

Lusheng's Preservation and Transmission of Knowledge in Qiandongnan Miao and Dong Autonomous Prefecture, Guizhou Province, China

Qin Chen¹ & Weerayut Seekhunlio¹

¹ College of Music, Mahasarakham University, Thailand

Correspondence: Weerayut Seekhunlio, College of Music, Mahasarakham University, Mahasarakham, 44150, Thailand.

Received: November 20, 2023

Accepted: December 29, 2023

Online Published: March 28, 2024

doi:10.5539/ies.v17n2p52

URL: <https://doi.org/10.5539/ies.v17n2p52>

Abstract

The study on the preservation and transmission of Lusheng knowledge in Qiandongnan Miao and Dong Autonomous Prefecture, Guizhou Province, China, yields important findings. It begins by detailing the traditional 6-pipe Lusheng's production process, stressing its employment on numerous cultural occasions but its limited applicability for solo performances owing to its narrow tonal range. Throughout, regional differences in Lusheng scale configurations contribute to a variety of musical styles. Mr. Dong Dan Gan is a key figure in the growth of Lusheng instruments. It starts with the 8-pipe Lusheng, then moves on to the 11-pipe version, which expands tonal potential. Subsequent variations, such as the 12-pipe, 13-pipe, 14-pipe, 16-pipe, 19-pipe, and ground-breaking 18-pipe, 21-tone Lusheng, increased adaptability and melodic possibilities even more. Moreover, Lusheng has a wider tone range. These advancements accommodate varied musical traditions and help to preserve and disseminate Lusheng knowledge, strengthening the cultural legacy. And efforts have enhanced Lusheng music greatly, aiding its transmission and cultural continuation.

Keywords: preservation, transmission, knowledge, Lusheng, Guizhou, music education

1. Introduction

The Lusheng holds significant popularity as a free-reed pneumatic musical instrument within the ethnic minority communities of Southwest China, encompassing the Miao, Dong, Shui, Gelao, Yao, Zhuang, and Yi groups. The Lusheng comes in multiple dimensions, with bamboo pipes that fit into a container made of cedar wood. Air introduced into the bucket via finger holes located on the pipes causes the reeds to vibrate. The traditional Lusheng instruments have the capacity to generate a range of 3 to 6 distinct tones; however, contemporary iterations have been enhanced to produce an expanded repertoire of up to 21 tones. Furthermore, these current variants can be transposed into various keys, enhancing their versatility and adaptability. Players manipulate finger holes, breath control, and hand positioning to produce harmonious combinations of tones, making it well-suited for both individual and group renditions during festive occasions and ceremonial gatherings (General Editorial Committee of Encyclopedia of China, 1989).

The Lusheng is a type of reed wind instrument that is frequently employed by many ethnic minorities, like the Miao, Dong, Shui, Yao, Gelao, and others. Many ethnic minorities, such as the Miao, Dong, Shui, Yao, Gelao, and others, primarily concentrate the popularity of this phenomenon in the provinces of Guizhou, Guangxi, Yunnan, and Sichuan, among other locations. The Lusheng exhibits variations in its physical structure, acoustic characteristics, playing techniques, and musical repertoire across several geographical regions. For numerous millennia, ethnic minorities have embraced and perpetuated a prevailing practice that possesses an extensive lineage, intimately intertwined with the ethical principles, moral traditions, and societal norms of these ethnic groups. The Lusheng is not solely a musical instrument; rather, it encompasses a fusion of dance, music, lyrics, and various cultural expressions. It has assumed a distinctive role in documenting the historical narrative of the Miao people, showcasing the distinct cultural heritage of this ethnic minority, and playing a significant part in the amalgamation of cultural identity and values (Meng, 2016; Erjian & Chuangprakhon, 2023).

The design of the Lusheng has undergone continual evolution in response to the development of civilization and the passage of time. During the period spanning from the late 1950s to the early 1960s, a collective of individuals

with a keen interest in Lusheng, a traditional musical instrument, in Guizhou Province engaged in a collaborative effort with local craftsmen specializing in the production of traditional Lusheng instruments. The objective of this collaboration was to investigate and innovate upon the existing six-pipe Lusheng design, resulting in the creation of alternative variations such as the 15-pipe, 18-pipe, and even 28-pipe iterations. With these improvements, the limitations of the first Lusheng instrument were removed, allowing it to play melodic sequences and switch between tones. This ultimately led to the creation of the chromatic scale Lusheng variant. The updated Lusheng instruments possess a notable characteristic wherein they exhibit enhanced ease in the manipulation of tunes and keys. This attribute renders them more expressive and fascinating in comparison to their conventional folk Lusheng counterparts. Furthermore, apart from their conventional usage in traditional folk Lusheng music, these adapted instruments possess the ability to perform intricate Lusheng compositions and even render renowned foreign melodies. The efficacy of these enhancements made to the Lusheng instrument has prompted aficionados to develop several genres of Lusheng music, encompassing solo performances, ensemble compositions, and orchestral arrangements (Zhao & Yang, 2013).

