Journal of Information Systems Engineering and Management

2025, 10(22s) e-ISSN: 2468-4376

https://www.jisem-journal.com/

Research Article

The Integration of Blended Learning in Guqin Art Education in Guangxi, China

Qun Tang*, Piyapun Santaveesuk**, Samrerng Onsampant**

*Ph.D. Student, Faculty of Education Shinawatra University, Thailand

**Lecturer in the Faculty of Education, Shinawatra University, Thailand.

ARTICLE INFO

ABSTRACT

Received: 15 Dec 2024

Revised: 29 Jan 2025

Accepted: 16 Feb 2025

This study explores the integration of blended learning (BL) in Guqin art education within Guangxi, China, addressing the challenges of cultural preservation and modern educational demands. A mixed-methods approach was adopted, combining quantitative surveys (n=187 valid responses) and qualitative interviews (7 experts). Results indicate that BL significantly enhances student engagement (mean=3.61/5), learning satisfaction (mean=3.69/5), and skill acquisition. Key factors include flexible online resources (e.g., VR/AR tools, MOOCs) and structured offline practices (e.g., workshops, Yaji gatherings). Challenges such as technological adaptation and resource limitations were mitigated through teacher training and institutional support. The study proposes a BL framework balancing online (30%) and offline (70%) components, emphasizing cultural relevance and technological innovation. Findings advocate for BL as a transformative tool in preserving intangible cultural heritage while meeting contemporary pedagogical needs.

Keywords: blended learning, Guqin art education, cultural preservation, intangible heritage.

Introduction

1. Background

Guqin, a traditional Chinese musical instrument, holds profound cultural and historical significance. However, Guqin education faces challenges in contemporary higher education due to limited student engagement and insufficient teaching resources. Blended learning offers a solution by integrating digital tools with traditional instruction, thus enhancing accessibility and effectiveness. Guangxi, a province known for its rich cultural diversity, has seen an increasing need for innovative educational approaches to preserve traditional art forms such as Guqin. The integration of blended learning in Guqin education not only fosters a more engaging learning environment but also ensures the survival and promotion of this historical art form. The unique blend of online learning resources and face-to-face interactions provides an enriched experience that caters to students' diverse learning styles.

2. Research Problem

The integration of blended learning in Guqin education in Guangxi has not been extensively studied. Key

Copyright © 2024 by Author/s and Licensed by JISEM. This is an open access article distributed under the Creative Commons Attribution License which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

challenges include a lack of technological infrastructure, student adaptation to digital tools, and teachers' pedagogical adjustments. This study aims to address these gaps by evaluating the feasibility and impact of blended learning in Guqin education. With the rise of digital education, it is imperative to explore how technology can enhance traditional music education without compromising cultural authenticity. While online learning platforms offer accessibility, they may not fully replicate the hands-on experience of face-to-face instruction. This research delves into how blended learning can strike a balance between digital convenience and the rich, immersive experience of traditional Guqin training.

Research Questions

- 1. How are the learning method the Integration of Blended Learning in Guqin Art Education in GuangXi, China ?
 - 2. How are the create the Integration of Blended Learning in Guqin Art Education in GuangXi, China?
 - 3. How are the evalvate to the Integration of Blended Learning in Guqin Art Education in GuangXi, China?

Research Objectives

- 1. To Study method the Integration of Blended Learning in Guqin Art Education in GuangXi, China.
- 2. To create the Integration of Blended Learning in Guqin Art Education in GuangXi, China.
- 3. Evaluation and comparison of on-site and online mixed comprehensive learning models in Guqin Art education in Guangxi, China.

