



# Preservation and Transmission of Shaanxi Guzheng Musical Instruments: Challenges and Strategies for Cultural Sustainability

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## Abstract

This study explores and analyzes the current challenges in preserving and transmitting Shaanxi Guzheng musical instruments and proposes effective strategies for cultural sustainability. The Shaanxi Guzheng, a traditional Chinese zither, faces significant challenges due to modern influences such as globalization and the rise of digital technologies, declining interest among younger generations, insufficient emphasis on traditional repertoire within educational frameworks, and the pervasive influence of Western music. This research utilized a qualitative approach guided by the PRISMA framework, incorporating a comprehensive literature review and semi-structured interviews with key informants, including Guzheng players, educators, and cultural scholars. Data were analyzed using thematic analysis to identify common themes and patterns. The findings highlight significant obstacles, such as the influence of modernism and the diminishing cultural enthusiasm among younger generations, cultural erosion, and educational inconsistencies. To address these issues, the study proposes several strategies: enhancing educational programs by integrating traditional music into school curricula, leveraging modern technology through digital platforms and online archives, promoting cultural awareness via public performances and media campaigns, reviving the master-apprentice transmission model, and securing government and institutional support. These strategies aim to create a sustainable framework for preserving and transmitting Shaanxi Guzheng music, ensuring its continued relevance and vibrancy for future generations. The research also discusses how these strategies can serve as a global paradigm for the conservation of traditional musical instruments.

**Keywords:** Cultural Heritage, Cultural Sustainability, Music Education, Preservation Strategies, Shaanxi Guzheng, Traditional Chinese Music.

## Introduction

Shaanxi Guzheng musical instruments are significant in Chinese cultural heritage, embodying centuries of artistic evolution and regional characteristics. The Guzheng, a traditional Chinese zither, is renowned for its expressive melodies and rich historical background. Originating in the Shaanxi province, this instrument has played a crucial role in China's musical traditions, symbolizing the region's artistic and cultural ethos (1-4). However, the preservation and transmission of Shaanxi Guzheng face numerous challenges in contemporary society, particularly in the face of modernism, globalization, and technological advancements. In recent decades, modernism and globalization have led to increased exposure to Western musical influences, while technology has allowed Guzheng music to reach a

global audience through digital platforms. This research explores and analyzes the current challenges in preserving and transmitting Shaanxi Guzheng musical instruments and proposes effective strategies for cultural sustainability (5-9). The influence of technology, while expanding the reach of Guzheng music, has also brought challenges in maintaining its traditional forms. Online tutorials, virtual performances, and digital archives have made music more accessible, but these platforms also risk diluting its cultural significance by focusing on contemporary adaptations rather than traditional techniques. These modern advancements provide both opportunities and challenges in balancing innovation with cultural preservation. One of the primary challenges in pre serving Shaanxi Guzheng

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music is the younger generation's changing musical tastes and preferences. In recent years, young people have noticed a noticeable decline in interest in traditional musical forms, including the Guzheng (10–13). The rise of Western musical influences and the popularity of modern genres have overshadowed the traditional arts, gradually eroding the cultural significance of instruments like the Guzheng. This shift threatens the art form's continuity and risks the loss of the rich heritage and nuanced techniques passed down through generations. Addressing this issue requires a concerted effort to rekindle interest and appreciation for Shaanxi Guzheng music among the youth (14–16).

The cultural ramifications of this declining enthusiasm are significant. Without renewed interest among younger generations, there is a real risk that traditional Guzheng music could fade from both cultural memory and practice. This generational shift could result in a disconnect between the instrument's historical importance and its contemporary relevance, undermining efforts to preserve its legacy.

Another significant challenge is the lack of emphasis on traditional repertoire within the current educational framework. Many music institutions and educators focus on contemporary pieces and technically challenging compositions, often at the expense of traditional works (17,18). This trend is problematic because it diminishes the importance of Shaanxi Guzheng music's historical and cultural context. Traditional pieces, rich in cultural narratives and historical significance, are essential for understanding the instrument's evolution and role in Chinese culture (19–21). Without a balanced approach that includes traditional repertoire, the teaching and learning of Guzheng can become skewed, leading to a disconnection from its cultural roots (22–27).

