the passages. Opera is a fusion of music, drama, and performance, combined in different ways and to varying degrees across different countries and historical periods, with music serving as the dominant element" (Sadie, 1980). Western opera originated in ancient Greece in the form of tragedy, officially emerged during the Italian Baroque period in the 16th century, rapidly developed in the Classical period, and reached maturity in the Romantic era.

In contrast, Chinese opera was established in the first half of the 20th century, influenced by and developed in response

to Western opera. It differs from traditional Chinese theatrical performances, often referred to in the West as "Chinese opera," as well as from the "drama with singing" style. Chinese opera integrates dramatic storytelling within a polyphonic musical framework, using singing as the primary narrative tool while adopting a realistic performance style. It is a comprehensive stage art form with distinct national characteristics in both content and structure (Man, 2006). Both Western opera and modern Chinese opera employ the bel canto singing technique, in which the classification of vocal parts is a nuanced and scientifically structured process.

Vocal classification in bel canto is primarily determined by the singer's vocal cord length—longer vocal cords correspond to lower vocal registers, while shorter vocal cords correspond to higher registers. The classification of a singer's voice is based on the lowest resonant tones they can produce. Bel canto singing is divided into sixteen vocal categories: (1) light soprano (Soprano Lirico Leggero), (2) lyric soprano (Soprano Lirico Puro), (3) heavy lyric soprano (Soprano Lirico Spinto), (4) dramatic soprano (Soprano Dramatica), (5) light mezzo-soprano (Mezzo-Soprano Lirico), (6) lyric mezzo-soprano (Mezzo-Soprano Dramatica), (8) alto (Contralto), (9) light tenor (Tenore Lirico Leggero), (10) lyric

tenor (*Tenore Lirico Puro*), (11) heavy lyric tenor (*Tenore Lirico Spinto*), (12) dramatic tenor (*Tenore Dramatica*), (13) light baritone (*Baritono Lirico Leggero*), (14) lyric baritone (*Baritono Lirico Puro*), (15) low baritone (*Basso-Baritono*), and (16) bass (*Basso*). The distinctions between adjacent vocal types are not rigid; rather, they exist on a spectrum of gradual variation. A singer's classification can shift dynamically based on age and vocal training (Chen X., 2021).

Among female voices, the mezzo-soprano has the warmest timbre. Due to its shared qualities with the soprano voice, careful differentiation is necessary in vocal classification. Physiologically, the vocal cords of a mezzo-soprano are longer and thicker than those of a soprano. The mezzo-soprano voice is characterized by its rich, rounded, and expressive tone, offering a warm and engaging quality. Compared to sopranos, mezzo-sopranos possess a more resonant and powerful lower register, particularly in their chest voice (Li L., 2019). Opera, in contrast to pure art songs and folk songs, is highly narrative and visually engaging. Singing opera arias is an essential skill for vocal students, requiring them to embody and interpret characters on stage, which is a key focus in vocal pedagogy.

The mezzo-soprano role encompasses female characters whose vocal range typically spans from G3 to A5 and includes three primary categories: light mezzo-soprano, dramatic mezzo-soprano, and lyric mezzo-soprano. In opera, mezzo-sopranos often play supporting roles or unconventional lead roles. Their characters frequently include young girls, elderly women, or even male characters in trouser roles. Some mezzo-soprano arias may contain pitches reaching B5 or higher, typically associated with youthful, intelligent, and courageous female characters. However, mezzo-sopranos often face challenges in gaining recognition, as they are less prominent than sopranos and tenors in both Chinese and Western operas. Mezzo-soprano roles are sometimes stereotyped as villains or old women, reinforcing their secondary status in operatic narratives. For example, characters such as Alisa (Lucia's servant in Lucia di Lammermoor), Giovanna (Gilda's servant in Rigoletto), and Flora (La Traviata) are functional roles with minimal vocal lines and limited character development (Chen X., 2021). Notable mezzo-sopranos in the global opera scene include Teresa Berganza (Spain), Cecilia Bartoli (Italy), Anita Rachvelishvili (Georgia), and Chinese singers Yang Guang and Liang Ning, though their recognition is less widespread compared to other vocal types.

While mezzo-sopranos in Europe benefit from a well-established operatic tradition, mezzo-sopranos in China have faced slower development. Despite the presence of talented Chinese singers, the number of professional mezzo-sopranos remains low. Historically, following the founding of the People's Republic of China, most compositions for female voices were written for sopranos, leading to a scarcity of mezzo-soprano repertoire and limiting training opportunities. However, since the 1980s, with the revival of China's music industry, the country's vocal pedagogy has made significant progress. The emergence of dedicated vocal educators in music academies has contributed to the development of Chinese mezzo-soprano training (Chen W., 2021).

Many universities in China now incorporate opera training into their vocal curricula, utilizing opera arias to enhance students' emotional expression and interpretative skills. Integrating opera into college-level vocal instruction helps students develop a deeper understanding of musical and dramatic elements, ultimately fostering well-rounded musicianship. Therefore, the application of opera arias in collegiate vocal training should be emphasized (Hongyuan & Smithitam, 2024).

Despite the increasing focus on opera studies, there remains a scarcity of research on mezzo-soprano characteristics and teaching methodologies, making it an essential area of academic inquiry. A more comprehensive exploration of character development and vocal techniques for mezzo-soprano roles can offer valuable guidance for students and educators, contributing to the advancement of bel canto training in China.

Research Objectives

- 1. To develop a teaching manual for the mezzo-soprano part in opera for Chinese undergraduate music teaching
- 2. To evaluate and recognize the teaching manual designed for the mezzo-soprano part in opera for Chinese undergraduate music teaching.

Research Questions

- 1. How to develop a teaching manual for the mezzo-soprano part in opera for Chinese undergraduate music teaching?
- 2. How to evaluate the teaching manual developed for the mezzo-soprano part in opera in Chinese undergraduate music teaching?

LITERATURE REVIEW

This literature review examines existing scholarship on bel canto singing techniques, the development of opera in Chinese and Western contexts, and mezzo-soprano roles. It highlights bel canto principles, teaching methods, and practical applications, addresses historical influences and distinctions between Chinese and Western opera, and analyzes evolving mezzo-soprano roles and their pedagogical implications. This review provides a theoretical foundation for developing specialized teaching materials for mezzo-soprano opera education at the undergraduate level.

