

A Study on the Development of Students' Singing Skills in Vocal Education

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Abstract—Singing ability is a core indicator in the training of vocalists, and the quality of its development directly reflects the professional standard of vocal teaching. Against the backdrop of current reforms in vocal teaching, this paper systematically explores the theoretical foundations, practical challenges and implementation strategies for cultivating students' singing ability in vocal education. The study argues that singing ability is a multidimensional construct encompassing technical skills, artistic expression, aesthetic perception and psychological regulation; its development requires a shift from isolated technical training towards the comprehensive enhancement of overall artistic literacy. Current vocal music education faces practical challenges such as the homogenisation of teaching objectives, the narrow focus of methods and approaches, and a one-sided orientation in assessment, all of which constrain the full development of students' singing ability. In response to these issues, this paper proposes the establishment of a 'four-in-one' training model integrating 'technique, art, psychology and practice'. Specific pathways include: promoting a paradigm shift in teaching from 'technical indoctrination' to 'artistic perception'; optimising the technical foundations of vocal and articulation training; deepening the artistic dimensions of musical understanding and emotional experience; strengthening the coordinated development of stage practice and psychological regulation; and introducing innovative mechanisms involving information technology and diversified assessment. The research aims to provide theoretical guidance and practical insights for vocal teaching reform, thereby promoting the comprehensive development of students' singing abilities.

Keywords— Vocal pedagogy; singing ability; training pathways; paradigm shift; multidimensional structure.

I. INTRODUCTION

Vocal art is one of humanity's oldest and most direct forms of musical expression; using the human voice as its medium, it serves the dual functions of conveying emotion and preserving cultural heritage. Within the higher music education system, vocal teaching occupies a pivotal position, and the cultivation of students' singing abilities is the core objective and ultimate aim of such instruction. As one scholar has pointed out, students' singing ability is the primary indicator of the standard of vocal teaching; teachers should proceed from the students' individual needs and progressively enhance their comprehensive singing proficiency (Ye, 2022).

However, with the evolution of the times and shifting societal demands, traditional vocal teaching models face a series of challenges. On the one hand, some teachers and students simplistically interpret singing as merely following the score, neglecting the deeper meaning and emotional expression behind the works (Liu, 2024); on the other hand,

the tendency in vocal pedagogy to 'prioritise technique over artistic literacy' means that, although students have mastered vocal production methods, they struggle to achieve breakthroughs in artistic expression (Gu & Xia, 2025). This 'technique-centred' teaching approach has, to a certain extent, constrained the comprehensive development of students' singing abilities.

In recent years, with the deepening implementation of a core literacy-oriented approach in the field of arts education, vocal music teaching has gradually shifted from a 'technique-centred' rote-learning model towards an educational approach centred on 'artistic perception and individual expression' (Liu, 2025). This paradigm shift has charted a course for vocal pedagogy reform and has also set forth new requirements for the cultivation of singing ability. Against this backdrop, this paper reviews the theoretical foundations of singing ability development, conducts an in-depth analysis of the practical challenges in current teaching, and explores scientifically sound and effective pathways for development, with the aim of providing valuable guidance for vocal pedagogical practice.

II. CONCEPTUAL DEFINITION AND STRUCTURAL ANALYSIS OF VOCAL ABILITY

A. Defining the Essence of Vocal Ability

Vocal ability is a concept with rich connotations; it differs from mere singing technique or vocal production methods, but rather refers to the comprehensive quality of a performer who integrates various elements, including vocal technique, musical literacy, artistic perception and emotional expression, to fully convey the essence of a vocal work. From an educational perspective, vocal ability is both a manifestation of the outcomes of vocal training and a key indicator for assessing students' professional development (Ngo & Spreadborough, 2022).

The core of vocal competence lies in the unity of 'technique' and 'artistry'. 'Technique' refers to the trainable technical elements essential for singing, such as vocal production, breath control, pitch and rhythm; 'artistry', on the other hand, refers to the artistic qualities of the singer, including the depth of their understanding of the piece, their emotional investment and their personalised expression. Truly high-level singing is an organic fusion of technical precision and artistic inspiration, rather than a simple superimposition of the two (Juntunen et al., 2023).

