

Practical Exploration of Integrating National Music Elements into Vocal Teaching in Universities under the Background of Artificial Intelligence

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Abstract: This article discusses the strategy and effect of the integration of national music elements in vocal teaching in universities under the background of AI (Artificial intelligence). By introducing specific vocal teaching cases in universities, this article analyzes in detail the ways and effects of the integration of national music elements. The results show that the integration of national music elements not only enriches the content of vocal teaching, improves students' interest and participation in learning, but also effectively promotes students' cognition and understanding of national culture. Students' feedback is generally positive, and they think this teaching method is helpful to improve their vocal music level and cultural literacy. Based on this, this article draws the conclusion that national music elements have important application value in vocal teaching in universities. It can not only enrich teaching contents and methods, improve teaching effect, but also effectively inherit and develop national music culture. It is suggested that the future vocal teaching should pay more attention to the integration and application of national music elements, and actively explore the combination with new technologies to promote the innovative development of vocal teaching and national music culture.

1. Introduction

As science and technology advance rapidly, AI has found its way into diverse sectors, notably education, where its impact is becoming progressively more pronounced [1]. Innovative applications such as intelligent teaching system, automatic evaluation tools and personalized learning path recommendation are gradually changing the traditional teaching mode. In this context, vocal teaching in universities is also facing new challenges and opportunities [2]. As an important part of cultural heritage, national music bears profound historical and cultural heritage and national feelings [3]. However, under the impact of modern society, the inheritance of national music culture faces many difficulties. How to inherit and develop national music in the new era background has become an urgent problem [4].

The integration of national music elements into vocal teaching in universities will not only enrich the content of vocal teaching, enhance students' learning interest and cultural identity, but also promote the inheritance and development of national music culture [5]. Through the platform

of universities, more young people can get in touch with, understand and love national music, thus injecting new vitality into its inheritance [6]. In addition, with the support of AI technology, students' learning needs and ability level can be analyzed more accurately, and personalized teaching schemes can be provided to further improve the effect and quality of vocal teaching.

2. AI and vocal teaching in universities

2.1. The development of AI technology and its application in the field of education

Since the 21st century, AI technology has achieved unprecedented development. The application of AI in the field of education mainly includes intelligent teaching system, automatic evaluation tools, personalized learning path recommendation, etc [7]. An intelligent teaching system tailors teaching content and feedback to each student's unique learning situation and requirements. Automated assessment tools evaluate students' homework and exams swiftly and precisely. Personalized learning path recommendations guide students to suitable resources and pathways based on their interests and strengths. Implementing these AI technologies enhances the effectiveness and quality of education while fostering a more tailored and varied learning journey for students.

2.2. The present situation and challenges of vocal teaching in universities

Vocal teaching in universities is an important part of music education, aiming at cultivating students' vocal music skills, musical literacy and aesthetic ability [8]. However, there are still some problems and challenges in the current college vocal teaching, as shown in Table 1.

Table 1: Problems and challenges

Problems and challenges	Specific content
The teaching contents and methods are relatively simple.	Traditional vocal teaching pays attention to skill training, ignoring the cultivation of music culture and aesthetics; The teaching methods are lack of innovation and diversity, mainly based on teacher demonstration and student imitation.
Uneven distribution of teaching resources	There is a big gap in the input of vocal teaching resources in universities in different regions and schools. Some schools may lack professional vocal music teachers, advanced audio equipment and good teaching environment.
Students have great individual differences.	Students' music foundation, learning interest and ability level are different, so traditional vocal teaching can't meet the needs of all students, and personalized teaching is needed.

3. The cultural value and educational significance of national music elements

3.1. The definition and characteristics of national music

National music refers to music originated from a certain nation or region and formed and developed under its cultural background. It contains many cultural elements such as the history, traditions, customs, beliefs and aesthetic concepts of this nation [9]. The characteristics of national music are mainly reflected in its melody, rhythm, harmony, timbre and playing mode, etc. These elements together constitute its unique musical style, as shown in Figure 1.

National music is often closely related to its natural environment, social environment and cultural environment. For example, ethnic music in mountainous areas may be melodious and high-pitched, while ethnic music in plain areas may be more peaceful and smooth. In addition, the music of different nationalities may also be influenced by their language, religion, philosophy and other factors, thus showing a more diversified musical style.