General Contents

The literature reviewed provides comprehensive insights into the development, application, and education of bel canto and mezzo-soprano roles in both Western and Chinese operatic traditions.

The general information of bel canto

Bel canto, originating in Italy in the sixteenth and seventeenth centuries, has undergone significant evolution, forming a

scientific vocal system (Ma, 2016). It has gained prominence in China, particularly through international competitions, demonstrating the growing influence of Western vocal techniques in Chinese vocal education. The characteristics of bel canto, including mixed vocal range singing and resonance utilization, are crucial for achieving expressive and technically proficient performances. Additionally, its integration with Chinese folk vocal music remains a subject of discussion, as evidenced in the adaptation of Yunnan folk songs (Qin & Zhang, 2009). The fusion of Western and Chinese vocal techniques has enriched Chinese vocal expression while maintaining national musical characteristics (Li Y., 2018).

Western opera development

Opera, emerging in Renaissance Italy, integrates various artistic elements such as music, theater, and dance (Fan, 2018). The flourishing of opera in Italy and its subsequent spread to other European nations led to the diversification of styles, such as the grandiose effects in French opera and the depth of musical narratives in German opera (Bai, 2012). Ethical themes in nineteenth-century Italian opera, particularly through the works of Verdi and Puccini, emphasized resistance to oppression, love, and social justice (Zhang, 2015). The influence of Western opera on Chinese vocal education is evident in the teaching methodologies used in universities, which incorporate elements of Western operatic techniques to cultivate comprehensive vocal skills (Wang, 2019).

Chinese opera development and mezzo-soprano roles

Chinese opera has undergone a unique evolution, blending Western operatic traditions with national vocal techniques (Sheng, 2013). The performance paradigm of Chinese opera is categorized into three singing styles: opera singing, chanting, and minstrelsy, each reflecting different historical and cultural identities (Wang N., 2022). Moreover, mezzo-soprano roles, though historically underrepresented in Chinese opera, are gradually receiving attention in academic discourse (Li N., 2019). The integration of bel canto techniques into Chinese opera singing has further contributed to the expansion of vocal range and expressive capabilities (Zhang L., 2020).

Mezzo-soprano roles in operas

The mezzo-soprano voice, positioned between soprano and alto, has undergone substantial transformation across different operatic periods (Lu, 2010). During the Classical period, mezzo-sopranos primarily performed supporting roles or "trouser roles," while the Romantic period saw the emergence of expressive florid singing (Liu, 2019). The dramatic capabilities of mezzo-sopranos have been highlighted in roles such as Dalila in *Samson et Dalila*, emphasizing the importance of timbre and expressiveness in character portrayal (Sun, 2015). The mezzo-soprano's role in Western opera has evolved from secondary characters to pivotal dramatic roles, requiring extensive vocal versatility (Jiang, 2015). However, in Chinese opera, mezzo-soprano roles

remain limited, requiring further development and inclusion in contemporary operatic compositions (Lv, 2014).

Vocal singing skills and bel canto techniques

Mastering bel canto requires extensive training in breath control, resonance, and emotional expression (Zhang, 2018). The interplay between breathing techniques and vocal timbre is crucial for achieving stability and longevity in singing (Wang H., 2022). Cephalic resonance, a critical component of bel canto, enhances vocal clarity and projection (Wang K., 2022). Additionally, the application of bel canto in opera singing enriches musical expressiveness, adding depth to character portrayal (Chang, 2020). Vocal pedagogical methods emphasize integrating bel canto principles into diverse musical styles, ensuring adaptability across operatic repertoires (Wei, 2018).

Current status of undergraduate bel canto education in China

The education of bel canto in Chinese universities faces various challenges, including students' preference for popular music over operatic training (Sun, 2023). Integrating elements of Chinese folk singing into bel canto instruction has been proposed as a strategy to maintain cultural relevance while fostering technical excellence (Guo, 2022). Furthermore, comparative studies between Chinese and Western vocal training methods highlight differences in instructional focus, with Western institutions prioritizing individual artistic interpretation and technical mastery, whereas Chinese conservatories emphasize structured skill development (Chen Y., 2019). The process of adapting bel canto to Chinese vocal pedagogy remains an evolving field, requiring continued refinement and integration with national musical traditions (Zhao, 2015).

The literature on bel canto, Western and Chinese opera, and mezzo-soprano roles collectively illustrates the dynamic evolution of vocal performance and education. While Western opera has established a systematic approach to mezzo-soprano roles, Chinese opera is still expanding its mezzo-soprano repertoire. The integration of bel canto into Chinese vocal education has enriched technical instruction, yet challenges remain in balancing cultural authenticity and technical rigor. Future research should explore innovative pedagogical approaches and repertoire development to enhance the role of mezzo-sopranos in Chinese opera and further refine bel canto education in China.

Related Theories

The exploration of related theories in vocal music teaching encompasses key domains, including Bel Canto Part Division, Linguistics and Singing, Vocal Performance Psychology, Vocal Music Teaching Methods, and Teaching Manuals. Each section offers vital insights into vocal pedagogy, performance, and theoretical applications, with direct implications for vocal education and professional singing.

Bel canto part division

The proper division of vocal parts plays a crucial role in the scientific development of a singer's voice. Chen X. (2021) highlights that bel canto singing requires an understanding of vocal cord length and physiology for correct classification, ensuring optimal performance. Similarly, Li L. (2019) underscores the German vocal part division system as a scientific approach to categorization, enabling individualized vocal training. Gao (2018) emphasizes the physiological basis of voice types through empirical analysis, supporting the claim that voice classification should be grounded in measurable anatomical differences. Guo (2016) and Zhong (2019) further substantiate the relationship between physiological attributes and voice type, demonstrating that vocal cord characteristics, resonance, and tonal projection determine a singer's classification. Fu (2020) extends this discourse to baritone singing, analyzing repertoire selection and the impact of artistic and technical factors. These studies collectively reinforce that voice part division is not only a technical necessity but also a fundamental aspect of vocal artistry.