B. The Multidimensional Structure of Vocal Ability

Based on an understanding of the nature of singing, vocal ability can be broken down into four interrelated dimensions.

The technical skills dimension forms the foundational level of vocal ability and includes correct breathing techniques and breath control, clear articulation and standard pronunciation, stable pitch and a sense of rhythm, as well as timbre control and the use of resonance. These technical elements constitute the starting point of vocal training and form the material basis for higher-level artistic expression. Research indicates that the effectiveness of basic vocal training is directly linked to the subsequent development of students' singing ability; breath control, accuracy of articulation, vocal range expansion and emotional expression are the core components of foundational training (Suepbunma & Theerapan, 2025).

The dimension of artistic expression constitutes the core aspect of vocal ability, involving an accurate grasp of a work's style, a deep understanding of its musical significance, and a personalised artistic interpretation. Singing is not a mechanical reproduction of musical notation, but rather the act of breathing life into a work through the voice. This requires singers to possess the requisite musical literacy, cultural background and aesthetic judgement, enabling them to engage in creative expression whilst respecting the spirit of the original work (Liu, 2024).

The aesthetic perception dimension serves as the deep-seated foundation of vocal ability, encompassing the discernment of vocal quality, sensitivity to the formal beauty of music, and the ability to grasp the emotional significance of a piece. The development of aesthetic perception relies on extensive exposure to the arts, systematic aural training and rich life experiences. Only when students possess acute aesthetic perception can they achieve a performance that is 'rich in both voice and emotion', thereby realising a deep integration of technique and artistry (Pomerleau-Turcotte et al., 2023).

The psychological regulation dimension serves as a vital safeguard for vocal ability, encompassing concentration during stage performance, the management of nervousness, the ability to adapt to unforeseen circumstances, and the capacity for self-evaluation and reflection. As singing is a public performance, the influence of psychological factors on its outcome cannot be overlooked. Strong psychological regulation enables singers to maintain a consistent performance under stage pressure, fully translating their level of training into actual performance results (Barros et al., 2024).

These four dimensions do not exist in isolation but rather interpenetrate and develop synergistically. Technical skills serve as the vehicle for artistic expression; aesthetic perception provides direction for these skills; and psychological regulation ensures that all three can be effectively integrated within the performance context. The cultivation of vocal ability is, in essence, the promotion of the coordinated development and organic unity of these four dimensions.

III. A CRITICAL EXAMINATION OF THE DEVELOPMENT OF SINGING SKILLS IN CONTEMPORARY VOCAL TEACHING

A. Deviations in teaching philosophy: prioritising technical skills over general literacy

For a long time, vocal teaching has, to a certain extent, exhibited a tendency towards 'technical supremacy'. Some teachers focus almost exclusively on the attainment of technical objectives, such as vocal production methods, breath control and vocal range expansion, whilst paying insufficient attention to the cultivation of students' musical literacy, cultural understanding and aesthetic sensibilities. This misguided pedagogical approach results in students who, although they have mastered relatively standard vocal techniques, lack expressiveness when performing works of different styles, leading to performances that are 'technical but lacking in artistry'.

Some scholars have criticised the common misconception in vocal teaching that 'singing is simply a matter of following the score'; in reality, 'true singing goes far beyond this level', as it involves understanding the story and deeper meaning behind a piece, as well as genuinely experiencing and conveying the emotions of the work. Technical training and the cultivation of artistic sensibility should be two sides of the same coin, yet in actual teaching practice, an imbalance between the two is quite common (Lewis & Hendricks, 2022).

B. Rigid teaching methods: a one-size-fits-all approach lacking individualisation

At present, some vocal music classes still predominantly follow the traditional model of 'teacher demonstration, student imitation and repeated practice', with teaching methods tending to be rather rigid. Whilst this model ensures a certain degree of standardisation in technical training, it also has clear limitations: individual differences among students are overlooked, scope for independent exploration is curtailed, and the development of artistic individuality is restricted (Xu, 2025). Under a teaching approach that aims for 'a single voice for a thousand people', students' singing tends to become homogenised, lacking distinctive artistic identity.