Conceptual Framework

The framework for integrating blended learning integrates the modernization of ancient guqin art inheritance and education as its core objective. By constructing a "culture-technology-education" tripartite integration system, it systematically integrates online and offline teaching resources and technological innovations. This framework takes the blended learning model as the independent variable and through the four-stage teaching process of "theoretical introduction - skill training - cultural integration - outcome presentation", it deeply couples digital tools such as MOOC courses, VR/AR finger technique simulation, and AI intelligent coaching with cultural experiences such as guqin gatherings and opera integration, forming a multi-dimensional and three-dimensional teaching structure. The research particularly focuses on the dynamic influence of moderating variables such as student participation, teacher technical ability, and equipment availability on learning outcomes and cultural dissemination efficiency, and establishes a composite assessment system including data tracking, cultural tests, and technical assessments. The future development direction focuses on optimizing personalized learning paths through brain-computer interfaces and building a globalized dissemination ecosystem for the metaverse in the field of the digital transformation of traditional art education, striving to construct an innovative educational paradigm that combines deep cultural inheritance and broad modern technology. This will provide a systematic solution for the digital transformation of traditional art education.

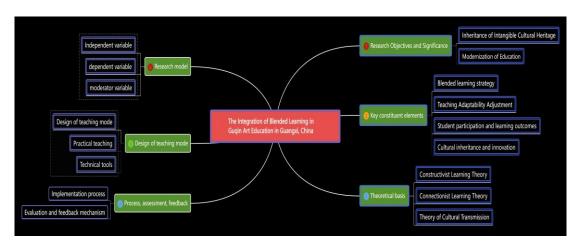


Table 1: Conceptual framework diagram

Research Methodology

1. Research Design

This study employs a mixed-methods approach, incorporating both qualitative and quantitative research methods to assess the effectiveness of blended learning in Guqin education. A combination of case studies, surveys, interviews, and performance evaluations will be used to gather comprehensive insights. The study will analyze student experiences, teacher perspectives, and institutional support mechanisms to develop a well-rounded understanding of blended learning implementation in Guqin education.

2. Data Collection Methods

Surveys will be conducted among students enrolled in Guqin education programs, focusing on their engagement levels and learning experiences in blended environments. Interviews with educators will provide qualitative insights into the pedagogical adjustments required for blended learning adoption. Observations of classroom settings will offer a comparative analysis of face-to-face versus blended learning effectiveness.

3. Data Analysis

Quantitative data will be analyzed using statistical tools to determine the impact of blended learning on student performance. Qualitative data will be thematically coded to identify recurring themes in students' and teachers' experiences. The findings will be synthesized to provide a holistic understanding of the blended learning model's effectiveness in Guqin education.

4. Data Analysis

Quantitative data are analyzed using statistical tools, while qualitative data are examined through thematic analysis to identify patterns in student and educator responses.

Results and Discussion

1. Result of Study method the Integration of Blended Learning in Guqin Art Education in GuangXi, China.

Under the background of the rapid development and wide application of modern educational technology,

blended learning, as a teaching mode combining the advantages of online and offline teaching, has gradually been widely concerned and applied in the field of education. The purpose of this study is to deeply explore the integration of mixed learning methods in Guqin art education in Guangxi, China, in order to provide theoretical and practical guidance for the modernization of traditional art education.

2. Application status of mixed learning in Guqin art education

Through a questionnaire survey, this paper randomly selected 380 respondents to conduct a questionnaire survey. The questionnaires were mainly distributed online, mainly through the questionnaire star platform. A total of 380 questionnaires were distributed, 193 questionnaires were excluded from those who had not participated in guqin related courses, and 187 valid questionnaires were recovered, with an effective rate of 49.21%. The collected valid questionnaires are sufficient, which can reflect the relevant situation of mixed learning in guqin culture and art education in Guangxi, and provide data support for the following research.

Basic information of the respondents: 53.68% of the respondents were male and 46.32% were female. Most of the respondents are aged 18 and 24 (74.74%), mainly students (78.42%), and their educational background is mainly bachelor's degree or above (52.63% bachelor's degree, 11.32% master's degree or doctor's degree).

Learning experience: Nearly half of the respondents (49.21 percent) have taken guqin related courses, and 65.24 percent are beginners. Most of them have learned guqin in 13 years (47.06%), mainly through offline classes (52.41%) and mixed learning (44.92%).