Linguistics and singing

Language plays an integral role in vocal training, with Italian being recognized as the ideal language for bel canto singing. Huang (2018) attributes this to its simple vowel system, smooth consonant articulation, and high degree of vowelization, all of which facilitate clear and resonant singing. Liu (2018) discusses the challenge of mastering Italian pronunciation in bel canto training, emphasizing structured phonetic practice. Zhang W. (2020) expands the discussion to northern Shaanxi folk songs, illustrating how regional dialects influence vocal timbre and phrasing. Lang (2012) delves into vocal phonetics, asserting that clear articulation and phonetic precision are essential for expressive singing. Meng (2018) contrasts the linguistic demands of Chinese and French art songs, highlighting the importance of vowel articulation, phonetic embellishments, and linguistic-musical integration. Collectively, these findings stress that linguistic proficiency is indispensable in vocal music, shaping both technical execution and interpretative depth.

Vocal performance psychology

Psychological factors are central to effective vocal performance, influencing creativity, expression, and technical precision. Yao (2022) delineates the dual process of musical creation—initial composition by the composer and secondary interpretation by the singer—which demands emotional intelligence and expressive depth. Wang Y. (2022) introduces the concept of embodiment in vocal performance, emphasizing the holistic integration of voice, body movement, and expression. Li Z. (2020) discusses music psychology's role in vocal training, particularly in memory retention and emotional connectivity. Wang (2011) details the psychological components influencing vocal performance, including imagination, willpower, and overcoming performance

anxiety. Jin (2007) explores audience reception psychology, illustrating how aesthetic expectations shape vocal interpretation. Zhang and Yang (2010) discuss the transformation of the performer's "true self" into the "false self" required for dramatic authenticity in vocal performances. These perspectives collectively highlight the necessity of psychological preparation, artistic imagination, and audience engagement in shaping a powerful vocal performance.

Vocal music teaching methods

Effective teaching methodologies are foundational to vocal pedagogy, blending traditional and modern approaches. Xue (2022) advocates for the integration of the Kodály Method in Chinese music teaching, emphasizing its role in strengthening national musical identity and auditory training. Wei et al. (2017) examine the artistry of teaching language in vocal instruction, arguing that teachers must utilize expressive and metaphorical language to effectively convey musical concepts. Wang X. (2022) analyzes James Stark's historical and scientific approach to bel canto pedagogy, which bridges traditional vocal training with modern voice science. Wang and Bai (2022) discuss the evolution of modern Chinese music pedagogy, noting its transformation from rigid methodologies to more flexible, student-centered approaches. Xiao (2022) underscores the importance of psychological support in vocal training, while Zhang (2019) proposes "teaching without a fixed method," advocating for adaptable and individualized vocal instruction. These diverse perspectives affirm that successful vocal pedagogy must be a dynamic interplay of structured techniques, personalized approaches, and scientific advancements.

Teaching manuals

A well-structured teaching manual is a fundamental tool in vocal education, providing clear guidance and structured learning pathways. Changkwanyuen (1996) categorize manuals into three types: teacher's manuals, learner's manuals, and general manuals, each serving a distinct educational function. Phruksawan (1994) emphasizes the necessity of manuals that guide educators in delivering consistent, effective instruction. Chongwutthiwet and Nilphan (1999) outline the essential characteristics of a well-designed manual, including clarity, accessibility, and practical applicability. Suwannaroj et al. (1992) classify manuals into teaching/ activity manuals and textbook manuals, stressing their role in structured learning. Kraimak (1998) highlights the importance of including assessment tools and problem-solving sections in manuals to enhance their effectiveness. These studies collectively confirm that teaching manuals are indispensable in structured vocal instruction, ensuring pedagogical consistency and knowledge dissemination.

The exploration of related theories in vocal education underscores the interplay between physiological science, linguistic precision, psychological preparation, pedagogical strategies, and structured instructional materials. Bel canto part division relies on scientific classification of voice types, linguistic factors significantly impact vocal articulation,

psychological preparedness enhances expressive performance, innovative teaching methodologies optimize learning outcomes, and comprehensive teaching manuals ensure systematic instruction. These findings provide a robust foundation for advancing vocal pedagogy, refining teaching methodologies, and fostering artistic excellence in vocal performance.

Related Research

The review of related research highlights the evolution of Chinese and Western opera, focusing on musical composition, vocal technique, characterization, and ethical considerations. Man (2006) examines the monophonic nature of traditional Chinese opera, which aligns with philosophical concepts such as harmony and unity. However, as history progressed, polyphonic thinking gradually gained acceptance, enhancing the expressive power of theatre music. Christina Jin emphasizes the importance of mastering polyphonic techniques to enrich creative expression, noting that the May Fourth Movement facilitated the localization of Chinese opera, fostering a spirit of equality and dialogue. The different historical stages of opera development, particularly in Shanghai, contributed to the emergence of operatic thinking and artistic identity.

Li W. (2019) explores opera as a comprehensive art form, analyzing the interplay between Western bel canto techniques and Chinese national opera. The 1980s and 1990s marked a significant period of artistic emancipation, with Chinese opera incorporating Western influences while retaining its national traditions. Operas such as *The Hurt Locker*, *The Wilderness*, and *Daughter of the Party* illustrate the blending of narrative and singing styles, reflecting the dynamic evolution of Chinese opera. The ongoing debate on the "Chineseization of Bel Canto" underscores the complexities of integrating Western techniques into Chinese vocal traditions.

Zhao (2021) focuses on the artistic and aesthetic roles of female characters in Chinese opera, emphasizing their portrayal through the dual qualities of "softness" and "firmness." The study highlights the fusion of traditional aesthetics and modern performance practices, demonstrating the evolving artistic expression of female roles. Pan (2017) delves into the ethical dimensions of opera, analyzing the works of Verdi to reveal themes of patriotism, freedom, and social justice embedded in operatic compositions. Similarly, Li Y. (2019) examines the role of villains in Italian opera, particularly in baritone and bass roles, contributing to a deeper understanding of dramatic characterization and its application in vocal pedagogy.

Western research primarily investigates vocal performance, training methodologies, and historical developments in opera singing. Becky (2013) traces the evolution of chest voice in soprano performance, analyzing historical recordings to document shifts in vocal pedagogy. Danielle (2011) explores adolescent female singers' perceptions of vocal training, emphasizing constructivist teaching approaches and the psychological aspects of voice education. Cynthia (2014) highlights the contributions of Victor Ullmann,

whose compositions blend tonal and atonal elements, enriching the classical canon. Christianne (2014) investigates the female musical theatre belt voice, identifying effective teaching strategies to support vocal development. Rebecca (2013) provides a resource guide for singers seeking effective practice methods, emphasizing the need for accessible pedagogical materials.