Furthermore, the rigidity of teaching methods is also evident in the compartmentalisation of technical training and artistic expression. Some teachers conduct vocal exercises and repertoire performance in separate phases, failing to integrate technical training organically into the process of artistic expression. This approach tends to lead students to view technique as an end in itself rather than a means to an end, overlooking the essential function of technique as a tool for artistic expression.

C. Limitations of the curriculum: an emphasis on repertoire at the expense of musical literacy

With regard to the selection of teaching content, some vocal courses focus primarily on the performance of specific repertoire, whilst placing insufficient emphasis on comprehensive literacy courses that underpin the development of vocal ability. Courses such as sight-singing and aural training, music analysis and musical appreciation are not sufficiently integrated with the main vocal course;

consequently, students' foundational knowledge of music theory, their ability to analyse musical works and their level of aesthetic appreciation have not improved in tandem with their practical singing skills (Li, 2025).

Research indicates that vocal pedagogy must overcome the limitation of 'prioritising technique over cultural literacy', by deeply integrating humanistic sensibilities with artistry in day-to-day teaching, thereby continually enriching students' knowledge and enhancing their musical literacy. This implies that the cultivation of vocal ability cannot be achieved through the main vocal course alone, but requires the establishment of a comprehensive curriculum system encompassing technical training, theoretical study and artistic enrichment (Wang, 2024).

D. A one-dimensional approach to assessment: emphasising results at the expense of the process

Current assessment practices in vocal music teaching remain predominantly summative, with students' singing abilities primarily assessed through one-off performances such as end-of-term examinations and recital performances. This approach emphasises outcomes whilst neglecting the process, making it difficult to comprehensively reflect the trajectory of students' vocal development and the extent of their progress. More importantly, a reliance on summative assessment alone can easily lead students to adopt a utilitarian approach to learning, focusing solely on 'polishing' their exam repertoire whilst neglecting the balanced development of all dimensions of their singing ability (Luo & Leung, 2023).

The development of singing ability is a long-term, gradual process that requires a shift in teaching assessment from a 'results-oriented' to a 'process-oriented' approach, organically combining formative and summative assessment to provide effective feedback and guidance for students' ongoing development.

IV. EXPLORING APPROACHES TO DEVELOPING VOCAL SKILLS IN VOCAL MUSIC EDUCATION

A. A shift in teaching philosophy: from the imparting of technical skills to the cultivation of artistic perception

Exploring pathways for the development of vocal skills first requires a fundamental shift in pedagogical philosophy. A key direction in the current reform of vocal music education is the transition from a 'technique-centred', rote-learning model to an educational approach centred on 'artistic perception and individual expression'. The essence of this transformation lies in elevating the objective of vocal training from merely 'teaching students to sing' to 'guiding students to express themselves through song'.

Specifically, the renewal of teaching philosophy can be pursued on three levels: firstly, establishing teaching objectives that place equal emphasis on technique and artistry, integrating musicality requirements into vocal training so that technical exercises consistently serve the needs of artistic expression (Liu, 2024); secondly, respecting students' individual differences and artistic personalities, and encouraging their independent exploration and creative expression on the basis of standardised training, whilst

avoiding a 'standardised production' approach to teaching; thirdly, incorporating the cultivation of humanistic literacy as an integral part of vocal music teaching, guiding students to focus on the cultural context and humanistic spirit behind the works, thereby enhancing the cultural richness and emotional depth of their performances.

B. Optimising technical training: consolidating the fundamentals of vocal production and pronunciation

Technical training is the starting point for developing vocal ability and the foundation for building high-level artistic expression. The key to optimising technical training lies in organically integrating technical exercises with artistic expression, ensuring that technical training always maintains a musical focus.

Breathing and vocal production training form the core of vocal technique. Effective breathing training should help students establish correct breathing habits, master the basic methods of combined chest-abdominal breathing, and enable them to flexibly control their breath during singing according to the requirements of different pieces. Vocal production training should begin in the natural register, gradually expanding the vocal range whilst emphasising unity and seamless transitions between registers. Research indicates that systematic vocal exercises incorporating modules such as breathing and breath control, as well as correct articulation, can effectively enhance students' fundamental singing skills (Liu, 2025).

