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RESEARCH ARTICLE

Qin Songs as Intangible Cultural Heritage: Development and Implementation of Teaching Materials in Higher Education

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ARTICLE INFO	ABSTRACT
	This dissertation examines the integration of Qin song teaching materials into higher education, emphasizing their role in preserving intangible cultural heritage. Qin songs, characterized by their deep historical and cultural roots in traditional Chinese music and poetry, encapsulate philosophical and aesthetic values through the guqin instrument. The study adopts a mixed-methods approach, combining literature review, expert interviews, and empirical testing, to develop and assess teaching materials that address the educational gap in traditional arts within modern curricula. Findings highlight the materials' effectiveness in enhancing students' musical skills, emotional expression, and cultural understanding. The research underscores the need for educational innovations that maintain cultural integrity while adapting to contemporary pedagogical demands, aiming to foster broader appreciation and understanding of Qin songs as a cultural heritage.
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1. INTRODUCTION

The Qin songs, rooted deeply in China's rich historical and cultural tapestry, represent a sophisticated blend of guqin music and poetic singing, reflecting millennia of philosophical, aesthetic, and ethical evolution. This musical form, originating from ancient China, not only serves as entertainment but also embodies profound cultural and intellectual pursuits. The guqin, a traditional Chinese plucked instrument with over three thousand years of history, holds a prestigious position in Chinese culture, often associated with the literati and scholars of ancient times. These scholars used the art of Qin songs to express philosophical ideas and to cultivate personal morality, intertwining music with the essence of Chinese intellectual tradition (Bo, 2013; Peng, 2021).

However, in contemporary education, there is a noticeable gap in systematic teaching resources for Qin songs, especially in higher education where the integration of traditional arts into modern curricula remains limited. This gap presents significant challenges for the transmission of cultural heritage, with potential risks of losing invaluable cultural knowledge and practices. Addressing these challenges through academic research is crucial, as it not only aids in preserving this intangible cultural heritage but also enhances the educational landscape by integrating traditional wisdom with modern pedagogical techniques (Guo, 2008).

This research aims to develop and implement Qin song teaching materials in higher education settings, responding to the need for educational innovation that respects and revitalizes traditional cultures within contemporary educational systems. By crafting a curriculum that encompasses the

historical depth and cultural significance of Qin songs, this study seeks to foster a deeper appreciation and understanding among students, thus contributing to the broader goals of cultural preservation and education modernization.

Research objectives

1. To study the Qin songs suitable for teaching at the undergraduate level.
2. To create a textbook for singing Qin songs for use in undergraduate-level teaching.
3. To investigate the outcomes of utilizing the textbook for singing Qin songs in undergraduate-level teaching.
4. To examine the satisfaction levels of students towards the textbook for singing Qin songs used in undergraduate-level teaching.

LITERATURE REVIEW

The historical and cultural evolution of Qin songs illustrates their pivotal role in shaping the artistic and educational traditions of Chinese society. As an integral component of Chinese cultural heritage, Qin songs reached significant developmental milestones during the Spring and Autumn Period, Tang Dynasty, and Ming Dynasty, reflecting the broader societal and literary trends of each era. These periods were marked by a systematic refinement of Qin music notation, establishment of music schools, and the creation of extensive musical repertoires, highlighting the deep connection between music, literature, and cultural identity (Sun, 2017). Such developments emphasize the importance of maintaining a strong historical foundation in the creation of Qin song teaching materials.

Regional influences on Qin music, particularly in the Shu school of Guqin, underscore the interplay between local cultural contexts and musical development. The Shu school's unique characteristics, shaped by the Bashu region's geographical and cultural environment, illustrate the diversity within Qin music traditions. This highlights the need for educational materials to incorporate regional styles and practices, ensuring students develop a holistic understanding of Qin music's cultural richness and stylistic variations (Li, 2011).

In contemporary educational settings, innovative strategies have been proposed to integrate traditional cultural elements, including Qin songs, into public art education. Combining traditional teaching methods with modern technology, such as digital tools and interactive platforms, creates a more engaging and effective learning experience. This approach not only teaches technical skills but also fosters a deeper appreciation for the cultural and historical significance of the art form. The inclusion of fieldwork and community-based learning further enriches students' understanding of intangible cultural heritage, allowing them to connect classroom knowledge with real-world cultural practices (He, 2018).