Blended learning preference: In blended learning, the respondents preferred practical exercises (69.52%), followed by watching teaching videos (51.34%) and watching concerts (32.62%). Popular technology tools include online learning platforms (64.17%) and social media platforms (59.36%).

Technology problems: In the process of using technology tools, the main problems encountered by respondents were insufficient teaching resources (38.5%) and Internet problems (29.95%).

Mixed learning experience: On the whole, the respondents have a positive experience of the mixed learning mode, with an average score of 3.69. They believe that they can make full use of online and offline resources to improve their guqin skills (3.6 points), and feel the flexibility and autonomy of learning (3.69 points).

Learning satisfaction: The respondents have a high satisfaction with the blended learning mode, with an average score of 3.69. They are especially satisfied with the guidance of offline teachers (3.82 points), and believe that the quality of online learning resources has improved their learning confidence (3.63 points).

Student engagement: In terms of engagement, the average score is 3.61, showing active participation in online discussions and interactions (3.51) and willingness to demonstrate performance in class (3.77).

Teacher support and feedback: Feedback provided by teachers in blended learning is considered to be helpful in improving performance skills, with an average score of 3.67. Respondents believe that teachers are able to answer questions in a timely manner and give personalized guidance.

Evaluation of blended learning effect: Respondents generally believe that blended learning has significantly improved their guqin playing skills (3.73 points) and theoretical knowledge understanding (3.8 points), as well as

their mastery of musical expression (3.6 points).

The survey results show that blended learning has been widely used in guqin art education in Guangxi. In the specific application of mixed learning mode, offline classroom is still the mainstream way of guqin learning, but the mode of mixed learning (combining online and offline) has also begun to be recognized by more and more learners. According to the data, offline classes accounted for 52.41 percent, while the blended learning mode accounted for 44.92 percent. This shows that mixed learning mode is gradually taking up a place in Guqin art education with the advancement of technology and the diversification of learners' needs.

3. Questionnaire survey specific statistics.

3.1 Frequency statistics of population characteristics

Table 2 shows the distribution results of population characteristics frequency of this questionnaire survey. It can be seen that: as for gender distribution, 59.89% of the respondents are female and 40.11% are male. This result indicates that the proportion of women in the survey is significantly higher than that of men, which may be related to the selection of the survey group or distribution channel.

In terms of age distribution, respondents in the 18-24 age group dominated, reaching 72.19%. They were followed by respondents over 35 years old, accounting for 19.25 percent. Those under 18 and those in the 25-34 age group accounted for only 3.21 percent and 5.35 percent, respectively. The distribution shows that the survey's respondents are mainly young people, especially those aged 18-24 who are students or just entering the workforce, with relatively few respondents in other age groups. In terms of identity distribution, students account for the vast majority, reaching 75.40 percent. Teachers and other identities accounted for 7.49 percent and 17.11 percent, respectively. This indicates that the survey was mainly aimed at the student group, with a small sample of teachers and other identities, and may need to appropriately increase the representation of the teacher group in future surveys. Finally, with regard to educational background, respondents generally had a higher level of education. Undergraduates accounted for 68.98 percent, master's students 14.97 percent, college students or below 14.44 percent, and doctoral students only 1.60 percent. This shows that most of the respondents have a high level of education, undergraduates are the main body, the level of education is relatively concentrated, but there are also a certain proportion of master's and junior college and below respondents, the proportion of doctoral students is relatively rare.