The Miao people engage in a rich social life characterized by the observance of a multitude of folk festivals throughout the year. These festivals represent the Miao community's diverse ethnic traditions, distributed across different regions of Guizhou. The Maple Lusheng Festival in Huangping County, which takes place on the initial day of the first lunar month, and the Treading Song Hall Lusheng Festival in Liping County, which occurs on the fifteenth day of the first lunar month, are two events designated with the appellation of the Lusheng instrument. Furthermore, it is worth mentioning the Lusheng gathering that takes place in Congjiang County on the 15th day of the lunar calendar's eighth month, alongside various other events. Lusheng playing frequently constitutes a prominent element within these celebrations. Lusheng music is performed during the Eating the New Festival, which is observed on the eighth day of the fourth lunar month. In addition, it is worth noting that minor ceremonial occasions such as marriages and house-building ceremonies often feature Lusheng music performances, contributing to the pervasive integration of Lusheng music within other facets of Miao culture (Wu, 2021).

Based on the aforementioned facts, it seems that there has been a somewhat restricted degree of systematic investigation. Notwithstanding the fact that the Lusheng performance was officially recognized and included in the national intangible cultural asset protection list in 2008. The Miao Lusheng has experienced significant advancements in its growth since the 1950s, attributed to the contributions of Mr. Dong Dan Gan, a notable musician. In order to fill this void in the existing body of research, the researcher intends to undertake a comprehensive investigation of the Lusheng musical instrument. The objective of this study is to furnish an all-encompassing resource for forthcoming scholars and to preserve and transmit knowledge of the Lusheng musical instrument within its cultural milieu.

2. Research Objectives

Research Objectives is to study the preservation and transmission of knowledge of Lusheng in Qiandongnan Miao and Dong Autonomous Prefecture, Guizhou Province, China.

3. Literature Review

3.1 *The General Knowledge of Lusheng in China*

The Lusheng, an ancient reed pipe and sound aerophone instrument originating from southern China, holds significant cultural significance among numerous ethnic minorities such as the Miao, Dong, Shui, Yao, She, Yi, Lahu, and others. The geographical distribution of this phenomenon encompasses various provinces in China, including Guizhou, Sichuan, Yunnan, Guangxi, and Hunan. In addition, Hmong people residing in Southeast Asian countries such as Laos, Vietnam, Myanmar, and Thailand also observe this phenomenon. The Lusheng, originating from the migratory past of the Miao ethnic group, has undergone a transformative process to emerge as a highly esteemed emblem of their cultural heritage. This musical instrument has a dual purpose, functioning as a means of documenting and observing their extensive historical narrative and customary practices. The historical documentation, originating from the Yin and Shang Dynasties, provides evidence of the existence and development of the Sheng family of musical instruments, including the Lusheng. Additionally, records from the Ming Dynasty offer further support for the instrument's lasting significance within the framework of Chinese cultural heritage (Meng, 2016; Hou & Seekhunlio, 2023).

There are three main groups of Chinese Lusheng instruments, primarily distinguished by their respective angles and shapes. The first category is known as acute-angle Lusheng, characterized by an angle of less than 90 degrees between the sheng bucket and the sheng Miao. Typically, this angle is situated within the range of 40 to 60 degrees. Two or three resonance tubes are strategically positioned near the upper extremity of the sound hole in the Lusheng instruments. The following categorization refers to the right-angle Lusheng, which is distinguished by the

arrangement of the sheng tube and sheng bucket at a 90-degree angle. The bulk of Lusheng instruments in circulation do not possess resonance tubes. However, it is worth noting that specific variations of these instruments may include a gourd or horn at the higher end in order to produce resonance effects. The third category is known as the obtuse-angle Lusheng, which is designated as such when the angle created between the bucket and the pipe exceeds 90 degrees. The inclusion of a gourd-shaped resonator situated at the upper extremity distinguishes Lusheng instruments featuring obtuse angles. These instruments can be arranged with sets of five pipes that generate six, seven, eight tones, and so on. The categorization of Lusheng instruments plays a crucial role in the preservation, transmission, and knowledge of this customary musical legacy (Yang, 2019).