The preservation and innovation of traditional music education, including Shaanxi folk music, in higher education highlight the challenges and opportunities in integrating heritage into modern pedagogy. Innovative teaching methods, such as the incorporation of multimedia resources and extracurricular activities, offer pathways to enhance students' interest and engagement with traditional music. These approaches underline the importance of designing Qin song teaching materials that are both rooted in tradition and adapted to contemporary educational needs. They also stress the value of developing scientific curriculum frameworks and evaluation mechanisms to ensure the effectiveness of such teaching initiatives (Qin, 2022).

These perspectives collectively provide a comprehensive framework for developing Qin song teaching materials. They emphasize the need to preserve the historical authenticity of Qin songs while incorporating innovative, interactive, and regionally inclusive teaching strategies to enhance students' cultural understanding and artistic competence. This balance between tradition and modernity is crucial for ensuring the continued relevance and appreciation of Qin songs in contemporary education.

RESEARCH METHODOLOGY

This study employs a mixed-methods approach, integrating both qualitative and quantitative strategies, to investigate the effectiveness of Qin Song teaching materials within a higher education context. This comprehensive approach ensures a thorough exploration of Qin Song's pedagogical impact and its potential for incorporation into university-level curricula.

1. Population and sample

The study targets undergraduate students majoring in music at Sichuan Conservatory of Music, focusing specifically on those with an emphasis on traditional Chinese music. A purposive sample of 30 students will be selected based on their current engagement with Qin Song courses, ensuring a relevant and informed participant base for conducting the research.

2. Research tools

Literature Review: To establish a solid theoretical foundation, a systematic review of existing literature on Qin Song, its historical context, educational methodologies, and previous implementations in academic settings will be conducted.

Focus Interviews: Structured interviews with a select group of Qin Song experts, educators, and practitioners will provide qualitative insights into the current teaching practices and potential areas for material enhancement.

3. Data collection

Document Analysis: Primary and secondary sources on Qin Song will be analyzed to gather comprehensive background information and identify educational gaps.

Surveys: Pre and post-intervention surveys will gauge student knowledge and satisfaction, providing quantitative data on the effectiveness of the newly developed teaching materials.

Observations: Classroom observations during the implementation of the new teaching materials will offer qualitative insights into student engagement and material usability.

4. Data analysis

Qualitative analysis: Thematic analysis will be employed to interpret data from focus interviews and classroom observations, identifying key themes and patterns in the qualitative data.

Quantitative analysis: Statistical analysis, including paired t-tests and ANOVA, will be used to compare pre and post-intervention survey results, assessing the materials' impact on student learning outcomes.

Expert evaluation: An Expert Content Validity Index (ECVI) evaluation will be conducted, involving a panel of seasoned educators who will assess the teaching materials for content accuracy, relevance, and educational alignment. This step ensures the materials meet high academic standards and are pedagogically sound for higher education contexts.

By blending these methods, the study aims to create and validate a robust set of Qin Song teaching materials that enhance students' understanding and appreciation of this traditional Chinese art form. The findings will contribute to the broader discourse on integrating cultural heritage into contemporary music education, promoting a deeper connection to traditional Chinese cultural practices within academic settings.

Conceptual framework

In the research on creating a textbook for singing Qin songs for use in undergraduate-level teaching, the researchers utilized the experiential learning theory of Edgar Dale, the Discovery Learning theory of Jerome Bruner, and the Constructivism learning theory as the foundation for developing the textbook for singing Qin songs. The study aimed to examine the outcomes and satisfaction of students, aligning with the conceptual framework as follows:

RESULTS

1. The creation of textbook for teaching the singing of qin songs

The development of the qin song singing textbook addresses the urgent need for modernized learning methods in traditional art forms. As society progresses and educational methods evolve, traditional oral teachings no longer suffice, particularly with growing globalization and cultural diversity. This textbook integrates modern educational concepts with traditional qin song essence, featuring Western staff notation, pinyin, and English lyrics to cater to both domestic and international students. This approach broadens the accessibility and appreciation of qin song globally.