To sum up, the survey sample is mainly concentrated in young and highly educated students, with a slightly higher proportion of female respondents, and the age distribution tends to the young group aged 18-24.

| Name | Ontions | Frequenc | ey Percentage | Cumulative | |
|--------|----------------|----------|---------------|-----------------|--|
| | Options | | (%)□ | percentage (%)□ | |
| Gender | male | 75 | 40.11 | 40.11 | |
| | female | 112 | 59.89 | 100.00 | |
| Age | Under 18 years | 6 | 3.21 | 3.21 | |

Table 2: Results of frequency analysis of demographic characteristics

| | | Frequency | Percentage | Cumulative |
|-------------|-------------------|-----------|------------|-----------------|
| Name | Options \Box | | (%)□ | percentage (%)□ |
| | old | | | |
| | Ages 18-24 | 135 | 72.19 | 75.40 |
| | Ages 25-34 | 10 | 5.35 | 80.75 |
| | Age 35 + | 36 | 19.25 | 100.00 |
| | Student | 141 | 75.40 | 75.40 |
| Identity | Teachers | 14 | 7.49 | 82.89 |
| | Other | 32 | 17.11 | 100.00 |
| | College degree or | 27 | 14.44 | 14.44 |
| | below | , | | |
| Educational | Undergraduate | 129 | 68.98 | 83.42 |
| background | course | | | |
| | Master's degree | 28 | 14.97 | 98.40 |
| | PhD | 3 | 1.60 | 100.00 |
| Total | | 187 | 100.0 | 100.0 |

3.2 Reliability test

Cronbach's Alpha reliability test was performed on the questionnaire. If this value is higher than 0.8, it indicates high reliability; If the value is between 0.7 and 0.8, it indicates good confidence; If the value is between 0.6 and 0.7, it indicates that the reliability is acceptable. If the value is less than 0.6, it indicates poor reliability.

Cronbach's Alpha reliability test was performed on the questionnaire. The statistical results are shown in Table 3. Cronbach's α coefficient of each dimension is as follows: Cronbach's α coefficient of mixed learning experience is 0.893; Cronbach's α coefficient of learning satisfaction is 0.896; Cronbach's α coefficient of student engagement is 0.894; Cronbach's α coefficient of teacher support and feedback was 0.915; And the Cronbach's α coefficient for blended learning effectiveness assessment was 0.911. Cronbach's α values of all dimensions are greater than 0.8, indicating good reliability.

Table 3: Reliability test

| Dimension partitioning | Number of items | Cronbach's alpha value |
|------------------------------|-----------------|------------------------|
| Blended Learning experience | 5 | 0.893 |
| Learning satisfaction | 5 | 0.896 |
| Student engagement | 5 | 0.894 |
| Teacher support and feedback | 5 | 0.915 |

| Blended learning effectiveness assessment | 5 | 0.911 | |
|---|---|-------|--|
| Biended learning effectiveness assessment | 5 | 0.911 | |

3.3 Validity test

Carry out validity analysis and test on the scale. Among them, KMO and Bartlett ball test were used. If the value is higher than 0.8, it indicates that the research data is very suitable for extracting information and the validity is good; If this value is between 0.7 and 0.8, it indicates that the research data is suitable for information extraction and has good validity; If this value is between 0.6 and 0.7, it indicates that the research data is suitable for information extraction and the validity is normal; If the value is less than 0.6, the validity of the data is average.

KMO test was performed on the questionnaire scale, and the test results were shown in Table 4. The KMO result is 0.903, greater than 0.8, and p<0.001 in Bartlett's sphericity test indicates that there are correlation factors among the variables, and the validity is good, so further factor analysis can be conducted.

Table 4: KMO and Bartlett ball test results of the scale

| KMO value | | 0.903 |
|--------------------------|------------------------|----------|
| | Approximate Chi-square | 3340.708 |
| Bartlett sphericity test | df | 300 |
| | p value | 0.000 |

It can be seen from Table 5 that the absolute value of the factor load coefficient of each item is greater than 0.4, indicating that there is a corresponding relationship between the options and factors. In addition, each item corresponds to its factor.