3.2 History of Chinese Lusheng

The historical trajectory of the Sheng instrument in China encompasses a significant temporal expanse, reflecting the intricate development of Chinese culture and society over millennia. The interconnection between music and ritual emerged during the Yin Shang Dynasty, with the Sheng instrument making its initial appearances in oracle bone inscriptions. The incorporation of the Sheng instrument into court music during the Western Zhou Dynasty established a ritual and music system that significantly impacted both the aristocracy and the wider population. During the Eastern Zhou Dynasty, there were significant indications of the development of Sheng designs, as evidenced by several artifacts. During the Han Dynasty and Three Kingdoms Period, the Sheng gained legendary meaning, while the Sui and Tang Dynasties experienced cultural affluence and the assimilation of ethnic music. The Song Dynasty facilitated notable economic advancements and fostered the proliferation of folk music, hence playing a significant role in the development of the Sheng. The Sheng family enjoyed significant enrichment during the Ming and Qing Dynasties, when the instrument thrived in both courtly and popular contexts. The Lusheng, a traditional musical instrument, held significant cultural value in both the Republic of China and the People's Republic of China. In the former, it was closely associated with cultural ceremonies, while in the latter, it continued to be utilized in diverse festivities and witnessed the evolution of multi-tube Lusheng instruments. The Sheng has consistently served as a significant emblem of cultural perpetuity and vibrancy throughout Chinese society (Yang, 2019; Yu, 2013; Chen, 1981; Dong 2003; Fan, 2006).

3.3 Types of Chinese Lusheng

The Lusheng is a traditional musical instrument in China that encompasses a variety of forms, namely the acute angle, right angle, and obtuse angle Lusheng. The acute angle Lusheng encompasses a range of distinct types, such as Lusheng and Sheng Tube, Sidishui Lusheng, Gaopai Lusheng, Muzi Lusheng, Zimei Lusheng, Gongmu Lusheng, Big Lusheng, Dong Lusheng, and Yao Lusheng. These variants possess unique characteristics and distribute throughout different regions. The category of right angle Lusheng comprises three distinct types: bent pipe Lusheng, Hulusheng, and six-pipe right angle Lusheng. The physical structure and the regions where these types are predominantly found differ. The Lusheng instrument, specifically the Five-Pipe Lusheng, showcases the characteristic of an obtuse angle, which is defined as an angle above 90 degrees, between its components. The aforementioned musical instruments hold considerable importance within the context of Chinese culture and music, effectively showcasing the extensive array of musical traditions prevalent in various places (Zhao & Yang, 2013; Wang, 2010; Xu, 2022).

3.4 Research Theory

In this study, researchers plan to conduct an in-depth exploration of the preservation and transmission of Lusheng, a traditional musical instrument. The proposed research aims to adopt a comprehensive methodology that incorporates various perspectives from the disciplines of ethnomusicology theory and musical acoustics theory. This approach seeks to achieve a comprehensive understanding of the cultural importance and acoustic characteristics of the instrument under investigation. The proposed research technique will encompass a comprehensive approach that includes substantial fieldwork. This will entail immersing researchers in the areas where Lusheng is prevalent, conducting interviews, and engaging in firsthand experiences. Through an examination of the complex interrelationships of music, geography, history, and culture, the researchers aim to elucidate significant perspectives on the function of Lusheng in Qiandongnan Miao and Dong Autonomous Prefecture, Guizhou Province, China. Furthermore, the investigation will thoroughly examine the complex elements that contribute to the distinctive sound generation of the instrument, thereby illuminating the acoustic subtleties that characterize Lusheng music. This interdisciplinary inquiry holds the potential to generate valuable insights, enhancing our comprehension of the cultural and musical history of Lusheng (Yu, 1997; Yang, 2011; Rice; 2010; Gough, 2014; Yue & Seekhunlio, 2023).

4. Methodology

The research methodology for this extensive examination of the preservation and transmission of Lusheng, a

traditional musical instrument, consists of several critical steps:

Step 1. Literature Review: Begin the investigation by undertaking an exhaustive review of existing resources on Lusheng, including its cultural significance, historical context, and musical qualities. This first stage gives a fundamental understanding of the instrument while revealing gaps in existing information.

Step 2. Data Collecting: Gather a wide range of scholarly literature, both historical and contemporary, including traditional Chinese music theory and ethnomusicology theory.