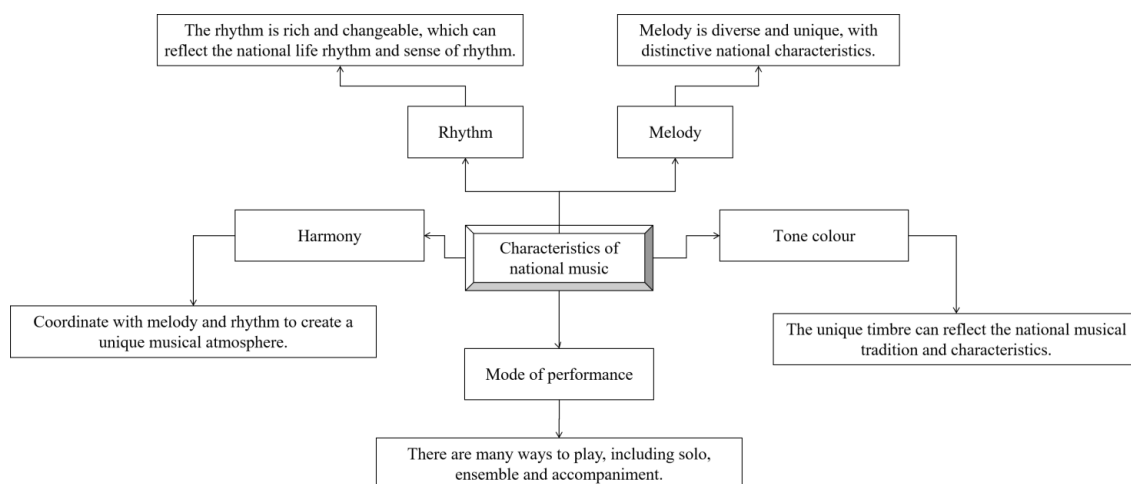


Figure 1: Characteristics of national music

3.2. Analysis of the cultural value of national music elements

As an important part of national culture, national music elements have profound cultural value. It is the carrier of national history and culture, and we can understand and feel the development process and cultural heritage of a nation through music. At the same time, the elements of national music reflect the national spiritual characteristics and aesthetic pursuit, and are an important source of national identity and cultural belonging. In addition, national music has the value of cross-cultural communication, which can promote cultural understanding and communication between different nationalities.

In modern society, with the acceleration of globalization and the blending of multi-cultures, the cultural value of national music elements is more prominent. Protecting and inheriting national music culture is of great significance for maintaining the diversity of world culture and promoting the development of human civilization.

3.3. The role and significance of national music in college vocal music education

Incorporating the essence of national music into university vocal education is crucial for bolstering students' musical proficiency, aesthetic sensibility, and awareness of cultural legacy. By delving into and performing national melodies, learners can grasp the deeper meanings and distinct traits of their national heritage, thereby elevating their appreciation and rendition of such music. This infusion of national music not only diversifies and enhances the substance and format of voice instruction but also ignites students' curiosity and creative spirits. Through the lens of folk music instruction and practical experiences, students can foster cross-cultural communication skills and embrace a pluralistic mindset, laying solid groundwork for their professional endeavors and societal engagement. Simultaneously, university-level vocal education stands to benefit from drawing inspiration and adopting exemplary elements from national music, thereby driving the evolution and advancement of the vocal arts.

4. Strategies of integrating national music elements into vocal teaching under the support of AI

4.1. The specific application of AI technology in vocal teaching

As AI technology continues to evolve, its utilization in vocal instruction is becoming

increasingly widespread. The integration of AI in vocal teaching encompasses several key areas: (1) Advanced voice analysis technology now offers precise evaluations of students' singing proficiency. By examining audio recordings of students' performances, these systems can pinpoint strengths and weaknesses in pitch, rhythm, and timbre, providing tailored suggestions for improvement. This not only streamlines the assessment process but also ensures that students receive highly personalized feedback. (2) Sophisticated recommendation systems tailor vocal learning resources and pathways to individual students' needs and preferences. These systems analyze learning histories, interests, and skill levels to suggest optimal songs, exercises, and study plans, facilitating a more efficient and enjoyable learning experience. (3) Cutting-edge virtual reality and augmented reality technologies immerse students in realistic and engaging singing environments. By simulating performance scenarios and providing virtual audience interactions, these tools enable students to experience the demands and excitement of performing firsthand, ultimately enhancing their stage presence and confidence.

4.2. Strategies of integrating national music elements into vocal teaching content

Integrating national music elements into vocal teaching content is an important way to inherit and develop national music culture. In this article, the following strategies can be adopted: (1) Taking folk music as an important part of vocal teaching. By letting students learn and sing folk music works, they can have a deeper understanding of the style and characteristics of folk music and feel the cultural connotation and emotional expression contained in it. (2) Integrating national music elements into vocal music skill training. For example, when training students' vocalization, breath control and other skills, we can combine the characteristics and expression techniques of national music to let students master and use these skills more naturally. (3) Encourage students to create and adapt national music. By stimulating students' creativity and imagination, they can understand and feel the cultural value and artistic charm of national music more deeply in the process of creation and adaptation.