Furthermore, Western music has profoundly impacted the development and perception of Shaanxi Guzheng music. While integrating diverse musical influences can lead to innovation and creativity, it also poses a risk of diluting the distinctiveness of traditional Guzheng music (28–31). Adopting Western techniques and styles often results in compositions lacking the unique tonal qualities and playing techniques that characterize the Guzheng (14, 32, 33). This Westernization of Guzheng music can lead to a homogenization of

musical expressions, thereby undermining the cultural identity of the instrument. It is crucial to balance embracing new influences and preserving the traditional elements that define Shaanxi Guzheng music (34–36).

This research also aims to highlight how the strategies developed for preserving Guzheng music can serve as a paradigm for addressing similar challenges in the conservation of traditional musical instruments worldwide. By creating a balanced approach that integrates modernization without compromising traditional values, this framework can be applied to other cultural preservation efforts across the globe.

This research proposes a multifaceted approach to address these challenges and ensure the cultural sustainability of Shaanxi Guzheng musical instruments. Firstly, there is a need for comprehensive educational programs that emphasize the importance of traditional repertoire alongside contemporary pieces. Such programs should be designed to engage young learners and cultivate a deep appreciation for the cultural heritage of the Guzheng. Secondly, fostering collaborations between educational institutions, cultural organizations, and media platforms can help promote Guzheng and make it more accessible to a broader audience (37,38). Finally, developing preservation mechanisms, such as digital archives and cultural festivals, can play a pivotal role in safeguarding the traditional knowledge and practices associated with Shaanxi Guzheng music. By implementing these strategies, it is possible to create a sustainable framework that supports the preservation and transmission of Shaanxi Guzheng musical instruments (39,40), ensuring their relevance and vibrancy for future generations.

## Methodology

A qualitative approach was adopted to achieve this objective, guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework. The PRISMA guidelines ensure a rigorous and transparent methodology for collecting, analyzing, and reporting qualitative data, which is essential for the reliability and validity of the research findings (41,42). The cultural sustainability approach employed in this study is adapted to emphasize the preservation of both musical and instrumental legacies. This method ensures the evaluation of Guzheng music's

sustainability not only by focusing on its transmission but also by highlighting the cultural heritage embedded in the instrument and its performance techniques.

**Data Sources and Search Strategy**

The research began with a comprehensive literature review using electronic databases such as Google Scholar, PubMed, Scopus, and the China National Knowledge Infrastructure (CNKI). The search terms included “Shaanxi Guzheng,” “Guzheng preservation,” “Guzheng transmission,” “Chinese traditional music,” “cultural sustainability,” and “musical heritage.” Additionally, manual searches of bibliographies

and consultations with experts in the field were conducted to identify further relevant studies. The search was confined to articles published in English and Chinese from 2000 to 2024.

**Inclusion and Exclusion Criteria**

To ensure the rigor and relevance of this study, specific inclusion and exclusion criteria were established to guide the selection of literature and data sources. These criteria were meticulously designed to capture studies that provide valuable insights into the preservation and transmission of Shaanxi Guzheng music while excluding those that do not meet the necessary methodological detail and relevance standards, as shown in Table 1.

**Table 1:** Inclusion and Exclusion Criteria

Type	Criteria
Inclusion	<ol style="list-style-type: none"> <li>1. Studies focusing on preservation and transmission.</li> <li>2. Articles discussing the challenges and strategies for the cultural sustainability of traditional Chinese musical instruments.</li> <li>3. Peer-reviewed journal articles, books, conference proceedings, and theses.</li> <li>4. Studies providing empirical data, case studies, or theoretical analyses.</li> </ol>
Exclusion	<ol style="list-style-type: none"> <li>1. Studies not directly related to Shaanxi Guzheng music.</li> <li>2. Articles lacking sufficient methodological details or empirical data.</li> <li>3. Publications not available in full text.</li> <li>4. Duplicate studies from different databases.</li> </ol>

