Innovative Paths and Cultural Identity Research in Folk Art Education in Guangzhou Universities Enabled by Digital Technology

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Abstract: This paper focuses on folk art education in Guangzhou universities empowered by digital technology. Using a combination of questionnaire surveys, interviews, classroom observations, and case studies, it deeply explores its innovative paths and the impact on students' cultural identity. Research has found that digital technology, through its application in Guangzhou university folk art education, enables innovative teaching methods, effectively enhancing students' sense of identity with Chinese traditional culture. Simultaneously, the study reveals current issues and proposes targeted development suggestions, providing references for promoting the digital transformation of folk art education in Guangzhou universities and related education in universities across the country.

Keywords: Digital technology; Guangzhou universities; Folk art education; Cultural identity

1. Introduction

Amidst the global wave of digitization, the education sector is undergoing profound changes, and digital transformation has become an inevitable trend in higher education development [1]. As a treasure of Chinese traditional culture, folk art carries rich historical memories and cultural connotations. Guangzhou, as the core region of Lingnan culture, possesses diverse and unique folk art resources, such as Cantonese opera and Guangfu boat lights [2]. Integrating digital technology into folk art education in Guangzhou universities not only conforms to the trend of education modernization but also represents an important measure to inherit and promote Chinese excellent traditional culture and enhance students' cultural identity.

However, the current research on the application of digital technology in folk art education in Guangzhou universities is still in the exploratory stage. Domestic research mainly focuses on education digitization and innovation

and entrepreneurship education, with few systematic studies on the digital transformation of folk art education and inadequate practical application and empirical research [3–5]. Although foreign research focuses on technology applications and digital communication, it lacks an in-depth exploration of folk art education in different regions, especially in Guangzhou [6–9]. In this context, it is of great practical significance to deeply study the innovative paths and cultural identity of folk art education in Guangzhou universities enabled by digital technology.

This study aims to fill this research gap. Through a systematic analysis of the current application, innovative practices of digital technology in folk art education in Guangzhou universities, and its impact on students' cultural identity, it provides theoretical support and practical guidance for the digital transformation of folk art education in Guangzhou universities. It also offers references for folk art education in universities across the country, facilitating the inheritance and development of Chinese excellent traditional culture.

2. Theoretical framework

2.1. Digital enablement theory

Digital enablement theory emphasizes the innovative role of digital technology in traditional education models. In folk art education, digital technology breaks time and space limitations and achieves an efficient allocation of educational resources by providing diversified teaching tools and resources [10]. Digital technology can create an immersive learning environment for students, making them feel like they are in a real scene of folk art, thus enhancing the intuitive experience of learning. Artificial intelligence (AI) technology can tailor personalized learning paths for students based on their learning progress and interests, improving learning effectiveness [11]. The application of these technologies fundamentally changes the teaching methods and learning experiences of traditional folk art education, injecting new vitality into education and teaching.

2.2. Cultural identity theory

Cultural identity refers to an individual's sense of belonging and identification with their cultural group, which is an important psychological foundation for cultural inheritance and development [12]. In a digital learning environment, students participate in folk art education courses and access rich folk art resources through digital platforms. They deeply understand the history, culture, and values behind folk art. This interactive and experiential learning process helps students establish emotional connections with traditional culture, enhancing their identification with Chinese traditional culture, especially Guangzhou folk art. Students can experience the atmosphere of traditional festivals in virtual folk scenes or understand the inheritance of folk art through digital resources, enabling them to more deeply understand and identify with local culture.

2.3. Contemporary transformation of folk art education

In the contemporary education system, folk art education has irreplaceable value [13]. It is not only an important way to inherit and promote Chinese excellent traditional culture but also cultivates students' aesthetic ability, innovative spirit, and cultural literacy. Guangzhou's folk art, such as Cantonese opera, integrates various art forms such as music, dance, and literature, and Guangfu boat lights contain unique waterside culture. These rich resources provide quality materials for folk art education in universities. However, the traditional folk art education model faces issues such as limited teaching resources and a single teaching method. Digital transformation brings new opportunities, allowing folk art education to break through the limitations of traditional teaching. It can be presented to students in a more vivid and intuitive way, achieving innovative development of folk art education in the contemporary era.

3. Research methods

3.1. Questionnaire survey

A questionnaire survey was designed for students from multiple universities in Guangzhou regarding digital folk art courses. The survey covered aspects such as student satisfaction with the courses, changes in cultural identity, and artistic literacy before and after learning. A total of 800 questionnaires were distributed, and 720 valid questionnaires were collected, with an effective recovery rate of 90%. Through statistical analysis of the questionnaire data, student feedback on digital folk art courses was obtained, providing quantitative data support for the study.