Step 3. Fieldwork: Immerse the researchers in locations rich in Lusheng culture, with a focus on the Qiandongnan Miao and Dong Autonomous Prefectures in Guizhou Province, China. This immersive method comprises active participation in local communities, participation in cultural events, and encounters with Lusheng musicians and community members.

Step 4. Interviews: Conduct structured interviews with individuals knowledgeable about Lusheng music, instrument workmanship key informant Mr. Dong Dan Gan, and community members adept in playing the instrument. These interviews will gather qualitative information about the cultural milieu, customary practices, and the transmission of Lusheng music.

Step 5. Audio and Video Documentation: Make audio and video recordings of Lusheng performances and rehearsals. This documentation is vital original source material for assessing the instrument's acoustic properties and the corresponding musical styles.

Step 6. Participant Observation: Engage in participant observation during Lusheng performances, ceremonies, and social activities. This type of observation records the instrument's use in various cultural contexts and its significance in local traditions.

Step 7. Reporting and Documentation: Thoroughly document all study findings, interviews, audiovisual resources, and analytical outputs to develop a comprehensive study report or academic essay that expands our understanding of Lusheng's culture, preservation, and transmission.

5. Results

The results of Lusheng's preservation and transmission of knowledge in Qiandongnan Miao and Dong Autonomous Prefecture, Guizhou Province, China, are as follows:

5.1 Traditional 6-Pipe Lusheng

The fabrication process of the traditional 6-pipe Lusheng in the Qiandongnan region follows a prescribed technique. Craftsmen carefully shape a segment of Chinese fir timber to resemble an avocado's form. This object is then bisected along its lateral axis, meticulously excavated based on a designated template, and carefully reassembled using adhesive to restore its original shape. Bamboo pipes are inserted into the anterior region at marked locations, with slender bamboo strips added to prevent fractures. To enable mouth-based play, a 10-centimeter bamboo pipe segment is attached.

In the local context, the bamboo pipes, known as Bai Kuzhu, have a copper reed placed at a specific location and a small aperture for sound, manipulable by the fingers. Traditionally, the Lusheng comprises six sound pipes, but the specific number and length of these pipes may vary. To enhance tonal diversity and instrument preservation, musicians outfit some sound tubes with slightly larger bamboo tubes or bamboo shot shells at their upper ends, serving as resonance tubes to amplify the instrument's auditory depth.

The sonic configuration of the traditional 6-pipe Lusheng varies across different counties within the Qiandongnan Miao and Dong Autonomous Prefectures, Guizhou Province, China. Scale levels determine the distinct sound arrangement in each county, playing a crucial role in transmitting Lusheng music knowledge and leading to the emergence of various Sheng pipe modes.

The traditional 6-pipe Lusheng is integral to various cultural events throughout the Qiandongnan region, including Lusheng Festivals, Miao Nian Festivals, Sacrifice Ceremonies, and related occasions. However, its limited vocal range of six tones and volume typically preclude solo performances. Instead, Lusheng ensembles commonly feature multiple instruments converging to create cohesive musical experiences.

In the Qiandongnan Miao and Dong Autonomous Region of Guizhou Province, China, two distinct scale arrangements are frequently observed in traditional 6-pipe Lusheng music. The use of varied scale arrangements enhances the instrument's cultural complexity, significance, and transmission of traditional Lusheng knowledge and practices (Figure 1 and 2).

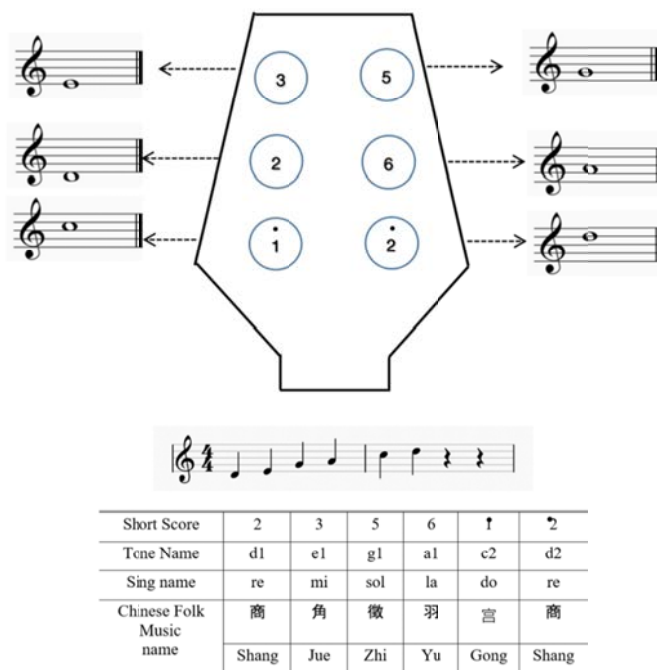


Figure 1. Musical note position of traditional 6-pipe Lusheng in “Re” mode (Source: Qin Chen)