Table 5: shows the load coefficient of rotation factor and variance of common factor

| | | Factor Load factor | | | | | | |
|------------------|---|--------------------|--------|--------|--------|---------------|--|--|
| | | | | | | degree | | |
| Name | | Factor | Factor | Factor | Factor | Factor(common | | |
| | 1 | 2 | 3 | 4 | 5 | factor | | |
| | | | | | | variance) | | |
| Blended Learning | | | | 0.504 | | 0.511 | | |
| Experience 1 | | | | 0.794 | | 0.711 | | |
| Blended Learning | | | | 0.501 | | 0.510 | | |
| Experience 1 | | | | 0.791 | | 0.718 | | |
| Blended Learning | | | | 0.=01 | | 0.500 | | |
| Experience 3 | | | | 0.781 | | 0.728 | | |
| Blended Learning | | | | 0.505 | | 0.650 | | |
| Experience 4 | | | | 0.725 | | 0.652 | | |

| Blended Learning | | | | | | |
|--------------------------|-------|-------|-------|-------|-------|--------|
| Experience 5 | | | 0.806 | | | 0.747 |
| Learning | | | | | | |
| Satisfaction 1 | | | | 0.793 | | 0.756 |
| Learning | | | | | | |
| Satisfaction 2 | | | | 0.725 | | 0.658 |
| Learning | | | | | | |
| Satisfaction 3 | | | | 0.788 | | 0.741 |
| Learning | | | | | | |
| Satisfaction 4 | | | | 0.754 | | 0.681 |
| Learning | | | | | | 6 - |
| Satisfaction 5 | | | | 0.779 | | 0.763 |
| Student Engagement | | | | | 0.000 | |
| 1 | | | | | 0.802 | 0.779 |
| Student Engagement | | | | | 0.500 | 0.500 |
| 2 | | | | | 0.790 | 0.720 |
| Student Engagement | | | | | 0.607 | 0.620 |
| 3 | | | | | 0.637 | 0.020 |
| Student engagement | | | | | 0.838 | 0.787 |
| 4 | | | | | 0.030 | 0.787 |
| Student Engagement | | | | | 0.757 | 0.691 |
| 5 | | | | | 0./5/ | 0.091 |
| Teacher support and | 0.786 | | | | | 0.737 |
| feedback 1 | 0.700 | | | | | 0./3/ |
| Teacher support and | 0.765 | | | | | 0.735 |
| feedback 2 | 0.703 | | | | | 0./33 |
| Teacher Support and | 0.822 | | | | | 0.761 |
| Feedback 3 | | | | | | 0.7,00 |
| Teacher Support and | 0.766 | | | | | 0.744 |
| Feedback 4 | , | | | | | / 11 |
| Teacher Support and | 0.812 | | | | | 0.779 |
| Feedback 5 | | | | | | |
| Blended Learning | | | | | | |
| Effectiveness Assessment | | 0.812 | | | | 0.756 |
| 1 | | | | | | |
| Blended Learning | | | | | | |
| Effectiveness Evaluation | | 0.794 | | | | 0.741 |
| 1 | | | | | | |

| Blended Learning | | |
|--------------------------|-------|-------|
| Effectiveness Evaluation | 0.788 | 0.744 |
| 3 | | |
| Blended Learning | | |
| Effectiveness Evaluation | 0.806 | 0.744 |
| 4 | | |
| Blended Learning | | |
| Effectiveness Evaluation | 0.786 | 0.738 |
| 5 | | |

Needle factor extraction and factor extraction information are analyzed. From Table 6, we can see: A total of 5 factors were extracted from the factor analysis, all of which had eigenroot values greater than 1. The variance interpretation rate of these 5 factors after rotation was 15.112%, 15.011%, 14.668%, 14.128%, 14.015%, and the cumulative variance explanation rate after rotation was 72.933%.