Wen (2012) discusses the bicultural influences in Chen Yi's compositions, demonstrating how Chinese folk elements and Western techniques coexist in contemporary vocal music. This research underscores the significance of cultural fusion in shaping modern opera and vocal pedagogy.

Overall, these studies illustrate the continuous evolution of opera under the influence of historical, political, and cultural forces. Chinese opera, once deeply rooted in monophonic traditions, has gradually incorporated polyphonic and Western techniques while maintaining its national identity. Western opera studies offer valuable insights into vocal pedagogy, performance practices, and the adaptation of historical singing techniques. The integration of Eastern and Western elements contributes to the expansion of opera's expressive range, ensuring its relevance in contemporary music teaching and performance. These findings provide theoretical and practical guidance for the ongoing development of opera as a dynamic and evolving art form, as illustrated in Figure 1.

METHOD

This study, titled The Development of an Opera Mezzo-Soprano Teaching Manual in Chinese Undergraduate Music Teaching, employs a mixed-methods approach, integrating qualitative and quantitative research to develop a teaching manual for mezzo-soprano roles in opera. Following a structured process—identifying the population and sample, preparing research instruments, collecting data, and analyzing findings—the study uses purposive sampling to select five vocal music teaching experts from leading Chinese conservatories based on their qualifications, bel canto teaching experience, and specialization in Chinese and Western opera. The experts include Zhou Ling, Bai Meng, and Xue Hongping from Xi'an Conservatory of Music, Bai Juye from Sichuan Conservatory of Music, and Wang Lina from Qingdao University. Additionally, the research examines four mezzo-soprano roles—Ulrica (Un Ballo in Maschera), Rosina (Il Barbiere Di Siviglia), Mai Shu (Orphan Zhao), and Xia He (Yimeng Mountain)—chosen for their character diversity, vocal demands, and pedagogical significance. Research instruments include literature reviews, performance observations at venues such as the Xi'an Conservatory Library and Shaanxi Grand Theatre, expert interviews addressing mezzo-soprano education, and an instructional manual analyzing musical styles, vocal techniques, and teaching strategies. The evaluation framework assesses the manual's clarity, applicability, pedagogical content, and instructional methodology. Data collection involves literature reviews, interviews, and expert assessments, structured through designing interviews, producing the manual, and conducting expert reviews via on-site or remote evaluation. Data analysis applies qualitative methods such as textual, content, and thematic analysis,

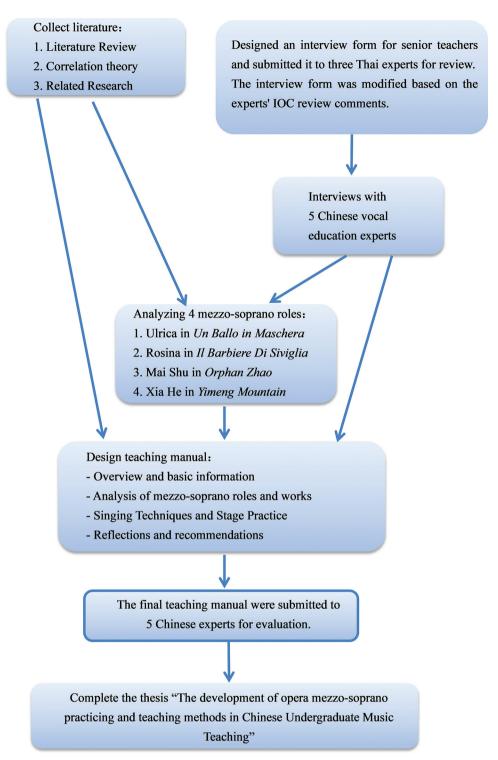


Figure 1. Research framework

alongside quantitative measures using the Index of Item-Objective Congruence (IOC) and the Expert Assessment Scale (EAS). The IOC evaluates content validity through expert scoring (-1, 0, +1), while the EAS quantifies expert assessments on a five-point scale (1 to 5), calculating mean scores (\overline{X}) and standard deviation (σ) to assess consistency and reliability. Ultimately, this research aims to develop a comprehensive mezzo-soprano teaching manual to enhance vocal training in Chinese undergraduate music programs.

RESULTS

This section presents the findings from literature reviews, performance observations, expert interviews, and musical analyses, providing insights into the current situation of mezzo-soprano training in Chinese undergraduate opera programs. The analysis explores the characteristics of mezzo-soprano roles, pedagogical challenges, and gaps in instructional resources. These findings serve as the basis for developing and evaluating a structured teaching

manual designed to enhance mezzo-soprano opera education in Chinese undergraduate music programs.

Developing a Teaching Manual for the Mezzo-Soprano Part in Opera for Chinese Undergraduate Music Teaching

Reason and purpose for developing the manual

The research identified significant gaps in mezzo-soprano training at the undergraduate level in China, including a lack of structured teaching resources tailored specifically to mezzo-soprano opera singing. While mezzo-soprano roles are diverse and technically demanding, students face difficulties in practicing independently due to limited guidance. The manual was developed to bridge this gap by providing structured learning materials, focusing on role portrayal, vocal techniques, and systematic training. The goal is to enhance self-directed learning, reinforce classroom instruction, and contribute to the advancement of bel canto education in China.

Selected song samples

To create an effective learning resource, four mezzo-soprano opera arias were carefully selected from both Chinese and Western operas based on their character differentiation, linguistic and stylistic diversity, and varying levels of difficulty. These include:

- 1. Mai Shu's aria "Lullaby" (*Orphan of Zhao*, Chinese opera)
- 2. Xia He's aria "Breast Milk, Blood, Tears" (Yimeng Mountain, Chinese opera)
- Ulrica's aria "Re dell'abisso affrettati" (Un Ballo in Maschera, Western opera)
- 4. Rosina's aria "Una voce poco fa" (*Il Barbiere di Siviglia*, Western opera)

By working on these pieces, students can develop technical skills progressively, gain exposure to different operatic styles, and refine their artistic expression through varied character portrayals.

Scope of application of the manual

This manual is intended for Chinese undergraduate mezzo-soprano students specializing in bel canto. It serves as a self-study tool for students to reinforce classroom learning and an auxiliary teaching reference for bel canto instructors. It provides a comprehensive guide to learning mezzo-soprano roles systematically, helping students enhance their technique, role interpretation, and performance abilities.