Figure 2. Traditional 6-Pipe Lusheng (Source: Qin Chen)

5.2 The Evolution of Lusheng Instruments and the Preservation of Musical Knowledge

5.2.1 Enhancing the Potential of Lusheng for the Conservation and Dissemination of Knowledge

In the year 1956, Mr. Dong Dan Gan undertook a noteworthy endeavor to augment the capacities of the conventional Lusheng musical instrument, with the objective of making a valuable contribution towards its conservation and dissemination of information. The motivation for this undertaking emerged due to the constraints of the traditional 6-pipe Lusheng instrument, which was capable of generating only six unique tones. The

aforementioned limitations impeded the instrument's capacity to execute a wide range of musical pieces, particularly those of a contemporary nature, hence diminishing its suitability for solo presentations. Mr. Dong Dan Gan's primary interest revolved around the 6-pipe Lusheng, a frequently seen musical instrument in Danzhai County, located in Guizhou Province, China.

5.2.2 The Emergence of the 8-Pipe Lusheng and the Expansion of Knowledge

Mr. Dong Dan Gan's initial discovery resulted in the creation of an octagonal Lusheng instrument with eight pipes, significantly expanding its tone range and musical capabilities. The aforementioned modification not only improved the musical instrument but also played a vital role in the conservation and dissemination of Lusheng knowledge. The inclusion of MI and SOL tones, commonly found in the "Re" mode of the pentatonic scale, enhanced the musical functionality of the gadget.

5.2.3 Progressing towards the 11-Pipe Lusheng and Safeguarding Musical Traditions

Although the 8-pipe Lusheng demonstrated notable advancements, its efficacy remains constrained when examined within the framework of the heptatonic scale. Mr. Dong Dan Gan devised the 11-pipe Lusheng as a reaction, incorporating three supplementary pipes into its design. The introduction of these novel pipes incorporated the addition of the XI note and two FA notes, signifying a shift from the pentatonic to the heptatonic scale. The aforementioned alteration not only enhanced the instrument's functionalities but also contributed to the preservation and transmission of traditional Lusheng music knowledge by accommodating a wider range of musical genres and compositions.

5.2.4 Customizing Lusheng for Varied Regions and Facilitating Cultural Continuity

Mr. Dong Dan Gan has recognized the diverse musical traditions and preferences that exist among the different counties located within the Qiandongnan Miao and Dong Autonomous Prefectures of Guizhou Province. The author conducted a thorough inquiry in order to gain universal acceptance of his innovative Lusheng designs among musicians from various locations. Throughout this analysis, the researcher uncovered a fascinating discovery regarding the intervals observed in the first, third, fourth, and sixth pipes of the re-mode, sol-mode, and la-mode Lushengs. Using this new knowledge, he combined the pipe configurations obtained from the three previously stated tunings. Consequently, the advancement of an 11-pipe Lusheng instrument has increased its adaptability to a wider range of musical styles. This advancement played a crucial role in protecting and preserving the various Lusheng cultures.

5.2.5 Enhancing the 11-Pipe Lusheng and Advancing Musical Scholarship

In his ongoing endeavor to develop musical instruments, Mr. Dong Dan Gan proceeded to implement additional adjustments. The author specifically discussed the discrepancy between the lengths of the Xi-tube and the Do-tube. The individual in question adhered to the established rules of traditional Lusheng workmanship and exchanged the placements of the aforementioned two tubes, resulting in the creation of an alternative iteration of the 11-pipe Lusheng. The aforementioned improvements not only served to broaden the tonal capabilities of the instrument but also contributed to the advancement of understanding in the field of Lusheng construction and tuning.

5.2.6 Introduction of the 12-Pipe Lusheng and the Dissemination of Knowledge

Recognizing the notable importance of the 11-pipe Lusheng as a noteworthy accomplishment, Mr. Dong Dan Gan endeavored to investigate more expansions in order to surpass its fundamental constraints. The proposed approach involved integrating the LA note into the existing 11-pipe Lusheng instrument, resulting in the emergence of a 12-pipe Lusheng variation. This novel iteration of the instrument not only facilitated the execution of many musical modes but also offered improved versatility. The proliferation of this information expanded the comprehension of Lusheng's versatility in diverse musical settings.