Table 6: results of variance interpretation rate

| | Feature root □ | | Rotational front difference | | | | Post-rotation variance | | | | | |
|------|----------------|----------|-----------------------------|--------------|---------------------|----------|------------------------|--------|------------------|----------|--------|--------|
| Fact | | | | | interpretation rate | | | | explanation rate | | | |
| or | | | Variance | e | | Variance | 9 | | | Variance | е | |
| Nun | n Cha | racteris | t interpre | t Cumulative | Feature | interpre | t | Cumula | Feature | interpre | t (| Cumula |
| ber | ic re | oot | ation | % | Roots | ation | tive | % | Roots | ation | tive 9 | 6 |
| | | | rate % | | | rate % | | | | rate % | | |
| 1 | | 10.271 | 41.083 | 41.083 | 10.271 | 41.083 | | 41.083 | 3.778 | 15.112 | 1 | 15.112 |
| 2 | | 2.258 | 9.033 | 50.116 | 2.258 | 9.033 | | 50.116 | 3.753 | 15.011 | 3 | 30.122 |
| 3 | | 2.153 | 8.612 | 58.727 | 2.153 | 8.612 | | 58.727 | 3.667 | 14.668 | 4 | 14.790 |
| 4 | | 1.796 | 7.185 | 65.912 | 1.796 | 7.185 | | 65.912 | 3.532 | 14.128 | 5 | 58.918 |
| 5 | | 1.755 | 7.021 | 72.933 | 1.755 | 7.021 | | 72.933 | 3.504 | 14.015 | 7 | 72.933 |
| 6 | | 0.772 | 3.087 | 76.020 | - | - | | - | - | - | - | - |
| 7 | | 0.555 | 2.219 | 78.238 | - | - | | - | - | - | - | - |
| 8 | | 0.532 | 2.129 | 80.367 | - | - | | - | - | - | - | - |
| 9 | | 0.511 | 2.043 | 82.409 | - | - | | - | - | - | - | - |
| 10 | | 0.474 | 1.894 | 84.304 | - | - | | - | - | - | - | - |
| 11 | | 0.435 | 1.742 | 86.046 | - | - | | - | - | - | - | - |
| 12 | | 0.404 | 1.617 | 87.662 | - | - | | - | - | - | - | - |
| 13 | | 0.361 | 1.443 | 89.106 | - | - | | - | - | - | - | - |
| 14 | | 0.332 | 1.328 | 90.434 | - | - | | - | - | - | - | - |

| 15 | 0.310 | 1.239 | 91.673 | _ | _ | _ | _ | _ | _ |
|----|-------|-------|---------|---|---|---|---|---|---|
| 19 | 0.510 | 1.239 | 91.0/3 | | | | | | |
| 16 | 0.292 | 1.169 | 92.843 | - | - | - | - | - | - |
| 17 | 0.282 | 1.127 | 93.969 | - | - | - | - | - | - |
| 18 | 0.244 | 0.975 | 94.945 | - | - | - | - | - | - |
| 19 | 0.229 | 0.916 | 95.861 | - | - | - | - | - | - |
| 20 | 0.214 | 0.858 | 96.719 | - | - | - | - | - | - |
| 21 | 0.202 | 0.808 | 97.527 | - | - | - | - | - | - |
| 22 | 0.176 | 0.704 | 98.231 | - | - | - | - | - | - |
| 23 | 0.169 | 0.677 | 98.907 | - | - | - | - | - | - |
| 24 | 0.146 | 0.583 | 99.490 | - | - | - | - | - | - |
| 25 | 0.128 | 0.510 | 100.000 | - | - | - | - | - | - |

By checking the reliability and validity of the questionnaire data, we ensure the reliability and validity of the survey results. The reliability test results showed that Cronbach's Alpha coefficients of all dimensions were greater than 0.8, indicating that the questionnaire had good internal consistency. In the validity test, the correlation between variables was verified by KMO and Bartlett ball test, and the KMO value was 0.903, indicating that the research data was very suitable for extracting information and had good validity.