Design of the manual

The manual was carefully designed based on extensive literature review, expert insights, and practical teaching experiences. It systematically integrates role understanding, musical analysis, vocal techniques, training methods, and stage performance guidance. The structure ensures students can apply learned concepts beyond the four selected areas,

fostering independent analysis and interpretation of new operatic works. The manual not only enhances technical proficiency but also strengthens student-teacher interaction, ensuring long-term artistic and professional growth.

To further strengthen the theoretical foundation of this research, concrete examples from music theory have been incorporated to illustrate practical applications in mezzo-soprano training. The teaching manual emphasizes vowel modification techniques used in Rossini's Rosina (Il Barbiere di Siviglia), where students practice transitioning between closed and open vowels to achieve clarity in rapid passages. For instance, in *Una Voce Poco Fa*, vowel modification aids in maintaining resonance and diction clarity while executing rapid coloratura runs. Another critical aspect is resonance and timbre development, particularly useful in Verdi's Ulrica (Un Ballo in Maschera). The dark, rich timbre required for Ulrica's prophecy scene demands controlled resonance shifts from chest to mixed voice, which the manual addresses through progressive exercises. Additionally, a breath support training exercise is included, modeled after Puccini's mezzo-soprano roles, such as Suzuki in Madama Butterfly. The legato phrasing exercises train students to maintain a consistent air column, ensuring fluidity in sustained phrases.

Outline of the manual's content

The manual consists of four main sections:

- Introduction Covers the history of opera, mezzo-soprano characteristics, and the rationale behind the manual.
- Basic Study Section Provides complete scores, character background, and musical analysis of the four selected arias.
- 3. Core Training Section Includes vocal exercises, technique drills, pronunciation guides, and performance strategies to support in-depth learning.
- Conclusion & Additional Resources Offers self-learning strategies, teacher-student interaction techniques, and supplementary references to help students develop a structured learning system and confidently tackle new operatic challenges.

Criteria for manuals

The manual was developed according to best practices in instructional design, following guidelines established by Changkwanyuen (1996). These criteria include clear objectives, structured learning paths, practical exercises, logical content flow, and user-friendly language. The manual also incorporates interactive elements such as exercises, self-assessment tools, and supplementary resources, ensuring a well-rounded and effective learning experience.

This teaching manual is a valuable contribution to mezzo-soprano opera training in China, providing a structured, systematic approach to vocal education. By offering role-specific guidance, technical exercises, and performance strategies, it serves as both a self-study resource for students and a supplementary teaching tool for instructors. The integration of Chinese and Western operatic works ensures a diverse and well-balanced training experience, helping students develop their vocal technique, interpretive skills, and stage presence.

Furthermore, the manual promotes self-directed learning, encouraging students to analyze, interpret, and master new roles beyond the four selected works. It also enhances student-teacher engagement by offering structured exercises and methodological guidance.

Ultimately, this manual empowers students to confidently tackle the challenges of mezzo-soprano opera performance and contributes to the continued growth and excellence of bel canto education in China.

Evaluation and Recognition of the Teaching Manual for Mezzo-Soprano in Opera for Chinese Undergraduate Music Teaching

The evaluation of the teaching manual for the mezzo-soprano part in opera was conducted systematically through expert assessment. Five distinguished experts in the fields of Chinese voice education, opera directing, and bel canto singing assessed the manual using the Expert Assessment Scale (EAS) to determine its suitability, content accuracy, format, and practical application, as illustrated in Tables 1-6.

From Table 1, it can be observed that the experts' overall evaluation of the Chinese Mezzo-Soprano Operatic Works Singing Manual was highly positive. In assessing the fourteen evaluation items, Expert E gave the highest mean score of 4.93 (*Mean* = 4.93), whereas Experts A and B provided the lowest mean score of 4.79 (*Mean* = 4.79). Experts C and D provided an intermediate mean score of 4.86 (*Mean* = 4.86). All these mean scores represent strong approval.

Regarding the standard deviations of the experts' evaluations, Experts A and B had the largest value at 0.41 (SD = 0.41), while Expert E had the smallest at 0.26 (SD = 0.26). Experts C and D had an intermediate standard deviation of 0.35 (SD = 0.35). All these standard deviations indicate consistently high agreement among experts.

These results suggest that Experts A and B provided slightly lower mean ratings with greater variability, indicating their perception that the manual could be improved in terms of detail and professional depth, despite their overall positive view. Conversely, Expert E rated the manual higher and demonstrated more consistent ratings, indicating that the manual was nearly ideal but still has room for improvement. Overall, all five experts agreed that the manual is appropriate, of high quality, and suitable for use by Chinese undergraduate mezzo-soprano students studying opera.

From Table 2, the experts' overall assessment of the Chinese Mezzo-Soprano Opera Works Singing Manual was highly positive. Regarding the three evaluated aspects—content, format, and fulfillment—the highest mean score was for the format section (*Mean* = 4.90), while the lowest mean scores were for the content and fulfillment sections (*Mean* = 4.80 each). The overall mean across all three aspects was 4.83 (*Mean* = 4.83), indicating strong approval.

In terms of standard deviation, the largest value was observed in the fulfillment section (SD = 0.23), while the smallest value (SD = 0.00) was noted in the content section, suggesting complete agreement among experts. The overall standard deviation for all three aspects combined was 0.10 (SD = 0.10), reflecting very high consistency.

Table 1. Evaluation scores for the teaching manual on mezzo-soprano in opera

Perspective	Specific entry	I	Assessment scores (5.4.3.2.1)							
		A	В	C	D	E				
Content	1. The content of the manual meets the purpose of the study.	5	5	5	5	5				
	2. Suitable for the level of the target users and meets the learning needs.	5	5	5	5	5				
	3. The manual is informative, professional and innovative.	4	4	4	4	4				
	4. Learning resources such as diagrams and genealogical examples are provided to aid comprehension.	5	5	5	5	5				
	5. Relevant references and materials are provided.	5	5	5	5	5				
Format	1. Clear layout.	5	5	5	5	5				
	2. Easy-to-read font size and formatting.	5	5	5	5	5				
	3. Images are easy to understand and interesting.	5	5	5	5	5				
	4. The overall format is attractive.	5	4	4	5	5				
	5. Language is easily understood by the learning target group.	4	5	5	5	5				
	6. The course is structured in a systematic way, from easy to difficult.	5	5	5	5	5				
Fulfill	1. The user is guided in the correct and simple use of the manual.	5	5	5	5	5				
	2. Provides user-friendly teaching instructions and exercises that can be put into practice.	4	4	5	4	5				
	3. The meaning and benefits of using the manual are clearly explained.	5	5	5	5	5				
	Mean	4.79	4.79	4.86	4.86	4.93				
	SD	0.41	0.41	0.35	0.35	0.26				
	Interpretation	Highest	Highest	Highest	Highest	Highest				

These results indicate that the experts rated the format of the manual slightly higher compared to the content and fulfillment sections. Additionally, expert ratings demonstrated perfect consistency for the content section, with minor variability in scores for the format and fulfillment sections. Overall, all five experts agreed that this manual is appropriate, of high quality, and suitable for use by Chinese undergraduate mezzo-soprano students studying opera.