Phonetic and articulation training must not be overlooked. Standardised articulation is a prerequisite for clearly conveying the content of the lyrics and is also a key factor in developing a beautiful timbre. During training, teachers should emphasise the purity of vowels, the clarity of consonants, and the fluidity of transitions between words. For works in different languages, students should also be guided to understand the corresponding phonetic rules and pronunciation characteristics, ensuring that their singing is both accurate and natural.

Optimising technical training also requires attention to its specificity and progression. Teachers should devise personalised training programmes based on students' actual proficiency levels and specific challenges, avoiding a 'one-size-fits-all' approach to practice. At the same time, they should guide students to understand the purpose and principles behind each technical exercise, helping them transition from passive imitation to active mastery.

C. Enhancing Artistic Literacy: Deepening Understanding and Strengthening Expression

Singing is not merely about singing a melody with one's voice; it is, above all, about interpreting a piece with one's heart. Enhancing artistic literacy is the key to taking one's singing ability from 'adequate' to 'excellent'.

Cultivating musical understanding requires guiding students to establish a systematic framework of artistic knowledge. When teaching a piece, teachers should not limit themselves to technical analysis at the level of the score, but should guide students to understand the work's compositional background, the composer's artistic style, and its place in

music history, thereby helping students develop a multidimensional understanding of the piece. Integrating relevant music theory (such as harmonic analysis and formal structure analysis) can deepen students' understanding and make it more professional (Holmgren, 2022).

The cultivation of emotional experience and expressive ability requires teachers to guide students in connecting their personal emotional experiences with the emotional content of the piece. Emotional expression in singing is not a simple venting of emotions, but rather an artistic presentation of emotions that has been refined, possessing both genuine emotional impact and aesthetic restraint. Teachers can assist students in finding the appropriate balance in emotional expression through methods such as thought-provoking questions, the creation of contextual scenarios, and comparative appreciation.

Furthermore, the enhancement of aesthetic perception must be an ongoing focus throughout the teaching process. Teachers should consciously guide students to listen to vocal works of different styles and periods, cultivating their discernment and judgement regarding vocal quality, musical style and artistic character. A broad aesthetic foundation provides students with rich artistic references for their singing, thereby promoting the development of their individual singing styles.

D. Enhancing Practical Stage Experience: Hone Mental Strength and Gain Experience

The ultimate test of vocal ability lies on stage. Stage practice is not only a means of demonstrating vocal ability, but also a vital pathway for its development. Through stage practice, students are able to integrate technical, artistic and psychological elements within a real-life performance context, thereby making the transition from a 'rehearsal state' to a 'performance state' (Benjamins et al., 2022).

The cultivation of psychological regulation skills is a key component of stage practice training. Stage fright and nervousness are common challenges faced by most singers, stemming from an inability to adapt to the pressures of the stage. Teachers can help students gradually acclimatise to the psychological environment of public performance through simulated performances, periodic progress reviews and open-class demonstrations. At the same time, teaching students practical psychological regulation techniques, such as deep-breathing relaxation, positive self-suggestion and distraction—can help them maintain a stable performance under stage pressure (Kenny, 2026).

The accumulation of practical experience requires a variety of stage activities. Schools can organise for students to take part in various performances, competitions and exchange activities, providing them with as many opportunities to perform on stage as possible. Every performance is an exercise in integrating skills; students need to draw upon their technical repertoire, activate their artistic perception and adjust their mental state in real-life situations. This comprehensive training of abilities cannot be replaced by classroom teaching.

E. Innovation in Teaching Methods: Integrating Technological Tools and Diverse Forms of Assessment

Against the backdrop of rapid advancements in information technology and digitalisation, vocal teaching methods must also keep pace with the times by actively incorporating new technologies to broaden the avenues and scope for developing singing skills.