5.2.7 The Expedition Towards the 13-Pipe Lusheng and its Cultural Legacy

Mr. Dong Dan Gan developed the 13-pipe Lusheng to enhance the tonal range. The main aim of this iteration was to integrate the ring finger as an additional digit for the purpose of playing, thus contributing to the preservation of the Lusheng music tradition. In order to accomplish this objective, Mr. Dong Dan Gan implemented the integration of a DO pipe between the RE and LA pipes, thereby yielding a musical instrument characterized by an expanded tone spectrum and novel avenues for expressive performance approaches.

5.2.8 The Emergence of the 14-Pipe Lusheng and the Evolution of Knowledge

Motivated by the aspiration to expand the functionalities of the 13-pipe Lusheng, Mr. Dong Dan Gan endeavored to augment its scope. The incorporation of an additional LA-pipe facilitated the progression towards the creation of the 14-pipe Lusheng. The incorporation of this design greatly enhanced the instrument's functionalities, rendering

it appropriate for solo performances and simplifying the process of transposing to meet the demands of a seven-tone scale. The advancement of Lusheng knowledge has facilitated musicians in their exploration of novel realms of artistic expression.

5.2.9 The 18-Pipe, 21-Tone Lusheng, and the Progression of Musical Artistry

The innovative efforts of Mr. Dong Dan Gan reached their zenith with the creation of the groundbreaking Lusheng instrument, which included 18 pipes and 21 distinct tones. The notable performance showcased supplementary annotations, including the C1 to C3 and D1 to D3 ranges, thus augmenting the sonic attributes of the musical instrument. To enhance the involvement of the little finger, we inserted two tone tubes, specifically C3 and D3, into the air hopper from the bottom in an upward direction. We intentionally arranged the placement of these tubes beneath the hopper to facilitate easy access to the corresponding tone holes. Furthermore, we included a B1 pitch pipe that is specifically designed for the F mode. The combination of these advancements resulted in the development of the 18-pipe, 21-tone Lusheng musical instrument, which has gained recognition for its exceptional tonal intricacy and versatility. This development represented a noteworthy progression in the development of information surrounding Lusheng music.

5.2.10 The Evolution of Multi-Pipe Lusheng Instruments

Within the domain of Lusheng instrument advancement, two notable iterations arise, distinguished by their ability to expand the tonal capabilities of the instrument. The incorporation of the 16-pipe Lusheng (Figure 3), which builds upon the preexisting 15-pipe reed-sheng developed by Mr. Dong Dan Gan, expands the instrument's tonal range to a total of 16 notes. This improvement enables the 16-pipe Lusheng to effectively execute musical compositions in the keys of C, F, G, and B-flat, hence expanding its adaptability for both players and composers. In contrast, the 19-pipe Lusheng (Figure 4), which draws inspiration from Mr. Dong Dan Gan's 18-pipe reed-sheng, extends the tonal range by integrating three more notes. The 19-pipe Lusheng possesses an expanded tonal range, enabling it to proficiently interpret music in the keys of C, F, G, and B-flat. This characteristic highlights its versatility and contributes to the preservation, transfer, and diffusion of information in the realm of Lusheng music.

Contemporary Lusheng musicians and practitioners are dedicated to preserving their traditional instrument while adapting it to modern contexts. They focus on passing down their cultural heritage, integrating Lusheng into contemporary music, maintaining and repairing instruments, collaborating with musicians from different cultures, educating the public, addressing sustainability concerns, documenting oral traditions, and navigating the challenges and opportunities of globalization. Their efforts reflect a commitment to both tradition and innovation in the world of Lusheng music.



Figure 3. Improved 16-pipe Lusheng (Source: Qin Chen)



Figure 4. Improved 19-pipe Lusheng (Source: Qin Chen)

5.2.11 Enhancing the Richness of the Lusheng Music Tradition and Facilitating Cultural Transmission

The continuous developments in Lusheng design have not only broadened the instrument's tonal capabilities but have also ensured its adaptability to the many musical traditions that are prominent in the Qiandongnan Miao and Dong Autonomous Prefectures. Currently, contemporary musicians can utilize a wide range of intricately crafted Lusheng instruments to accommodate specific creative requirements and individual inclinations. The creative journey of Mr. Dong Dan Gan made a substantial contribution to the preservation, transfer, and evolution of information and practice related to Lusheng music. These advancements expanded the artistic possibilities for musicians, enhancing the Lusheng music heritage and enabling the dissemination of cultural knowledge (Table 1).