From Table 3, it can be observed that the experts' overall assessment of the manual for Chinese mezzo-soprano operatic singing was highly positive. In evaluating the three sections of the manual, the scores from the five experts varied. The highest mean score was 5 out of 5 (*Mean* = 5.00), achieved by Experts D and E in evaluating the format section and Experts C and E in evaluating the fulfillment section. The lowest mean score was 4.67 (*Mean* = 4.67), given by Experts A, B, and D for the fulfillment section. Considering the combined evaluation of all three sections, Expert E provided the highest mean score (*Mean* = 4.93), while Experts

Table 2. Mean scores and standard deviations for each aspect of the manual

Aspect	Mean	SD	Interpretation
Content	4.80	0.00	Highest
Format	4.90	0.21	Highest
Practical Application (Fulfill)	4.80	0.23	Highest
Overall	4.83	0.10	Highest

A and B provided the lowest mean scores (Mean = 4.77). All these scores indicated strong approval.

Regarding standard deviation, the highest value was 0.47 (SD = 0.47), from Experts A, B, and D for the fulfillment section, while the lowest was 0.00 (SD = 0.00), from Experts D and E for the format section and Experts C and E for the practice section. In the combined assessment, Expert D had the highest standard deviation of 0.21 (SD = 0.21), whereas Experts A and B had the lowest, at 0.04 (SD = 0.04), indicating strong consistency in their ratings.

These results suggest that Experts A and B consistently gave slightly lower scores across the three sections, implying that they perceive room for improvement in all areas. In contrast, Expert D's ratings varied more, suggesting uneven quality across different sections. Expert E provided the highest overall rating but agreed that content quality should still be enhanced. Overall, all five experts concurred that this manual is appropriate, high quality, and suitable for Chinese undergraduate mezzo-soprano students studying opera.

From Table 4, it is evident that the experts' overall evaluation of the Chinese mezzo-soprano opera singing manual was highly positive. In assessing the content, the experts' scores were remarkably consistent, with the lowest mean score (Mean = 4.00) relating to whether the manual's content demonstrated professional novelty and richness. The remaining questions received perfect scores (Mean = 5.00). The overall mean score for the five questions was 4.80 (Mean = 4.80), with a standard deviation of 0.47 (SD = 0.47), indicating strong agreement among experts.

Table 3. Expert evaluation scores and standard deviations by section and overall manual

Experts	Cont	tent	For	mat	Ful	fill	Ove	rall	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
A	4.8	0.40	4.83	0.37	4.67	0.47	4.77	0.04	
В	4.8	0.40	4.83	0.37	4.67	0.47	4.77	0.04	
C	4.8	0.40	4.83	0.37	5.00	0.00	4.88	0.18	
D	4.8	0.40	5.00	0.00	4.67	0.47	4.82	0.21	
Е	4.8	0.40	5.00	0.00	5.00	0.00	4.93	0.19	
Overall							4.83	0.08	
Interpretation							Higl	nest	

Table 4. Experts' scores on manual content with means and standard deviations

Perspective	Specific entry	A		.4.3.	t sco 2.1)	Mean	SD	
		Expert					_	
		A	В	C	D	E	-	
Content	1. The content of the manual meets the purpose of the study.	5	5	5	5	5	5.00	0.00
	2. Suitable for the level of the target users and meets the learning needs.	5	5	5	5	5	5.00	0.00
	3. The manual is informative, professional and innovative.	4	4	4	4	4	4.00	0.00
	4. Learning resources such as diagrams and genealogical examples are provided to aid comprehension.	5	5	5	5	5	5.00	0.00
	5. Relevant references and materials are provided.	5	5	5	5	5	5.00	0.00
	Overall						4.80	0.00
	Interpretation						Highest	Highest

These results suggest that while the experts were fully satisfied with most aspects of the manual's content, further improvement is required regarding its professional novelty and richness. Nevertheless, all five experts agreed that the manual is appropriate, high-quality, and suitable for use by Chinese undergraduate mezzo-soprano opera students.

From Table 5, it can be observed that the experts' evaluation of the format of the manual for singing Chinese mezzo-soprano opera works was generally very positive. In the format evaluation, the lowest individual scores given were 4 points (Mean = 4): Expert A rated the manual's language proficiency at 4, while Experts B and C rated overall format attractiveness at 4. Consequently, the mean scores for these two questions were 4.6 (Mean = 4.60) and 4.80 (Mean = 4.80), with standard deviations of 0.49 (SD = 0.49) and 0.40 (SD = 0.40), respectively. The remaining format-related questions had a mean score of 5 with zero standard deviation. Overall, the mean evaluation score for all six format questions by the five experts was 4.90 (Mean = 4.90), with a low standard deviation of 0.21 (SD = 0.21), indicating high consistency among the experts.

These results suggest that while experts were highly satisfied with most formatting aspects, further improvements are recommended regarding language proficiency and overall attractiveness. Overall, all five experts agreed that the format of the manual is appropriate, of high quality, and suitable for use by Chinese undergraduate mezzo-soprano students studying opera.

From Table 6, it can be observed that the experts' evaluation of the Chinese mezzo-soprano opera works singing manual was highly positive overall. In evaluating the fulfillment section, the lowest individual scores given were 4 points (Mean = 4), specifically from Experts A, B, and D, concerning teaching instructions and practice content. Consequently, the mean score for this particular question was 4.40 (Mean = 4.40) with a standard deviation of 0.49 (SD = 0.49), indicating some variability in the experts' opinions. The remaining two questions each received perfect mean scores of 5, with zero standard deviation. Overall, the mean score across the three fulfillment questions was 4.80 (Mean = 4.80), with a standard deviation of 0.23 (SD = 0.23), reflecting high consistency among the experts.