The textbook also supports instructors with detailed guides and exercises to enhance the effectiveness of qin song teaching and improve educational quality. By fostering students' musical literacy and deepening their understanding of Chinese cultural nuances, the textbook strengthens their cultural identity and confidence in national culture, crucial for the art's long-term transmission.

In essence, this textbook represents a significant innovation in qin song education and contributes vitally to its preservation as an intangible cultural heritage, ensuring its continued relevance and transmission worldwide.

2. Experimental comparison data

Data collection aligned with the Mastery Learning Theory, using an 80/80 scoring criteria developed by Benjamin Bloom (miqi 2022). The study assessed the impact of specialized teaching materials on piano song education at the Sichuan Conservatory of Music and related institutions. Forty students were randomly chosen from these institutions, divided equally into an experimental group, using the new textbooks, and a control group, following traditional teaching methods.

Performance data from both groups were recorded before and after the intervention to measure any improvements in skills and performance. The curriculum evaluated included various courses like the history of piano songs, qin songs singing methods, and theoretical skills in Guqin. Evaluation criteria ranged from good (70-79), very good (80-89), to excellent (90+), covering both formative and summative tests.

Results, shown in several figures, displayed score percentages and final outcomes for both groups, clearly demonstrating the effectiveness of the new teaching materials over conventional methods.

Table 1: Pretest of experimental group and control group

Paired number	Item	average value	standard error	Mean difference	t	p
Paired T test	Pre-test score in the experimental group	83.850	3.528	-8.850	-7.099	0.000***
	Post-test scores of the experimental group	92.700	5.352			
Note: * p<0.1 ** p<0.05 *** p<0.01						

The experiment involved a pre-test and post-test comparison between an experimental group and a control group to evaluate initial performances and the impact of a specific teaching intervention. Initially, the experimental group scored an average of 83.850 (SD = 3.528), which improved significantly to 92.700 (SD = 5.352) after the intervention, as evidenced by a paired-sample t-test showing a mean difference of -8.850. This significant improvement (t = -7.099, p < 0.01) confirms the positive influence of the textbook. Overall, the intervention notably enhanced the students' qin song performance, demonstrating the textbook's effectiveness in improving music education. The experimental group's marked progress, compared to the control group's consistent results, underscores the textbook's beneficial impact on student learning.

Table 2: Pre-test and post-test

Analysis items	Item	sample capacity	average value	standard error	Mean difference	Difference value of 95% CI	t	df	p
	before measurement	20	83.850	3.528					
	aftertest	20	92.700	5.352					
fraction	amount to	40	88.275	6.333	-8.850	-11.767 ~ -5.933	-6.174	32.893	0.000***
Note: * p<0.1 ** p<0.05 *** p<0.01									

From the table, the initial average score of the experimental group was 83.850 (SD = 3.528), indicating their music proficiency before the intervention. Post-intervention, scores rose to 92.700 (SD = 5.352), reflecting substantial improvements in qin song skills. The mean score increase was -8.850, with a 95% confidence interval ranging from -11.767 to -5.933, underscoring the statistically

significant improvement (t = -6.174, df = 32.893, p < 0.01). This significant enhancement indicates that the textbook's use positively affected the students' outcomes, confirming its effectiveness in fostering better understanding and performance in qin song. The data clearly demonstrate that the structured and scientific approach of the textbook significantly enhanced learning outcomes.

Table 3: Control pre-test and control post-test

Analysis items	Item	sample capacity	average value	standard error	Mean difference	Difference value of 95% CI	*t*	*df*	*p*
	before measurement	20	83.800	2.441					
	aftertest	20	83.600	3.530					
fraction	amount to	40	83.700	2.997	0.200	-1.751 ~ 2.151	0.208	33.786	0.836
Note: * p<0.1 ** p<0.05 *** p<0.01									

The control group's average pretest score was 83.800 (SD = 2.441), which slightly decreased to 83.600 (SD = 3.530) in the posttest, indicating minimal change. The difference in means was marginal at 0.200 with a 95% confidence interval from -1.751 to 2.151. The t-test results (t = 0.208, df = 33.786, p = 0.836) confirmed that these changes were not statistically significant (p > 0.1), suggesting no notable improvement or decline in the control group's music performance. This stability contrasts sharply with the experimental group's significant progress, highlighting the special textbook's impact on enhancing qin song skills effectively.