**Data Extraction and PRISMA Flow Diagram**

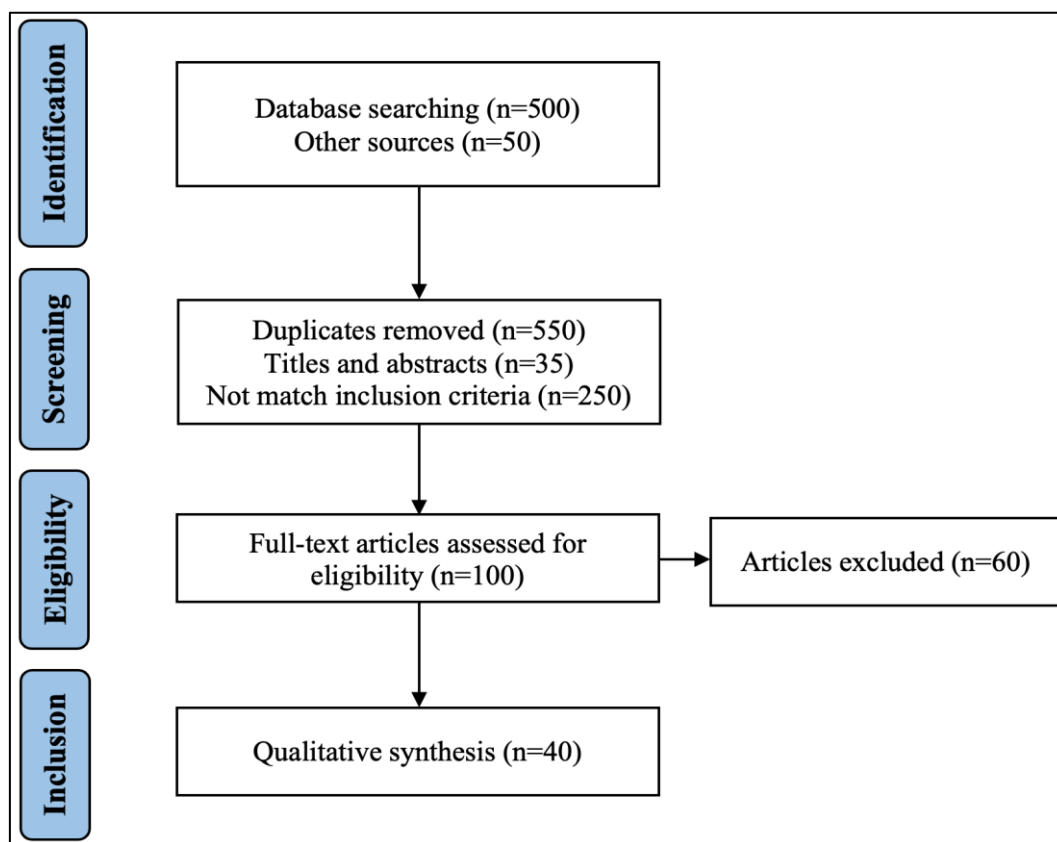
The search identified 500 articles, removing duplicates and resulting in 350 remaining. These were screened based on titles and abstracts, resulting in 100 articles for full-text review. Two independent reviewers assessed the texts to

reduce bias and ensure consistency. Discrepancies were resolved through discussion or consultation with a third reviewer. The PRISMA flow diagram, a crucial component in systematic reviews, visually represents identifying, screening, eligibility, and inclusion, ensuring transparency and replicability, as shown in Table 2.

**Table 2.** The Systematic Review Process as Described

Phase	Description
Identification	The initial phase involves thoroughly searching databases and other sources to identify relevant studies for the research objective. The total number of records is documented, and duplicate records are removed to ensure each study is considered only once in subsequent phases.
Screening	The screening phase is a preliminary review of identified records based on titles and abstracts, excluding irrelevant or non-compliant studies. This helps narrow the pool of studies to those more relevant and useful for the review.
Eligibility	The eligibility phase involves assessing the full texts of the remaining studies to determine if they meet inclusion criteria. Excluding studies lacking sufficient methodological details or empirical data or not available in full text ensures that only relevant and methodologically sound studies are included in the final review.