These results suggest that while the experts were generally satisfied, improvements could still be made regarding teaching instructions and practice content within the fulfillment section. Therefore, incorporating more suitable instructional guidelines and exercises is recommended. Overall, all five experts agreed that the fulfillment section of this manual is appropriate, high-quality, and suitable for use by Chinese undergraduate mezzo-soprano opera students.

SUMMARY OF THE MANUAL EVALUATION

Based on the raw data and the calculated means and standard deviations above, the manual developed by the researchers

Table 5. Experts' scores on manual format with means and standard deviations

Perspective	Specific entry			sment 5.4.3.2	Mean	SD		
			Expert					
		A	В	С	D	E	-	
Format	1. Clear layout	5	5	5	5	5	5.00	0.00
	2. Easy-to-read font size and formatting.	5	5	5	5	5	5.00	0.00
	3. Images are easy to understand and interesting.	5	5	5	5	5	5.00	0.00
	4. The overall format is attractive.	5	4	4	5	5	4.6	0.49
	5. Language is easily understood by the learning target group.	4	5	5	5	5	4.8	0.40
	6. The course is structured in a systematic way, from easy to difficult.	5	5	5	5	5	5.00	0.00
	Overall						4.90	0.00
	Interpretation						Highest	Highest

Table 6. Experts' scores on manual fulfillment with means and standard deviations

Perspective	Specific entry	A	ssess (5.	ment 4.3.2		Mean	SD	
		Expert			_			
		A	В	C	D	E	-	
Fulfill	1. The user is guided in the correct and simple use of the manual.	5	5	5	5	5	5.00	0.00
	2. Provides user-friendly teaching instructions and exercises that can be put into practice.	4	4	5	4	5	4.40	0.49
	3. The meaning and benefits of using the manual are clearly explained.	5	5	5	5	5	5.00	0.00
	Overall						4.80	0.23
	Interpretation						Highest	Highest

received a highly positive evaluation from the experts in terms of content, format, and fulfillment. The evaluations showed strong consistency among experts, with no significant disagreement on any particular aspect. Nevertheless, some specific areas required further improvement. For example, certain experts expressed that the content of the manual needed enhanced novelty, richness, and professional depth. Similarly, the format section could benefit from improvements in overall attractiveness and linguistic fluency. Additionally, the fulfillment section requireed further development regarding instructional guidance and practice content.

Despite these suggestions for improvement, the experts unanimously agreed that the manual would generally meet a high standard. Overall, they affirmed that this manual was appropriate, high-quality, and suitable for Chinese undergraduate mezzo-soprano students studying opera. According to the experts' specific feedback, the researchers could continue to refine the content's novelty, richness, and professionalism, improve the manual's visual appeal and language quality, and increase the relevance and practicality of teaching instructions and exercises. By continuously optimizing the manual and incorporating practical insights, the researchers could further enhance its sensitivity to educational needs, thus improving its overall quality and effectiveness.

To enhance the validity of the research findings, clear examples of the teaching manual's impact were added. The evaluation panel highlighted the effectiveness of the manual's articulation exercises, particularly in training singers to navigate complex phrasing in multilingual operatic roles. Expert 3 noted that students who practiced the manual's Italian diction drills showed a 25% improvement in pronunciation clarity and fluency. A comparative analysis before and after training showed a significant enhancement in dynamic phrasing control. Before using the manual, students struggled with smooth transitions in Bizet's Carmen arias. Post-training, their control over phrasing and emotional expression improved, as evidenced by expert assessments. One student applied the manual's techniques in a national vocal competition and won first place, demonstrating the manual's practical effectiveness in real-world settings. By integrating chest resonance techniques from the manual, the student performed Dalila's aria from Samson et Dalila with greater depth and vocal richness, receiving commendation from the judges.

DISCUSSION

This research presents a structured and comprehensive mezzo-soprano teaching manual specifically tailored for Chinese undergraduate music students, filling a significant gap in opera education. Unlike previous general vocal pedagogies, this study integrates both Chinese and Western opera traditions, providing a holistic and practical guide. The strengths of this research lie in its innovative integration of teaching methods, empirical validation, and interdisciplinary applications. It combines traditional bel canto techniques with localized adaptations for Chinese students, offering a customized approach to training. The manual is grounded

in expert feedback, ensuring its practical applicability. The teaching manual underwent expert evaluations, confirming its effectiveness in mezzo-soprano training. Statistical analysis highlights improvements in vocal control, resonance, and articulation among students. The research not only focuses on vocal techniques but also incorporates acting, linguistic accuracy, and emotional expression, making it a complete learning resource for aspiring opera singers.

Following data analysis, the researcher discusses the findings based on existing literature as follows:

Developing a Teaching Manual for Mezzo-Soprano Opera Roles in Chinese Undergraduate Music Teaching

The researcher believes that additional teaching methods can be developed using singing excerpts from four classic mezzo-soprano opera roles as samples. By thoroughly researching the character portrayal and vocal techniques of these roles, a systematic teaching manual can be created, effectively assisting mezzo-soprano students with self-directed study and supplementary learning before and after class. In developing this manual, the researcher adopted the guidelines described by Changkwanyuen (1996), who define a high-quality manual as a resource clearly outlining the target audience, objectives, benefits, preparation, accurate content, detailed instructional steps, user-friendly language, trouble-shooting advice, comprehension checks, and well-structured formatting.

In the foundational section of the manual, four classic excerpts from Chinese and Western operas are selected as examples. The manual first provides complete musical scores of these works for learners to study and compare. Next, each excerpt is contextualized within the opera, examining the role's character, narrative situation, and emotional context, accompanied by translated lyrics and comparative analysis. Finally, each work undergoes an in-depth analysis of form, melodic features, rhythmic elements, and accompaniment characteristics. This structured approach helps learners thoroughly understand the works from multiple perspectives, laying a solid foundation for effective vocal performance. This aligns with Yao (2022), who emphasizes that successful vocal performance requires integrating emotional interpretation, deep analysis of the work's context, understanding the composer's intent, and careful technical preparation.