4.3. Innovation of teaching methods: vocal teaching practice combined with AI technology

With the support of AI technology, vocal teaching methods can also be innovated and optimized. First of all, intelligent voice analysis technology can be used for real-time feedback and guidance. In the process of students' singing, the intelligent voice analysis system can analyze their singing performance in real time and give targeted improvement suggestions and guidance. This method not only improves the teaching efficiency, but also enables students to correct their own shortcomings in time. Secondly, the intelligent recommendation system can be used to provide students with personalized learning paths and resources. According to students' learning needs and interests, the intelligent recommendation system can recommend suitable learning plans and resources for them, thus helping students to learn vocal music more efficiently. Finally, virtual reality and augmented reality technology can be used to create more realistic and vivid singing scenes. By simulating the real singing environment and audience feedback, students can feel the atmosphere and pressure of singing more immersive, so as to better enhance their stage performance and self-confidence. At the same time, combining the characteristics and expression techniques of national music elements, students can understand and feel the charm and cultural connotation of national music more deeply.

5. Practical case analysis

5.1. Select specific vocal teaching cases in universities

To delve deeper into the amalgamation of national music components within university vocal instruction, this segment examines a notable case study from a prestigious conservatory of music. Over the past few years, this Conservatory has been proactive in its pursuit of integrating national music elements into its vocal curriculum, yielding tangible outcomes.

5.2. Analysis of the way and effect of the integration of national music elements in the case

In the vocal teaching of the Conservatory, the integration of national music elements is mainly reflected in the following aspects:

(1) National music-related content has been added to the curriculum. The college offers a series of national music courses, including national music history, national music appreciation, national vocal music skills, etc., so that students can have a deeper understanding of national music in theory.

(2) Pay attention to the singing of national music in teaching practice. Teachers encourage students to learn and sing various styles of national music works, and let students feel the charm and charm of national music through practice.

(3) The College also actively organizes performances and exchange activities related to national music, which provides a platform for students to show their talents and promotes the spread of national music culture.

The effect of these integration methods is also remarkable. Students' interest and sense of identity in folk music have been significantly enhanced, and their appreciation and expressive power have also been improved. At the same time, the quality and reputation of vocal teaching in the college have also been improved.

5.3. Discuss the challenges and solutions in teaching practice

In teaching practice, the integration of national music elements into vocal teaching also faces some challenges. Table 2 shows some major challenges and their solutions:

Table 2: Challenges and their solutions

Challenge	Describe	Solution
Students' cognition and understanding of national music is insufficient.	Due to the impact of multi-culture in modern society, some students lack sufficient understanding and interest in national music.	Increase the curriculum and teaching content related to national music, and guide students to deeply understand the cultural background and artistic value of national music.
		Organize folk music performances and exchange activities to enhance students' practical experience and sense of participation.
Teachers lack the teaching experience and resources of national music.	Some teachers may not be familiar with folk music or lack relevant teaching resources and methods.	Strengthen teachers' training and further study, and improve their cognition and teaching ability of national music.
		Introduce national music experts and scholars to provide teaching guidance and support for teachers.
It is difficult to select and adapt folk music tracks.	Because of the different styles and characteristics of national music, it requires certain professional knowledge and experience to select and adapt the tracks suitable for vocal teaching.	Establish a national music repertoire library and adaptation team, systematically sort out and adapt national music, and provide rich repertoire resources for vocal teaching.
		Encourage teachers and students to actively participate in the selection and adaptation process of tracks and give full play to their creativity and imagination.

6. Conclusions

National music, being a pivotal component of Chinese culture, encapsulates profound historical and cultural insights. Its seamless amalgamation into university-level vocal pedagogy not only ensures the preservation and progress of national musical heritage but also rejuvenates and revolutionizes the teaching of vocals. Furthermore, engaging with folk music enables students to foster a deeper comprehension and appreciation of multiculturalism, ultimately contributing to societal cohesion and harmony.

This investigation delves into the strategies and tangible impacts of incorporating national music elements within university vocal education. Utilizing case studies, impact assessments, and student feedback, it becomes evident that a thoughtful integration of national music elements significantly elevates the caliber of vocal instruction. In their encounter with national music, students witness an augmentation in their singing proficiency while gaining a profounder grasp of national culture. This cross-cultural engagement elevates students' overall competency and establishes a robust foundation for their future endeavors. Simultaneously, students exhibit a favorable disposition towards the infusion of national music into their vocal curriculum, perceiving it as an enriching and motivating addition that fosters a more engaged and enthusiastic approach to learning. Through their immersion in national music, students also cultivate a stronger sense of belonging and pride in their cultural heritage.

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