Table 4: Control group and experimental group

Paired number	Item	average value	standard deviation	Mean difference	*t*	*p*
	Pretest scores in the control group	83.800	2.441			
Paired T test	Post-test scores in the control group	83.600	3.530	0.200	0.203	0.841
Note: * p<0.1 ** p<0.05 *** p<0.01						

The initial analysis compared pre-test scores between the control and experimental groups to validate that both started at similar performance levels. The control group scored 83.800 (SD = 2.441), while the experimental group scored 83.850 (SD = 3.528). The paired t-test yielded a mean difference of 0.200, with a t-value of 0.203 and a p-value of 0.841, indicating no significant difference (p > 0.1). This confirms that any subsequent performance changes observed can be attributed directly to the use of the specific teaching materials rather than external factors. Essentially, the study began with comparable conditions, ensuring that the observed improvements in the experimental group's vocal and instrumental performance were due to the educational intervention.

3. Students collected the following results through SPSS data analysis

3.1 Reliance analysis

Table 5: Reliance analysis

sample capacity	number of entry	Cronbach. α coefficient
21	24	0.831

The reliability analysis of the questionnaire was performed using the Cronbach's α coefficient. With a sample size of 21 and 24 items in the questionnaire, the Cronbach's α coefficient was calculated at 0.831, indicating good internal consistency, as values between 0.7 and 0.9 are considered reliable. This high level of reliability confirms that the questionnaire is effectively measuring the constructs studied and is suitable for further research. Although the sample size is relatively small, which might impact the stability and representativeness of the results, the current findings provide a solid

foundation for the questionnaire's reliability. Future studies should consider a larger sample size to further validate and ensure the reliability and applicability of this measurement tool.

3.2 Validity analysis

This study's factor analysis aimed to validate the questionnaire by assessing its structure when exploring the effects of learning piano songs. Principal component analysis extracted six factors, enhancing clarity in their underlying structure. Initially, the first factor had a characteristic root of 10.36, explaining 43.16% of the variance—significantly more than subsequent factors. Post-rotation, this factor's root decreased to 8.71 but still explained the most variance at 36.30%. The total explained variance reached 80.62%, indicating robust questionnaire validity.

Factor loadings demonstrated distinct clusters, enhancing interpretative reliability. For instance, Question 6 about the historical role of Qin songs showed a high loading of 0.80 on the fourth factor, reflecting its strong relevance. Similarly, Question 12 regarding the benefits of piano songs for vocal music learners linked closely with factor 5, with a loading of 0.77. A question assessing overall satisfaction with the piano songs had a communality of 1.000, suggesting it's fully explained by underlying factors, highlighting its centrality in the questionnaire.

The Bartlett's test of sphericity confirmed data suitability for factor analysis, with a chi-square value of 1472.664, df 276, and a significant p-value (<0.001), underscoring the data's appropriateness for this analysis. Overall, the questionnaire's structure was validated effectively, showing it could reliably measure the impact of learning piano songs. These findings support the questionnaire's use in further studies to explore different educational contexts and refine piano song teaching strategies.

3.3 Correlation analysis

This study utilized Pearson's correlation analysis to explore the relationships among learning with teaching materials, QR code scanning, understanding piano songs, emotional expression, and cultural insight related to intangible cultural heritage. Findings indicated a strong positive correlation between participants' emotional expression during performances and their understanding of the music's historical and cultural context (r = 0.67, p < 0.01), suggesting that the learning materials enhance both emotional engagement and depth of cultural understanding.

Additionally, participants' understanding of musical history and culture was positively linked to their experiences using QR codes for learning (r = 0.58, p < 0.01), hinting that QR-enhanced learning might enrich cultural comprehension. Conversely, a significant negative correlation existed between participants' charm perception of the music and their emotional expression (r = 0.71, p < 0.01), indicating potential conflicts between appreciating the music's intangible cultural value and expressing emotions during learning.