The integration of information technology with vocal teaching is emerging as a significant trend. Research indicates that blended learning via platforms such as We Sing and MOOCs can significantly enhance students' performance in areas such as pitch accuracy, rhythm, emotional expression and musical creativity (Wei & Li, 2025). The introduction of virtual reality technology and voice analysis software has also demonstrated positive teaching outcomes: voice analysis software provides immediate auditory feedback, helping students improve their musical accuracy; VR technology, by creating an immersive environment, facilitates students' progress in vocal control and stage performance (Xie, 2026). The value of these technological tools lies in their ability to provide students with more intuitive feedback, a more flexible practice environment and richer learning resources.

The development of a diversified assessment framework is equally worthy of attention. The cultivation of vocal performance skills requires moving beyond a single summative assessment model to establish an evaluation system that combines formative and summative assessment, as well as teacher assessment with student self-assessment and peer assessment. Formative assessment can track students' progress throughout the learning process, providing them with continuous feedback; student self-assessment and peer assessment help foster critical thinking and self-reflection, thereby promoting the development of metacognitive skills.

F. Synergy within the curriculum system: Building a comprehensive educational ecosystem

The development of vocal performance skills should not be viewed solely as the responsibility of the main vocal lessons, but rather as the result of the synergistic interaction of the entire vocal curriculum. The organic integration and coordinated cooperation of all pertinent courses are necessary for the development of an integrated training model that includes "technique, artistry, psychology, and practice".

On the one hand, the integration of main vocal lessons with supplementary courses is of paramount importance. Sight-singing and aural training courses provide the fundamental foundation of pitch accuracy and rhythm for singing, whilst harmony and form courses deepen students' understanding of musical structure. Music history and music appreciation courses broaden students' artistic horizons and cultural knowledge. These courses should not operate in isolation but should complement one another in terms of teaching content and progression, thereby creating a synergistic effect. Research indicates that there is a close correlation between the ability to apply music theory comprehensively and the level of vocal performance (Deng, 2024).

Furthermore, the integration of classroom teaching and extracurricular practice is also a vital component of a cohesive curriculum system. Classroom teaching provides systematic technical training and theoretical guidance, whilst extracurricular practice (such as performances, competitions and academic activities) offers students opportunities to apply and test the knowledge they have acquired. The effective integration of these two elements enables students to achieve continuous improvement in their abilities through a cycle of 'learning by doing and doing whilst learning'.

V. CONCLUSION

The cultivation of students' singing abilities in vocal music education is a subject that combines theoretical depth with practical breadth. This paper begins with a structural analysis of singing ability, revealing the organic unity of four dimensions: technical skills, artistic expression, aesthetic perception and psychological regulation. Through an examination of current teaching practices, it identifies shortcomings in teaching philosophy, methods, content and assessment. On this basis, it proposes a comprehensive development pathway encompassing the renewal of teaching philosophy, the optimisation of technical training, the enhancement of artistic literacy, the strengthening of stage practice, innovation in teaching methods and the coordination of the curriculum system.

The study argues that the core of cultivating vocal performance ability lies in achieving a paradigm shift from 'technical indoctrination' to 'artistic perception', thereby transforming vocal music teaching into a process that truly cultivates 'well-rounded performers', individuals who not only possess a solid technical foundation but also demonstrate profound artistic literacy, acute aesthetic perception and stable psychological resilience. Achieving this objective requires teachers to undergo a shift in pedagogical philosophy, to continuously innovate teaching methods, and to ensure synergy within the curriculum system.

Future research could focus further on personalised strategies for developing vocal performance skills, exploring the patterns of vocal development among different types of students and devising tailored guidance programmes; it could also delve deeper into ways of integrating information technology with vocal pedagogy, using new technologies to enhance traditional teaching and expand the possibilities for developing vocal performance skills. Only by continuously advancing theoretical exploration and practical innovation can we consistently improve the quality of vocal pedagogy and cultivate more high-calibre vocalists who possess both technical skill and artistic literacy.