**Inclusion** The inclusion phase involves selecting studies that meet all inclusion criteria and have passed through previous phases. This final set of studies will be analyzed and synthesized to address the research objectives.



**Figure 1:** PRISMA flowchart showing final results

The PRISMA flow diagram is thus an essential tool in systematic reviews, providing a clear and concise summary of the study selection process. It enhances the transparency of the review and helps ensure that the process is systematic, rigorous, and reproducible, as shown in Figure 1.

The study established specific criteria to evaluate the efficacy of the proposed preservation measures. These criteria include the number of new students enrolling in Guzheng programs, the integration of traditional repertoire into educational curricula, the frequency and quality of public performances highlighting traditional techniques, and the development of digital archives for Guzheng music. Success will be measured by increased engagement in these areas, indicating the successful transmission and preservation of Guzheng music.

### **Selection of Key Informant and Research Tools**

Key informants, including prominent Guzheng

players, music educators, cultural scholars, and representatives from cultural preservation institutions, were chosen based on their extensive knowledge of the genre, involvement in its preservation, and recognition within the cultural and musical communities. The research tools used include semi-structured interviews, focus group discussions, and participant observations, which were used to gather detailed qualitative data. These methods gave a comprehensive understanding of the challenges and strategies for preserving Shaanxi Guzheng music.

### **Data Management and Analysis**

Data management involves organizing and categorizing the collected information for analysis. Audio recordings from interviews and focus group discussions were transcribed verbatim. Field notes from participant observations were also documented. Thematic analysis was employed to identify common themes and patterns within the data.

## Results and Discussion

This section presents the findings from the systematic review to explore and analyze the current challenges in preserving and transmitting Shaanxi Guzheng musical instruments and propose effective strategies for ensuring their cultural sustainability. The research results are organized according to key themes identified during the analysis of the selected studies.

### Challenges in Preservation and Transmission

The historical development of the Shaanxi Guzheng, from its origins in the Qin Dynasty to the present day, reveals significant changes in its shape, structure, performance materials, audience, and venues. This research examines these aspects across various historical periods, highlighting the instrument's evolution.

### Guzheng of the Qin Dynasty

The Qin Dynasty marked the initial development phase of the Guzheng. During this time, rapid socio-economic and cultural growth led to diversified musical forms, necessitating changes in the instrument's structure to accommodate richer musical expressions. The Guzheng of this era, typically made from bamboo with five strings, was highly favored by the royal family and spread to other countries, such as South Korea, due to economic and cultural exchanges. The instrument's shape during this period was similar to today's Guzheng, with a rounded surface and flat back. The Guzheng was commonly used in Shaanxi's folk sacrificial activities and entertainment celebrations in the Qin Dynasty. It was also prevalent in the court, as documented in the Yuefu (Music Bureau) of the Han Dynasty, where it was included in national poetry collections and musical performances. Notably, the Guzheng was one of seven instruments used in various traditional tunes, reflecting its importance in ancient Chinese music.

### Guzheng in the Tang Dynasty

The Tang Dynasty was a golden age for cultural and artistic development, including the Guzheng. This period saw the instrument become an essential part of court music, used extensively in large banquets and various musical compositions. The Guzheng was diversified and used in local, foreign,

and minority music genres. Literature from the Tang Dynasty, such as the "Old Book of Tang," documents the extensive use of the Guzheng alongside other instruments like the jade chime, harp, and pipa. Innovations during this period included the creation of the rolling zither and the Yunhe zither, named for their unique head shapes. Emperor Tang Ming's love for music led to the elevation of musicians' status and the use of the Guzheng in court and folk settings. After the An-Shi Rebellion, many court musicians were exiled to rural areas, promoting the development of folk Guzheng art.

### Guzheng in the Qing Dynasty

In the Qing Dynasty, the Guzheng underwent significant innovations, including expanding to fifteen and sixteen strings and technological advancements. This period saw the Guzheng integrating more closely with local opera and folk music, becoming a principal or accompaniment instrument in various musical forms such as opera, rap, and dance. The development of distinct regional styles, like the Shandong, Henan, and Zhejiang zither schools, began during this period. These styles reflected the gradual maturation and diversification of the Guzheng. The Qing Dynasty also saw the Guzheng's integration with Qin opera, establishing a strong connection between the instrument and regional operatic traditions. This laid the foundation for the later development of the Shaanxi Zheng school.