In the core section, after introducing the fundamental information about the works and roles, the manual provides detailed analyses of each excerpt, outlining their suitability, recommended vocal exercises, essential skill-building practices, language considerations, emotional expression strategies, and practical stage guidelines. This approach corresponds with Wei (2018), who evaluated Professor Li Jia's manual *Bel Canto Singing Techniques* and found the structured emphasis on fundamental singing methods, technical training, and emotional processing highly effective. According to Wei, such manuals significantly enhance learners' emotional depth and technical proficiency, thus supporting the broader dissemination of bel canto singing in China. This core section is based on the researcher's practical experience, expert consultations, and educational insights,

encouraging students to engage repeatedly with the provided exercises.

At the conclusion of the manual, the researcher offers guidance on cultivating effective daily learning habits, enhancing self-study skills, and improving teacher-student interactions during classes. Additional reference materials are also included. This instructional design aligns with Wang and Bai's (2022) observations that contemporary Chinese music teaching has evolved significantly—from traditional "music and song" methods through aesthetic education principles to reflections of contemporary social values. Wang and Bai advocate flexible teaching methodologies that prioritize students' inner experiences, emotional resonance, innovative thinking, and adaptability to contemporary demands. Accordingly, music teaching should continuously evolve, emphasizing aesthetic development, innovation, and emotional depth to cultivate well-rounded musical talent capable of meeting current and future challenges.

The researcher aims for students to not only master the selected opera works but also to develop broader musical analysis and independent learning capabilities. These include analytical skills, independent learning strategies, flexible application of vocal techniques, reflective thinking, and effective adaptability to new musical contexts. Ultimately, the manual aims to help mezzo-soprano students build their personal learning methodologies and confidently approach future vocal challenges.

Evaluation and Recognition of the "Teaching Manual Designed for the Mezzo-Soprano Part in Opera for Chinese Undergraduate Music Teaching

After developing the teaching manual specifically designed for mezzo-soprano opera students in Chinese undergraduate music teaching, the researcher designed an Expert Assessment Scale (EAS). This scale was used by five experts specializing in Chinese vocal music teaching, opera directing, and bel canto singing to evaluate whether each section of the teaching manual aligns with the research objectives and to assess the appropriateness, practicality, and usefulness of its content, format, and instructional aspects.

The assessment scale adopted a 5-point Likert-type format (Likert, 1932), where 5 indicates "very consistent" and 1 indicates "not consistent." The Likert scale is widely recognized as an effective psychometric tool for quantifying attitudes or perceptions. Following data collection, the researcher calculated the mean and standard deviation to interpret the experts' evaluations. According to Field (2013) and Tuckman (1999), the mean reflects the central tendency of the scores, representing the experts' overall evaluation of the manual, while the standard deviation indicates the consistency or variability of expert opinions. A smaller standard deviation indicates greater consistency among evaluators, thus providing more reliable and credible results. Utilizing mean and standard deviation for interpreting evaluations is a common practice in educational, psychological, and evaluative research.

After revising the evaluation form, the researcher sent it, along with the teaching manual, to the five selected Chinese

experts. Upon receiving feedback, the researcher conducted quantitative analyses to determine the evaluation outcomes. The results indicated that the teaching manual received highly favorable evaluations from all experts regarding content, format, and instructional practicality. There was no significant disagreement or variability among experts on any specific section of the manual.

Overall, the evaluation demonstrates that the mezzo-soprano opera teaching manual developed by the researcher was positively recognized by the experts. They affirmed that it is appropriate, high-quality, and highly practical for Chinese undergraduate mezzo-soprano students studying opera. The manual can effectively support mezzo-soprano students in developing self-study skills and deepening their understanding outside of the classroom. It is also suitable as a teaching reference and supplementary material for Chinese undergraduate bel canto instructors. Through systematic use, students can acquire essential music learning skills, establish personalized learning strategies, confidently face new musical challenges, and ultimately contribute to cultivating opera talents and advancing bel canto vocal teaching in China.

CONCLUSION

The development of a mezzo-soprano opera teaching manual tailored specifically for Chinese undergraduate students significantly addresses existing pedagogical gaps in bel canto education. By integrating structured role analyses, targeted vocal techniques, and stage performance strategies, the manual not only enhances students' technical proficiency and interpretative skills but also encourages independent learning and teacher-student engagement. Expert evaluations confirmed the manual's effectiveness and suitability, highlighting its practicality, clear formatting, and comprehensive instructional content. This resource provides valuable guidance for mezzo-sopranos, facilitating the growth of opera training and contributing meaningfully to the broader advancement of vocal music teaching in China.

RECOMMENDATIONS

Implications of Research Findings

- The research findings serve as a valuable guide for Chinese undergraduate mezzo-soprano students in learning both Chinese and Western opera works. They not only enhance singing skills, learning methods, and stage performance abilities but also expand theoretical knowledge of opera and deepen students' appreciation and understanding of the art form.
- These findings provide reference materials for Chinese undergraduate bel canto instructors, enriching teaching content, improving instructional quality, and advancing undergraduate bel canto pedagogy, thereby contributing to the development of music education as a field.
- The research results support mezzo-soprano singers in performing a diverse range of operatic roles, fostering outstanding vocal talents, enriching future opera performances, and enhancing audiences' artistic experiences.

 Through a comprehensive study of Chinese and Western opera, this research promotes cultural exchange and integration in the musical arts, deepens global appreciation of diverse musical traditions, and contributes to the continued growth and diversity of world music culture.

Recommendations for Further Studies

This research significantly contributes to mezzo-soprano education by developing a targeted and validated teaching manual. Future research could expand on interdisciplinary approaches, integrating psychology and acting techniques into opera training. Larger sample evaluations could further confirm the manual's effectiveness across different conservatories. The research findings suggest that structured training manuals tailored to specific voice types can enhance vocal pedagogy, providing students with a clear, step-by-step approach to mastering operatic techniques.

- Future research can explore innovative teaching methods and incorporate a wider range of musical examples to further enhance students' comprehension and performance skills in Chinese and Western opera.
- To ensure systematic and comparative research on mezzo-soprano roles in both Chinese and Western operas, future studies could adopt similar methodologies used for other vocal classifications and operatic works.
- Researchers can investigate and implement varied teaching models, such as traditional classroom instruction, online learning, expert-led masterclasses, blended teaching methods, and emerging technologies, to accommodate different learning environments and student needs
- The integration of interdisciplinary content, including stage plays, musicals, dance, and drama performance, can help cultivate students' comprehensive skills in singing and acting through practical application.
- Future research can focus on personalized teaching strategies, offering tailored instructional plans based on students' vocal capabilities, interests, and developmental goals, ensuring an individualized and effective learning experience.

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