Table 1. Evolution of multi-pipe Lusheng instruments and their impact on knowledge and music heritage

Lusheng Instrument Type	Development Highlights	Key Benefits
16-pipe Lusheng	Expanded from 15-pipe reed-sheng to 16 notes	Proficiency in playing music in C, F, G, and B-flat keys, increased versatility for players and composers
19-pipe Lusheng	Inspired by 18-pipe reed-sheng, added 3 more notes	Enhanced tonal range for interpreting music in C, F, G, and B-flat keys, greater adaptability in Lusheng music
11-pipe Lusheng	Expanded from 8-pipe Lusheng, integrated 3 more pipes	Shifted to heptatonic scale, broader musical capabilities, preservation of traditional Lusheng music knowledge
12-pipe Lusheng	Added LA note to 11-pipe Lusheng	Improved versatility for playing different musical modes, expanded knowledge of Lusheng's adaptability
13-pipe Lusheng	Introduced ring finger for playing	Expanded tonal spectrum, enriched expressive possibilities, enhanced preservation of Lusheng music traditions
14-pipe Lusheng	Added additional LA-pipe	Suitable for solo performances, easy transposition to seven-tone scale, advancement in Lusheng knowledge
18-pipe, 21-tone Lusheng	Groundbreaking design with 18 pipes and 21 distinct tones	Exceptional tonal intricacy, versatility, and adaptability, significant progression in Lusheng music information

Including contemporary insights from Lusheng musicians and practitioners highlights the instrument's current role, challenges, and adaptations in today's cultural context. Lusheng remains a vital part of cultural celebrations and events in the Qiandongnan region, with musicians adapting to changing times by exploring new musical styles and compositions. Challenges include preserving traditional knowledge and craftsmanship, which practitioners address by passing down their expertise and promoting traditional practices. Contemporary Lusheng musicians are

also collaborating with other genres and instruments to broaden their appeal. These insights offer a comprehensive view of Lusheng's significance in modern culture.

6. Discussion and Conclusion

The discussion about the preservation and transmission of Lusheng knowledge in the Qiandongnan Miao and Dong Autonomous Prefecture in Guizhou Province, China, has provided important insights. This in-depth investigation combines ethnomusicological research and acoustic analysis to provide a thorough knowledge of Lusheng and its cultural significance. Yan Liu's (2012) study serves as a foundation, emphasizing the historical, humanistic, musical, and social importance of Guizhou's Lusheng culture, notably among the Miao, Dong, Shui, and Yao ethnic groups.

The study's major findings highlight the cultural relevance of the region's traditional 6-pipe Lusheng. It plays an important role in cultural events such as Lusheng Festivals, Miao Nian Festivals, and Sacrifice Ceremonies. Despite its narrow tonal range and volume, it is frequently performed in groups rather than alone, stressing its communal and cultural significance. This is consistent with Pan Mei's (2013) research on the Lusheng Festival of the Miao Ethnic Group, which dives into the instrument's religious and cultural implications. Meng Meng's (2016) research on Lusheng music and dance in Miao burial rites sheds light on its significance in cultural and ceremonial contexts.

The investigation also looks at the evolution of Lusheng instruments, with Mr. Dong Dan Gan's pioneering contributions taking center stage. His developments, which included the 8-pipe, 11-pipe, 12-pipe, 13-pipe, 14-pipe, and ground-breaking 18-pipe, 21-tone Lusheng, greatly increased the instrument's tonal capabilities and facilitated its adoption into numerous regional musical traditions. Yang's (2019) taxonomy of Lusheng kinds based on sound series and shape emphasizes the adaptability and accessibility of the instrument for players.

Furthermore, the study emphasizes the significance of regional variations in Lusheng scale configurations, which influence various musical genres throughout counties. Mr. Dong Dan Gan's efforts to customize Lusheng instruments to align with different counties' musical traditions highlight the importance of adapting to local customs in cultural preservation and diffusion, as demonstrated by Qixing Hong's (2014) examination of Miao Lusheng Dance in Guizhou Province.

A study of the Lusheng scale configurations in the Qiandongnan Miao and Dong Autonomous Prefectures of Guizhou Province, China, shows that there are big differences between the counties. These variations influence musical styles, cultural expressions, and the transmission of knowledge. Scale configurations, whether pentatonic or heptatonic, impact the emotional quality of music and its suitability for various cultural events. Local specialization in scale configurations ensures the preservation of unique regional styles. Cross-county influences and collaborations further enrich the musical landscape, making Lusheng music a diverse and culturally significant art form in the region.