REFERENCES

- Barros, S., Marinho, H., França, A. B., & Pereira, A. (2024). Music performance anxiety: a study of anxiety predictors in higher education music students in Portugal. *International Journal of Music Education*, 02557614241280040.
- Benjamins, L., Roland, S. L., & Bylica, K. (2022). The complexities of meaningful experiential learning: Exploring reflective practice in music performance studies. *International Journal of Music Education*, 40(2), 163 – 176.
- Deng, H. (2024). Improvement path of singing skills under the influence of cross-cultural communication in vocal music education. *Applied Mathematics and Nonlinear Sciences*, 9(1).
- Gu, X.F., & Xia, B.H. (2025). The Integration of Industry and Education: Empowering Innovation and Development in University Vocal Music Teaching. <https://link.oversea.cnki.net/doi/10.28607/n.cnki.nnxb.2025.007548>
- Holmgren, C. (2022). Empowering piano students of Western classical music: challenging teaching and learning of musical interpretation in higher education. *Music Education Research*, 24(5), 574 – 587.
- Juntunen, M.-L., Arlin, E. P., & Liira, K. (2023). Expression in popular music singing as embodied and interpersonal. *Frontiers in Education*.
- Kenny, D. T. (2026). Music performance anxiety: evolutionary, developmental, and psychodynamic perspectives. *Frontiers in Psychology*, 17, 1787319.
- Li P.Y. (2025). The Impact of Sight-Singing and Aural Training on Vocal Performance Techniques. *Tomorrow's Trends* (16), 23 – 25.
- Lewis, M. C., & Hendricks, K. S. (2022). "It's your body, it's part of who you are!": Influences upon collegiate vocalists' performance self-efficacy beliefs. *International Journal of Music Education*, 40(4), 514 – 529.
- Liu, Z. (2025). The effect of vocal training on vocal quality in Chinese singing students. *Journal of Voice*, 39(2), 561. e511 – 561. e517.
- Liu, J.Y. (2025). From 'Technical Indoctrination' to 'Artistic Perception': A Paradigm Shift in the Development of Vocal Skills in Vocal Music Teaching. *China Musical* (5), 146 – 149.
- Liu, N. (2024). Strategies for Developing Students' Vocal Performance Skills in University Vocal Music Teaching. *Delta* (36), 208 – 210.
- Liu, Y.S. (2024). Strategies for Cultivating Classical Vocal Techniques and Performance Skills in Vocal Music Education. *Modern Music* (4), 184 – 186.
- Luo, Y., & Leung, B.-W. (2023). Proposing and piloting a criterion-and standard-based assessment framework in teaching Cantonese operatic singing in Guangdong, China. *British Journal of Music Education*, 40(3), 361 – 384.
- Ngo, T., & Spreadborough, K. (2022). Exploring a systemic functional semiotics approach to understanding emotional expression in singing performance: Implications for music education. *Research studies in music education*, 44(3), 451 – 474.
- Pomerleau-Turcotte, J., Dubé, F., Moreno Sala, M. T., & Vachon, F. (2023). Building a mental toolbox: Relationships between strategy choice and sight-singing performance in higher education. *Psychology of music*, 51(1), 119 – 139.
- Suepbunma, P., & Theerapan, S. (2025). Developing Vocal Literacy: The Efficiency of Basic Vocal Training Exercises for Students at Yamaha Music School in Mahasarakham, Thailand. *International Journal of Education and Literacy Studies*, 13(2), 58 – 66.
- Wang, Y. (2024). Vocal education in higher educational institutions in China: student motivation and creativity. *Interactive Learning Environments*, 32(3), 813 – 823.
- Wei, X., & Li, C. (2025). The Integration of Information Technology into Vocal Education: Music Teacher Training Students in Colleges and Universities. *International Journal of Sociologies and Anthropologies Science Reviews*, 5(1), 91 – 102.
- Xie, Y. (2026). Modern Approaches to Teaching Pop Singers: Comparing Virtual Reality Technologies and Voice Analysis Software. *European Journal of Education*, 61(1), e70312.
- Xu, K. (2025). Cultivating Singing Skills Through Effective Vocal Modeling and Varied Feedback. *Journal of General Music Education*, 38(3), 26 – 34.
- Ye, Q. (2022). A Dialectical Analysis of Vocal Music Teaching and the Development of Singing Skills: A Review of a Study on the Dialectical Relationship between Vocal Performance and Teaching*. *Journal of the Chinese Society of Education** (7), 114.