### Guzheng from the 1950s to the Present

The modern era of the Guzheng, particularly from the 1950s, saw significant changes. The instrument transitioned from oral traditions to academic and professional settings, evolving from 14 to 16 strings to the current 21 strings made of nylon. The 1930s marked the beginning of contemporary Guzheng music's development, with numerous outstanding composers and works emerging. Shaanxi Guzheng experienced a revival in the 1950s, led by dedicated local musicians. This period solidified the instrument's presence in academic institutions and folk traditions, ensuring its continuous development and adaptation to modern musical trends, as shown in Figure 2.

### The Current Status of Social Communication

The Shaanxi Guzheng, a traditional Chinese

instrument, has been promoted in various communities through community performances, highlighting its cultural significance. These events enrich residents' leisure time and spiritual lives and facilitate the dissemination of intangible cultural heritage. By increasing residents' awareness and appreciation of their cultural heritage, these performances encourage the protection and continuation of the Guzheng

tradition. In tourist attractions like Shaanxi Province, where the instrument is popular, performances serve as both a cultural and artistic feast and an effective means of heritage preservation. These performances attract large audiences, boosting local tourism and the economy while spreading the unique charm of the Shaanxi Guzheng nationwide, as shown in Figure 3.



**Figure 2:** The shape of the Guzheng in the 1950s



**Figure 3:** Shaanxi Guzheng scenic spot performance

The Zhuque Cup, the largest performance competition for the Shaanxi Guzheng, aims to elevate performance standards and enhance the instrument's influence. The event features solo and ensemble performances, providing a platform for Guzheng lovers to showcase their talents and engage with one another. Regular hosting of such competitions not only furthers the spread of Shaanxi's musical culture and the spirit of Guzheng art but also offers a learning opportunity for fans and students. Performing on stage helps students build enthusiasm, improve psychological resilience, and develop a bold personality. Competing allows students to identify their

strengths and weaknesses, fostering mutual learning and improvement. The Shaanxi Guzheng Exhibition Competition also provides a forum for teachers to exchange ideas and improve teaching methods, ultimately enhancing the quality of Guzheng education.

### **The Current Status of Educational Institutions**

At the 60th anniversary of Xi'an Conservatory of Music, the historical and academic development of the Shaanxi Guzheng was discussed, highlighting the role of key figures in reviving the ancient Qin Zheng by incorporating Shaanxi folk music, which rejuvenated the Shaanxi Guzheng tradition. The



importance of a collective and systematic approach to preserving the art form was emphasized, crediting the sustained efforts of educators and students over the decades. Since the establishment of the Guzheng major at Xi'an Conservatory of Music in 1956, the institution has achieved significant success in reviving the Qin Zheng. This success is attributed to the contributions of dedicated educators who have worked to spread this cultural heritage. The list of professional Guzheng teachers at Xi'an Conservatory of Music reflects a tradition of teachers who were once students at the same institution, underscoring a

continuous lineage of knowledge transmission. The grade distribution of students in the Guzheng club shows higher participation in grades 3 to 6, with the fourth grade having the most participants. This trend is attributed to older students' stronger cognitive and psychological development. However, many students are unfamiliar with the Shaanxi Guzheng School, and only a few know it. Students' musical preferences vary, with most favoring music adapted from popular songs, which aligns with their exposure to contemporary media, as shown in Figure 4.



**Figure 4:** Shaanxi Guzheng Middle School Teaching

Community teachers are pivotal in the quality of Guzheng education. Interviews reveal that teachers provide individual guidance during group classes, although time constraints and large class sizes limit detailed instruction. Teachers highlighted the need for more structured teaching plans and materials to ensure consistent and effective education. Guzheng classes often face interruptions due to school activities, reducing the effective teaching time. While teachers use fixed textbooks, a lack of unified teaching plans leads to inconsistent teaching outcomes. This underscores the necessity for a systematic and scientifically grounded Guzheng teaching framework to ensure high-quality education.