4. Result of Create the intergration of Blended Learning in Guqin art education in Guangxi, China

Through interviews with seven scholars, experts, performers, and students involved in the mixed-style teaching of Guqin (including Qian Wei, President of the Guangxi Guqin Culture Research Association), the sample covers groups from different ages, genders, educational levels, professional backgrounds, and regions. In the context of rapid development in information technology, experts generally agree that traditional face-to-face teaching models can no longer meet diverse learning needs. The application of information technology in art education, such as improving teaching efficiency, enriching teaching methods, broadening students horizons, promoting resource sharing, innovating teaching methods, personalizing education, and reforming educational evaluation in art education, all demonstrate the driving force of information technology in transforming educational models. Therefore, it is urgent for Guqin art education in Guangxi to introduce a blended learning model to adapt to modern educational demands. Under this model, the design and integration of Guqin art courses with teaching resources, combined with online and offline instructional guidance and assessment, provide students with comprehensive and in-depth learning experiences. Online components allow students to learn theoretical knowledge independently through instructional videos, complete online assignments, and participate in discussions. This not only offers flexibility in learning time but also greatly enriches learning resources. Offline components focus on practical exercises, concert observations, and face-to-face teacher guidance. Practical exercises enable students to convert online theoretical knowledge into practical skills; concert observations allow students to experience the unique charm of Guqin art firsthand. Face-toface teacher guidance ensures that the learning process fully meets individual needsDemand. Develop a blended

teaching model (Blended Learning Model for Guqin Art Education) based on the interview content, covering core elements, implementation framework and future development direction.

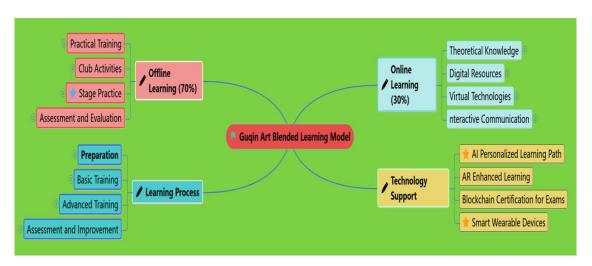


Table 7: Gugin Art Blended Learning Model

The model integrates the teaching practice experience of experts from interviews, forming a blended Guqin teaching system that combines online and offline, technology and culture, practice and theory. To ensure the effective operation of this blended learning model, it is essential to fully utilize technical tools such as online learning platforms (like DingTalk and WeChat), social media (such as WeChat and QQ), and video conferencing software (like Tencent Meeting). These tools not only conveniently provide learning resources and interactive platforms but also facilitate real-time communication and collaboration between teachers and students, optimize the teaching resource library, enhance the interactivity and quality of teaching videos, and introduce various innovative teaching methods and activities, thereby improving teaching effectiveness. It helps stimulate students interest in learning, optimize learning paths, and promote the modernization of Guqin culture dissemination. To achieve sustainable development of the blended learning model, respondents pointed out that increased technical support and financial investment are necessary to optimize technical equipment and network environments; at the same time, strengthening teacher training to improve their technical proficiency and teaching skills is also indispensable.

The current state of Guqin art education in Guangxi: As one of the important centers for the inheritance of Chinese Guqin art, traditional teaching has primarily been offline, emphasizing master-apprentice transmission and on-site guidance. In recent years, with the development of network technology, online elements have gradually been introduced into Guqin education in Guangxi, but overall, offline teaching remains dominant. Compared to blended learning models, the application of online teaching in Guqin education in Guangxi is relatively limited, especially in areas such as AI accompaniment and VR/AR technologies, which are not yet widespread. In contrast, blended learning models offer more advanced technological applications, providing students with richer learning resources and tools. In terms of offline teaching, Guqin education in Guangxi boasts a strong traditional advantage, particularly in master-apprentice transmission and on-site guidance, offering valuable practical opportunities for students. The offline teaching section of the document shares similarities with traditional teaching methods in Guangxi, but it is more diverse in activity formats (such as gatherings and workshops). Cultural integration: Guqin education in Guangxi also has distinct characteristics in cultural integration, especially in its connection with local ethnic minority

cultures. While the focus is on integrating with local ethnic minority cultures, the document mentions opera and traditional Chinese medicineThe integration of traditional culture is also distinctive, and each has its own merits.