3.2. Interview method

In-depth interviews were conducted with teachers and course designers involved in folk art education in Guangzhou universities. The interviews focused on their views on digital teaching, practical experiences, difficulties faced, and suggestions for improvement. A total of 20 teachers and 10 course designers were interviewed. Through the collation and analysis of the interview content, valuable experiences and insights from their teaching practices were obtained, providing a deep understanding of the application of digital teaching in folk art education from the perspective of teachers and course designers.

3.3. Classroom observation

Observations were made in folk art education classrooms in Guangzhou universities to observe the application of digital technology in practical teaching. Aspects such as classroom interaction, student engagement, and the use of teaching resources were recorded to evaluate the impact of digital technology on classroom teaching effectiveness. A total of 15 different types of folk art courses were observed, providing a direct understanding of the practical application effects and existing problems of digital technology in the teaching process.

3.4. Case analysis

Representative digital folk art courses in Guangzhou universities, such as the digital Guangdong Han Opera course, were selected for detailed analysis. Starting from course design, teaching implementation process, and student learning outcomes, the specific application and implementation effects of digital technology in the innovation path of folk art education were demonstrated, providing practical cases for other universities to learn from.

4. Research content and analysis

4.1. Exploring innovative paths of digital technology in folk art education

Application of Digital Technology: Some universities in Guangzhou have introduced digital technology into folk art education to create immersive learning scenarios. In digital courses, students can use digital technology to "place themselves" in performance scenes, watch actors' costumes, makeup, and performance movements online, and experience the stage atmosphere. Digital technology overlays virtual folk elements on real scenes, allowing students to see folk art displayed in real scenes without spatial or geographical restrictions through digital applications, understanding its structure and production process. This immersive experience greatly enhances students' interest in learning and makes them more actively involved in learning.

Artificial intelligence and adaptive learning: Based on AI technology, some universities have developed personalized learning platforms. The platform analyzes students' learning progress and interest preferences based on data such as answer performance, study duration, and enthusiasm for participation in interactions during the learning process. It then

recommends personalized learning content. For example, in folk art history courses, students interested in traditional theater will be recommended more traditional theater-related materials, including classic repertoire appreciation and actor interviews. Students interested in intangible cultural heritage crafts will receive related craftsmanship tutorials and historical and cultural background introductions. This personalized learning path design meets students' differentiated learning needs and improves learning effects.

Cross-platform digital resource integration: Guangzhou universities are actively integrating folk art digital resources and establishing digital folk art resource libraries. These resource libraries cover various forms of information such as text, images, audio, and video, including historical documents, performance videos, and artistic works of folk art. Through multi-platform sharing, students can access the resource library on different platforms such as campus networks and mobile terminals, enabling anytime, anywhere learning. Additionally, the resource library provides interactive functions, allowing students to exchange learning experiences and share their own works on the platform, promoting interaction and cooperation between students.

4.2. The impact of digital empowerment on students' cultural identity

Design of cultural identity measurement indicators: Through questionnaires and interviews, a set of cultural identity measurement indicator systems has been designed, including dimensions such as cognition of Guangzhou folk art, emotional identity with Chinese traditional culture, and willingness to inherit folk art. The questionnaire adopts the Likert scale form, allowing students to score their degree of agreement with each dimension. By comparing and analyzing the questionnaire data before and after student learning, changes in students' cultural identity are evaluated.

Case analysis: Taking the digital course of Guangdong Han Opera as an example, before the course was implemented, some students only had a superficial understanding of Guangdong Han Opera, and their cultural identity was low. After the course was implemented, a questionnaire survey found that 85% of students had a deeper understanding of the history, singing style, and performance form of the Guangdong Han Opera. 78% of students expressed an enhanced sense of identity with Chinese traditional culture, and 60% of students expressed willingness to participate in the inheritance activities of Guangdong Han Opera. This indicates that the digital course has effectively enhanced students' identity with Guangdong Han Opera and Chinese traditional culture.

Student feedback and classroom interaction analysis: Through statistical analysis of student classroom feedback and interaction data, it is found that digital teaching stimulates students' active learning awareness. In digital classrooms, the number of times students participate in discussions and ask questions has increased significantly. They share their understanding and feelings about folk art through online platforms, forming a good learning atmosphere. This interactive learning not only deepens students' understanding of knowledge but also promotes their cultural identity, allowing them to understand the connotation of folk art more deeply through communication.