Guzheng music has the potential to converge with other traditional Chinese art forms, such as opera and dance, to enhance its cultural preservation. These interdisciplinary collaborations can help

broaden the audience for Guzheng music while maintaining its artistic integrity. For example, combining Guzheng performances with Chinese dance or opera may create a more immersive cultural experience, making the music more accessible and relevant to contemporary audiences while preserving its traditional roots.

### **Strategies for Ensuring Cultural Sustainability**

Various strategies have been identified to address the challenges of preserving and transmitting Shaanxi Guzheng musical instruments to ensure cultural sustainability. These strategies are rooted in enhancing education, leveraging modern technology, promoting cultural awareness, supporting traditional transmission models, securing government and institutional support, and providing economic incentives.

## **Enhancing Education and Training Programs**

Enhancing education and training programs is fundamental for preserving the Shaanxi Guzheng. Integrating traditional music into school curricula can foster a deeper understanding and appreciation among younger generations. This integration can be achieved through music classes, history lessons, and cultural studies programs that emphasize the significance of traditional music in Shaanxi's history and culture. Specialized music schools dedicated to traditional music can further enhance these efforts. These institutions can provide focused training in Guzheng performance and theory, ensuring students receive a comprehensive, high-quality education. Specialized schools can also serve as centers of excellence, where master musicians teach and inspire students, fostering a new generation of skilled Guzheng players.

Additionally, providing scholarships and funding for students interested in traditional music can alleviate financial barriers. Scholarships can be offered at various levels, ensuring financial constraints do not hinder the development of future Guzheng masters. Funding can also support the purchase of instruments and educational materials, making Guzheng education more accessible.

## **Utilizing Modern Technology**

Modern technology can play a pivotal role in preserving and transmitting traditional music. Digital platforms offer innovative solutions for teaching and performance, making Guzheng education more accessible and engaging. Online classes and tutorials can reach a global audience, allowing students from different regions to learn about the Shaanxi Guzheng. These platforms provide interactive and flexible learning opportunities, catering to diverse learners. Creating online archives of musical scores and recordings is another crucial aspect. These archives can serve as valuable resources for students, researchers, and enthusiasts, preserving the rich heritage of Guzheng music. Digital archives can include historical recordings, contemporary performances, instructional videos, and annotated musical scores, offering a comprehensive repository of Guzheng knowledge. Such resources help bridge the gap between generations, ensuring traditional music remains relevant and accessible.

Moreover, social media and other digital communication tools can promote Guzheng performances and events, attracting new audiences and fostering a global appreciation for this traditional instrument. Live-streaming concerts and virtual performances can bring the beauty of Guzheng music to a wider audience, transcending geographical boundaries.

## **Promoting Cultural Awareness**

Cultural awareness is vital for generating interest and appreciation for the Shaanxi Guzheng. Public performances, festivals, and media campaigns can highlight the cultural and historical significance of the instrument, attracting new audiences and encouraging younger generations to engage with traditional music. Public performances in parks, community centers, and cultural venues can make Guzheng music more accessible to the general public. These events can showcase the instrument's versatility and beauty, captivating audiences and fostering a deeper appreciation for traditional music. Festivals dedicated to traditional music and cultural heritage can provide platforms for Guzheng performers to share their art with larger audiences, celebrating the rich musical traditions of Shaanxi.

Media campaigns can play a crucial role in raising cultural awareness. Television programs, documentaries, and radio shows can explore the history and significance of the Guzheng, reaching a broad audience and educating the public about its cultural importance. Social media campaigns can engage younger audiences, using visual and interactive content to capture their interest and inspire them to learn more about traditional music. Educational programs and workshops in schools and communities can also promote cultural awareness. These programs can involve hands-on activities, demonstrations, and interactive sessions, allowing participants to experience the Guzheng firsthand and develop a personal connection with the instrument.