Conclusion

This study demonstrates that blended learning (BL) significantly enhances Guqin art education in Guangxi, China, by improving student engagement (mean=3.61/5), learning satisfaction (mean=3.69/5), and skill acquisition through flexible online resources (e.g., VR/AI tools, MOOCs) and structured offline practices (e.g., workshops, Yaji gatherings). While BL effectively bridges cultural preservation and modern pedagogy, challenges such as technological adaptation (29.95% cited internet issues) and resource limitations (38.50%) necessitate institutional support for teacher training and infrastructure. The proposed 30:70 online-offline framework balances innovation with tradition, yet its scalability depends on addressing sample diversity, digital literacy gaps, and short-term assessment biases. Future research should explore AI-driven personalization, blockchain certification, and interdisciplinary approaches to refine standardized evaluation tools and ensure long-term efficacy across diverse cultural contexts.

References

- [1] Cai,Q.&Jin,Q.w., (2016). Into.roducing Intangible Cultural Heritage into the Classroom and Studies of the Practice in Regional Colleges Introducing Intangible Cultural Heritage into the Classroom and Studies of the Practice in Regional Colleges:International Conference on Arts, Design and Contemporary Education (ICADCE 2016)
- [2] Dong, C., & Wang, J.J. (2021). Research on the Integration of Jingdezhen Ceramic
- [3] "Intangible Cultural Heritage" into Curriculum Politics of Art Design Major in Colleges and Universities:International Journal of New Developments in Education, ISSN 26638169 Vol. 3, Issue 2: 2831, DOI: 10.25236/IJNDE.2021.030206
- [4] Li,J.L., (2022). Research on the Development of Intangible Cultural
- [5] Heritage Traditional Handicraft Education Inheritance and Socialization Inheritance:International Journal of Frontiers in Sociology ISSN 27066827 Vol. 4, Issue 5: 16, DOI: 10.25236/IJFS.2022.040501
- [6] Liu,F.,& Chen,J., (2020). Research on the Public Education System of Textile Intangible Heritage in Museums Taking the Ethnology Museum:SouthCentral University for Nationalities as an Example, Advances in Social Science, Education and Humanities Research, volume 490 Education, Language and Intercultural Communication (ELIC 2020)
- [7] NI,N., (2023). Practical Exploration of Ethnic Intangible Cultural Heritage theme in the Thematic Art Creation of College Students: Pacific International Journal, Vol. 6(2), 187190; 2023 ISSN (Print) 26638991, ISSN (Online) 26164825 1 DOI: 10.55014/pij.v6i2.379 https://rclss.com/index.php/pij
- [8] Susana Gonçalves (2011). Intangible culture, cooperation and intercultural dialogue among university Students:Intercultural Education,http://www.tandfonline.com/loi/ceji20
- [9] Wu,J., (2021). Inheritance and Application of Intangible Cultural Heritage in Higher Art Education: Advances in Social Science, Education and Humanities Research, volume 643 Proceedings of the 2021 Conference on Art and Design: Inheritance and Innovation

- [10] Yang,Y.Q., (2020). Exploration on the Path of Intangible Cultural Heritage Endowed Beautiful Rural Construction From the Perspective of Art Education —The case of Yunfu Stone Art :Advances in Social Science, Education and Humanities Research, volume 497 Proceedings of the 2nd International Conference on Literature, Art and Human Development (ICLAHD 2020)
- [11] Zhang, J., & Xie, Z. Y, & Zhang, H., & Yu, L., & He, D.Y., (2022). Study on the Value Fit and Practical Direction of Regional Intangible Cultural Heritage Integration Into Aesthetic Education in Colleges and Universities: International Journal of Social Science and Education Research Volume 5 Issue 3, 2022. ISSN: 2637-6067 DOI: 10.6918/IJOSSER.202203_5(3).0098
- [12] Zheng,Y.f.& Liu,X.L. (n.d.). Discussion on Two Intangible Cultural Heritage Inheritance Patterns: Journal of Humanities and Social Sciences Studies ISSN: 26637197 DOI: 10.32996/jhsss Journal Homepage: www.alkindipublisher.com/index.php/jhsss