In conclusion, the Qiandongnan Miao and Dong Autonomous Prefectures' efforts to keep and pass on Lusheng knowledge show how historical events, cultural elements, and human creativity all interact in a creative way. The Lusheng instruments have undergone a transformative evolution and have demonstrated exceptional adaptability in assimilating various musical genres. This has been essential in maintaining the enduring vitality of Lusheng music in the local region. The current study has elucidated the complex relationship between tradition and innovation, leading to a substantial partnership in the field of cultural preservation and dissemination. As people navigate through the complex web of cultural heritage, the echoes of Lusheng continue to resonate, acting as a channel for the collected knowledge, values, and traditions of past periods, smoothly blending them into the unified structure of future times. The inclusion of ethnomusicological theories is essential. Ethnomusicological frameworks facilitate the examination of cultural transmission, performance dynamics, symbolism, ritual significance, identity creation, and the influence of globalization on Lusheng music. The incorporation of this integration will enhance the theoretical underpinnings of the study and augment its academic profundity.

References

- Chen, Q. (1981). Etymological Examination of Lusheng. *Journal of the Central University for Nationalities*, 3, 49-52.
- Dong, D. (2003). The Second Resonance Characteristics of Lusheng Pronunciation. *Journal of Guizhou University (Art Edition)*, 3, 14-16.
- Erjian, M., & Chuangprakhon, S. (2023). Transmission of Yugu Folk Song Knowledge in Sunan County, Gansu Province, China. *International Education Studies*, 16(3), 43-50. <https://doi.org/10.5539/ies.v16n3p43>

- Fan, Y. (2006). Comparison of Harmony between Traditional Lusheng and Sheng. *Chinese Music (Quarterly)*, 4, 197-199.
- General Editorial Committee of Encyclopedia of China. (1989). *Encyclopedia of China - Music and Dance* (p. 68). Encyclopedia of China Press.
- Gough, C. (2014). Musical acoustics. *Springer handbook of acoustics*, 567-701.
- Hong, Q. (2014). *Research on Lusheng Dance of Miao People in Guizhou Province* (Master's thesis, Guizhou Normal University).
- Hou, J., & Seekhunlio, W. (2023). Concept Composition and Literacy Transmission of the Clarinet Folk Song "Pamir Zhiyin". *International Journal of Education and Literacy Studies*, 11(4), 166-172. <https://doi.org/10.7575/aiac.ijels.v.11n.4p.166>
- Liu, Y. (2012). *Research on Guizhou Lusheng Music Culture and Its Social Functions* (Master's thesis, Guizhou Minzu University).
- Meng, M. (2016). *Lusheng Music and Dance in the Miao Funeral Ceremony in Danzhai County, Guizhou* (Doctoral dissertation, Central University for Nationalities).
- Pan, M. (2013). *Investigation and Research on the Lusheng Festival of Miao People in Huangping: Taking the Lusheng Festival in September in Gulong as a Case* (Master's thesis, Yunnan University).
- Rice, T. (2010). Ethnomusicological theory. *Yearbook for traditional music*, 42, 100-134. <https://doi.org/10.1017/S0740155800012686>
- Wang, J. (2010). Investigation and Reflection on Gaopai Miao Guzang Festival. *Journal of Original Ecological Ethnic Culture*, 2(1), 110-114.
- Wu, H. (2021). *An Overview of Miao Lusheng Culture in Guizhou* (p. 213). Guizhou University Press.
- Xu, H. (2022). The Social Functions of Miao Music in Qiandongnan in Contemporary Context. *House of Drama*, 1, 85-86.
- Yang, Y. (2011). *New Theory of Musicology* (pp. 237-238). Higher Education Press.
- Yang, Z. (2019). Investigation and Research on the Types of Lusheng. *National Music*, 4, 19-21.
- Yu, Q. (2013). Overview of Miao Lusheng Craft Culture Research. *Journal of Kaili University*, 2, 21-22.
- Yu, R. (1997). *Introduction to Musicology* (pp. 7-8). People's Music Press.
- Yue, D., & Seekhunlio, W. (2023). The study of knowledge and preservation of songming lantern opera in Kunming, Yunnan province, China. *Multidisciplinary Science Journal*, 6(4), 2024050. <https://doi.org/10.31893/multiscience.2024050>
- Zhao, C., & Yang, C. (2013). Dongdangan and Lusheng Reform. *Musical Instruments*, 9(9), 20-23.

Acknowledgments

Thanks to the College of Music at Mahasarakham University.

Funding

This research project was financially supported by Mahasarakham University.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Canadian Center of Science and Education.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

Open access

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.