5. Research results

5.1. Feasibility and effectiveness of innovative paths

Research findings indicate that the innovative application of digital technology in folklore art education at Guangzhou universities has high feasibility and significant effectiveness. The application of AI technology has increased students' interest in learning by 70%. The design of personalized learning paths through artificial intelligence has improved students' academic performance by an average of 15 points (out of 100). Cross-platform digital resource integration has facilitated communication and cooperation among students, enhancing their autonomy in learning. These innovative paths have promotional value in universities at different levels and majors, effectively improving the quality of folklore

art education.

5.2. Improvement effect of cultural identity

Through quantitative and qualitative research, it has been found that digital folklore art education significantly enhances students' cultural identity. After studying digital courses, students' awareness of Guangzhou folklore art has increased by an average of 40%, and their emotional identification with traditional Chinese culture has increased by 35%. Qualitatively, students have demonstrated a stronger interest in folklore art during interviews and classroom interactions, actively participating in the inheritance and promotion of folklore art. Some students have even spontaneously organized folklore art clubs to carry out related activities.

5.3. Suggestions for optimizing teaching models

Based on the research results, the following suggestions for optimizing teaching models are proposed: further develop digital teaching resources to enrich teaching content; strengthen teachers' digital literacy training to improve their ability to use digital technology; enhance the interactivity and personalized services of the digital teaching platform by improving its functionalities; establish a diversified teaching evaluation system that comprehensively considers students' learning processes and outcomes.

6. Discussion and suggestions

6.1. Experience summary of the digital transformation of folklore art education in Guangzhou universities

Guangzhou universities have gained some experience in the digital transformation of folklore art education [14]. Firstly, they focus on the deep integration of technology and teaching content, selecting appropriate digital technologies based on the characteristics of folklore art to enhance teaching effectiveness. Secondly, they actively integrate multiple resources, including on-campus teachers, external experts, and social cultural institutions, to jointly promote the construction of digital courses. Thirdly, they emphasize students' subjectivity, designing courses and teaching activities oriented towards students' needs to stimulate their learning enthusiasm.

6.2. Challenges and countermeasures

The application of digital technology requires certain hardware devices and software support, which can be costly. The countermeasure is to seek financial support from the government and schools and collaborate with enterprises to reduce technical costs through industry-university-research cooperation. For example, partnering with technology companies to develop low-cost VR equipment suitable for folklore art education.

Some teachers have limited mastery of digital technology, affecting teaching effectiveness. Teacher training should be continuously strengthened, and teachers should be regularly organized to participate in digital teaching skills training courses. Encourage teachers to conduct digital teaching research and practice to enhance their digital literacy.

The quality of digital resources for folklore art on the internet varies. Universities should establish strict resource screening and review mechanisms to ensure the accuracy and authority of teaching resources. Simultaneously, encourage teachers to independently develop high-quality teaching resources to enrich teaching content.

6.3. Reference significance for national universities

The practices of Guangzhou universities provide valuable experience for national universities. In terms of course design,

other universities can learn from the way Guangzhou universities combine digital technology with local folklore art to develop folklore art courses with local characteristics. Promote personalized learning and immersive teaching models to improve teaching effectiveness. Regarding resource integration, establish a cross-school and cross-regional digital resource sharing platform for folklore art to achieve optimal resource allocation.

6.4. Suggestions for international exchange and promotion

Utilize digital platforms to promote Guangzhou folklore art internationally. Spread traditional Chinese culture overseas by producing multilingual versions of digital courses and hosting online international folklore art exchange activities. Collaborate with international universities to study the digital transformation of folklore art education and enhance the influence of Chinese universities in the field of international folklore art education.

7. Conclusion

Through an in-depth exploration of digital technology-enabled folklore art education in Guangzhou universities, the study systematically analyzes its innovative paths and impacts on students' cultural identity. The research results indicate that digital technology brings new development opportunities to folklore art education in Guangzhou universities. By innovating teaching methods and integrating teaching resources, it effectively improves teaching quality and students' cultural identity.

However, there are still some issues in applying digital technology to folklore art education in Guangzhou universities, requiring further improvement in technical cost control, teacher digital literacy enhancement, and teaching resource optimization. In the future, we should continuously monitor the development trend of digital technology, constantly explore its new applications in folklore art education, and provide strong support for inheriting and promoting excellent traditional Chinese culture.

Simultaneously, it is hoped that the research results can provide valuable references for the digital transformation of university folklore art education, promote the further development of Chinese university folklore art education, and facilitate the global dissemination and exchange of excellent traditional Chinese culture.

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Disclosure statement

The authors declare no conflict of interest.

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