## **Supporting Master-Apprentice Relationships**

Reviving the master-apprentice transmission model is an effective strategy for preserving the authenticity of traditional Guzheng music. Experienced musicians mentor young learners in this model, directly passing down traditional techniques and styles. This approach ensures that the nuances and subtleties of Guzheng playing are



preserved accurately and authentically. Master-apprentice relationships can be formalized through apprenticeships, mentorship programs, and music conservatories. These programs can pair young students with master musicians, providing personalized instruction and guidance. Apprenticeships can involve intensive training sessions, regular practice, and performance opportunities, allowing students to develop their skills under the tutelage of experienced mentors. These relationships can also foster strong intergenerational bonds within the musical community, creating a supportive network of musicians dedicated to preserving and promoting traditional music. By learning directly from masters, students can gain a deeper understanding of the cultural context and historical significance of the Guzheng, ensuring this knowledge is passed down to future generations.

### **Government and Institutional Support**

Government and institutional support are critical for providing the necessary resources and infrastructure to preserve traditional music. Funding for research and preservation projects can ensure that valuable cultural assets are protected and studied. Government grants and subsidies can support academic research on the Guzheng, enabling scholars to explore its history, development, and cultural impact. Recognition and protection of cultural heritage sites where the Guzheng has historical significance can further bolster preservation efforts. These sites can be designated as cultural heritage landmarks, ensuring their protection and promoting their cultural significance to the public. Museums and cultural centers can host exhibitions and educational programs that highlight the history and artistry of the Guzheng, providing valuable resources for students, researchers, and visitors. Creating policies that promote the arts and support traditional musicians is also essential. Government policies can include funding for music education programs, tax incentives for cultural organizations, and initiatives to promote traditional music in public spaces. By creating a supportive environment for traditional musicians, the government and institutions can ensure the long-term sustainability of the Guzheng.

### **Economic Incentives**

Providing economic incentives for musicians specializing in traditional music can help mitigate

financial barriers and support their careers. Grants and performance fees can provide much-needed financial support, enabling musicians to focus on their art and pursue their passion without financial constraints. Opportunities for international collaborations and tours can expose musicians to global audiences, fostering cultural exchange and enhancing the global appreciation for the Shaanxi Guzheng. International collaborations can include joint performances, workshops, and cultural festivals, allowing musicians to share their art with diverse audiences and learn from different musical traditions. Economic incentives can also include funding for recording projects, allowing musicians to produce high-quality recordings of their performances and compositions. These recordings can serve as valuable cultural assets, preserving the rich heritage of the Guzheng and making it accessible to a broader audience.

Media and technology play an increasingly important role in the preservation of traditional music. Digital archiving and online tutorials have made Guzheng music accessible to a global audience. Virtual performances have not only enabled broader dissemination but also opened new avenues for collaboration and innovation. However, while these platforms offer significant opportunities for preservation, they also present challenges, as overreliance on technology could lead to the loss of nuanced traditional techniques. Thus, it is essential to find a balance between leveraging media for accessibility and maintaining the authenticity of Guzheng music.

A critical examination of prior preservation efforts for traditional instruments, both within China and internationally, reveals mixed results. In China, government-backed initiatives have focused on large-scale cultural festivals and institutional reforms, which have raised awareness but often lack deep community involvement. Internationally, community-based models, such as those found in Japan and Korea, have shown greater success by directly involving local musicians and educators in the preservation process. This study proposes a hybrid model, combining government support with community-led initiatives, to ensure both broad cultural awareness and local transmission of Guzheng music.

The findings from this study are consistent with previous research emphasizing the importance of

traditional music in cultural heritage and the challenges it faces in modern times. Tang found that the decline in interest among younger generations in traditional musical forms (1), attributing this trend to the increasing influence of Western music and modern genres. This study confirms these findings, noting a significant decline in interest in Shaanxi Guzheng music among young people, threatening this art form's continuity.

Furthermore, the research aligns with previous studies that stress the importance of incorporating traditional repertoire into music education. Emphasize the need for a balanced educational approach that includes both traditional and contemporary pieces to maintain the cultural significance of traditional music (2, 3). This study echoes these sentiments, revealing that many music institutions and educators prioritize contemporary compositions over traditional works, leading to a disconnection from the cultural roots of Shaanxi Guzheng music.