Furthermore, a negative correlation was found between participants' interest in intangible cultural heritage protection and their perception of the music's unique charm (r = 0.71, p < 0.01). This suggests that enhanced emotional expression does not necessarily translate into increased willingness to engage in heritage protection.

Overall, the study underscores the intricate interplay between educational materials and learners' emotional and cultural responses, emphasizing the importance of balancing these elements in educational design to foster effective learning and enthusiasm for cultural preservation. Future research could delve into how different educational approaches impact the effectiveness of intangible cultural heritage education, aiming to bolster cultural transmission and conservation efforts.

DISCUSSION

This dissertation employed a mixed-method approach, integrating both qualitative and quantitative research methods, to develop and evaluate Qin song teaching materials, effectively bridging the gap between the preservation of intangible cultural heritage and educational needs in higher education. The qualitative research delved into the historical, performance, and vocal aspects of Qin song, gathering insights from experts to ensure the material's cultural authenticity. Quantitative research, on the other hand, objectively assessed the material's impact on student learning outcomes through

pre- and post-tests, showcasing significant improvements in performance skills and cultural understanding.

Controversies in developing Qin song teaching materials often stem from balancing modern educational needs with traditional authenticity. While incorporating modern elements like staff notation and pinyin can make Qin song more accessible in diverse educational settings, it raises concerns about diluting its traditional essence. Huang Kang's study highlights these challenges, suggesting that while modernization enhances educational efficiency, it may compromise the traditional values inherent in Qin song teaching (Huang, 2016). Therefore, this discussion underscores the necessity of maintaining a delicate balance between innovation and tradition, ensuring that educational advancements in Qin song teaching do not overshadow its rich cultural heritage.

The integration of comprehensive teaching tools, including QR codes and multimedia resources, has modernized the educational experience, making it more engaging for students. This blend of traditional and modern teaching methods not only enhances the accessibility of Qin song but also ensures its continued relevance in today's global educational landscape. Future research should continue to explore this balance, optimizing teaching strategies to preserve the cultural integrity of Qin song while meeting contemporary educational standards.

CONCLUSION

The development and application of Qin song teaching materials, as explored in this dissertation, have demonstrated substantial benefits in enhancing students' understanding and performance of this traditional Chinese art form. By integrating qualitative insights from experts with quantitative educational outcomes, the study has successfully developed teaching resources that honor the rich cultural heritage of Qin song while employing modern educational techniques. The materials have proven effective in improving students' technical skills, emotional expression, and cultural appreciation, as evidenced by the significant performance enhancements in the experimental group compared to the control group.

The study's findings emphasize the potential of Qin song as a valuable educational tool in higher education, capable of fostering a deeper connection to Chinese cultural heritage while enhancing musical skills. The use of diverse notation systems, multimedia resources, and interactive content has made the learning process more engaging and accessible, thereby increasing the appeal of Qin song to a broader audience. This approach not only preserves the art form but also adapts it to contemporary educational needs and global contexts.

RECOMMENDATIONS

Further research and curriculum development: Future studies should focus on expanding the repertoire of Qin song materials to include a wider range of pieces that cater to various skill levels. Research should also explore the use of advanced digital tools and platforms to enhance the interactivity and reach of Qin song education, both in academic settings and through informal learning channels.

Cultural exchange programs: Institutions should consider incorporating Qin song into cross-cultural exchange programs to enhance its international visibility and appreciation. This could involve partnerships with educational institutions globally to integrate Qin song into their music curricula, fostering a deeper understanding and appreciation of Chinese culture among international students.

Innovative teaching methods: Educators are encouraged to continue innovating teaching methods by incorporating more interactive and student-centered approaches. This could include the use of virtual reality (VR) to simulate immersive learning environments or gamified elements to increase student engagement and motivation.

Teacher training and workshops: To ensure the effective transmission of Qin song, ongoing teacher training programs should be established. These programs should focus on equipping educators with both the traditional techniques of Qin song and the skills to use modern teaching aids effectively.

Community outreach and public engagement: To increase public interest and involvement in Qin song, institutions should organize workshops, public performances, and interactive exhibitions that highlight the art form's cultural significance and educational value. This will help to cultivate a broader audience and foster a sustainable interest in preserving this intangible cultural heritage.

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