The influence of Western music on the perception and development of traditional Chinese music has also been well documented. The risk of diluting traditional music's distinctiveness through Western techniques and styles (6). This research supports this view, highlighting the homogenization of Guzheng music due to the integration of Western musical elements, which undermines the instrument's unique cultural identity.

The current social communication status of the Shaanxi Guzheng reveals both positive and negative aspects. Community performances and tourist attractions have been crucial in promoting the Guzheng and increasing cultural awareness (Figure 3). However, these efforts are often insufficient to counter the broader trend of declining interest among younger generations. The Zhuque Cup and other performance competitions have successfully elevated performance standards and enhanced the instrument's influence. Still, more consistent and widespread efforts are needed to sustain this momentum.

Educational institutions play a vital role in preserving and transmitting Guzheng music. The Xi'an Conservatory of Music's success in reviving the Qin Zheng highlights the importance of a systematic and collective approach to education. However, the study reveals significant gaps in the

current educational framework, including a lack of emphasis on traditional repertoire, inconsistent teaching plans, and limited effective teaching time due to school activities (Figure 4).

The strategies proposed in this study are consistent with the theoretical principles of cultural sustainability and previous research findings. Enhancing education and training programs is fundamental to preserving the Shaanxi Guzheng. Integrating traditional music into school curricula and providing scholarships and funding for students interested in traditional music can foster a deeper understanding and appreciation among younger generations (24).

Utilizing modern technology is another critical strategy. Digital platforms offer innovative solutions for teaching and performance, making Guzheng education more accessible and engaging. Online archives of musical scores and recordings can serve as valuable resources for students, researchers, and enthusiasts, preserving the rich heritage of Guzheng music (6, 37).

Promoting cultural awareness through public performances, festivals, and media campaigns can generate interest and appreciation for the Shaanxi Guzheng. This approach aligns with the findings of Hong and Wu (5), who emphasize the importance of cultural awareness in preserving traditional music. Reviving the master-apprentice transmission model can ensure the authenticity of traditional Guzheng music. This approach, supported by previous research, emphasizes the importance of direct mentorship in preserving the nuances and subtleties of traditional playing techniques (27). Government and institutional support are crucial for providing resources and infrastructure to preserve traditional music. This study confirms the findings of Lee (39) and Ma and Chen (40), who highlight the importance of government policies and funding in supporting cultural preservation efforts.

## Conclusion

The historical development of the Guzheng, from its origins in the Qin Dynasty to its modern form, highlights the instrument's evolution and the ongoing challenges in maintaining its traditional essence. The study revealed that while community performances and educational initiatives have contributed to raising cultural awareness, these efforts are insufficient to counteract the broader trends of cultural erosion. Additionally,

educational institutions' inconsistent teaching plans and limited effective teaching time exacerbate these challenges.

To address these issues, the research proposes several strategies. Enhancing education and training programs by integrating traditional music into school curricula and providing scholarships can foster a deeper appreciation among younger generations. Utilizing modern technology, such as digital platforms and online archives, can make Guzheng education more accessible and engaging. Promoting cultural awareness through public performances, festivals, and media campaigns can attract new audiences. Reviving the master-apprentice transmission model can ensure the authenticity of traditional Guzheng music, while government and institutional support are crucial for providing necessary resources and infrastructure.

By implementing these strategies, it is possible to create a sustainable framework that supports the preservation and transmission of Shaanxi Guzheng musical instruments. This approach will help ensure the relevance and vibrancy of this cultural heritage for future generations, maintaining its significance within the broader tapestry of Chinese musical traditions.

### Abbreviations

CNKI: China National Knowledge Infrastructure; PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

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### Author Contributions

All authors contributed to the study's conception and design. Conceptualization, methodology, data collection, formal analysis, writing, and original draft preparation were performed by Ying Huang. Literature review, data collection, writing, editing, visualization, and funding acquisition were conducted by Sayam Chuangprakhon and Piyapun Santaveesuk. All authors read and commented on the manuscript.

### Conflict of Interest

The authors declare that there is no conflict of interest.

### Ethics Approval

Informed consent was obtained from the participants before the data collection.

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