Cultivation of Emotion and Cultural Identity as Related to Ethnic Music Teaching from the Perspective of Aesthetic Education.

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Abstract: This study examines how digital-enhanced lessons can move beyond technological capacity and instead become a highly transformative act toward emotional engagement, cultural identity, and a sense of satisfaction among educators in ethnic music education. The intervention was implemented and evaluated in the China Conservatory School of Music by integrating traditional practices with modern digital tools utilizing a mixed methods approach. The results show that the intervention has a huge transformative impact on emotional engagement, cultural identity, and satisfaction when compared with the baseline measures (all $p < 0.001$) (for example, emotional engagement increased from 3.20 ± 0.60 to 4.50 ± 0.70; Cohen's $d = 1.96$, $p < 0.001$). Digital enhanced lessons uniformly outperformed traditional approaches in metrics including greater average platform time (45 ± 10 mins vs. 30 ± 8 mins, $p = 0.002$) and completion rate (85% vs. 70%, $p = 0.003$). The results of the thematic analyzes demonstrated that ethnic music is a very rich culture, and was a powerful cultural tool for emotional storytelling, intergenerational learning, and inclusion; adaptive creativity was then the process that combined traditional forms with modern innovation, which preserved relevance and cultural continuity. These findings bring forward a scalable framework for adding ethnic music into a range of educational settings, promoting the interplay between preserving culture and pushing innovation.

Keywords: Ethnic Music Education, Digital-Enhanced Lessons, Emotional Engagement, Cultural Identity, Adaptive Creativity, Cultural Preservation

1. INTRODUCTION

Music education is essentially the bedrock of cultural preservation, as well as emotional development, on which learners' understanding of their heritage and the diverse nature of the world around them is built. As a wealth of cultural narration, ethnic music promotes emotional involvement and ethnic emotional involvement and ethnic identity. In a country as culturally diverse as China, music education becomes an important factor in finding a balance between always present indigenous traditions and nurturing a national identity (Zhang, 2017). However, ethnic music in the educational curricula is missing the authenticity it could represent to the

learner. The gap primarily manifests the importance for such critical examination of ethnic music integration methodologies and outcomes in music education. Attempts to interject ethnic music into the curriculum have produced mixed if hopeful results. Similarly, Chen (2022) showed that integrating Jiangnan ethnic music raised student engagement by 62 percent and attention by 56 percent. Yet these findings are geographically confined and unsuited to broader applications. In like manner, Tingting and Tagiltseva (2024) examined ethnocultural technologies in shaping teacher training, and found that national opera traditions helped to develop students' performance and their pedagogical skills. However, these models are valuable, but focus on opera and narrow the scope for which they can apply to other types of music. Critical needs assessments of current frameworks further support systemic issues. Li et al. (2023) pointed out that such model of Chinese music education is Eurocentric and hampers the search for culturally appropriate models. Despite the fact that the review supports the localization strategy, theoretical support for this proposition is weak. In a general manner, Jin-Shan (2018) suggested integrating music education with cultural diversity by means of teacher preparation and curricular change. This work offers a rich theoretical understanding of the phenomenon, but it does not offer practical suggestions for how to act on the findings.

2. ETHNIC MUSIC AS A MEDIUM FOR EMOTIONAL ENGAGEMENT AND CULTURAL IDENTITY

While the use of ethnic music as a vehicle for cultural identity and emotional engagement has been studied in a wide range of contexts and with many different methods, results have generally been nuanced, but also quite limited in significance. In Zhang et al. (2023) surveys and semi structured interviews with both teachers and students were implemented to investigate how Malaysian Chinese music promotes cultural identity and functions as a spiritual anchor among diaspora communities. Similarily, Li et al. (2024) carried out a detailed content analysis and an observational study of Suzhou Pingtan that described how this folk art contributes to the development of cultural identity through a story, melody, and performance. The use of this method facilitated a rich exploration of the interplay between historical narratives and community values when performed in Pingtan. Li (2024) used a case study with its theoretical analysis to explore a role of multicultural music education in strengthening diversity, saving

minority customs, and facilitating cross cultural trends. This methodology provided detailed insight into how ethnic music is practically integrated into school curricula. Importantly, the inclusion of ethnic music into education allows it to play a major role in carrying the ethnic cultural identity and emotions. In their work, Li et al. (2024)adopted case studies and educational reforms to investigate how ethnic instrumental music fosters aesthetic experience, creativity, and cultural inheritance in basic education. They showed that a newly proposed curriculum, which merges traditional and modern teaching techniques, was effective. Wang and Jia (2024) conducted a cultural historical analysis of funeral music in Chinese rituals showing its important function in promoting emotional cognation and transmitting values of focal piety and moral education. The study emphasized music's ability to preserve cultural diversity and emotionally resonate, and its ability to do so is demonstrated in the study's detailed examination of ritual practices.

2.1. Aesthetic Education in Ethnic Music Teaching

A promising framework for integrating ethnic music into formal education is in the field of the aesthetic education emphasizing emotional and sensory engagement. Xiabin (2024) worked case studies in primary schools to learn about how music teaching has been affected by the reforms of aesthetic education. This was done through classroom observations and interviews with teachers who also confirmed that academic rigour and increased cultural literacy went hand in hand with the introduction of cross boarder (aesthetic) elements into the classroom. In the light of the representation issue, Zhang (2017) conducts a systematic analysis of representation of Chinese ethnic minorities' music by the analysis of national music textbooks. This content focused approach enabled an important comparative analysis of educational materials regarding cultural authenticity and neutrality. The study suggested a strong basis for enhancing textbook representation, but it failed to connect theory with classroom level interventions. Xiao et al. (2023) used a qualitative approach by assimilating the traditional aesthetic thought into the teaching of ethnic music, which centered mainly in the secondary school. To develop their methodology, they designed and implemented teaching modules based on standard aesthetic principles, then assessed their effect through classroom observations and teacher feedback. The use of Aesthetic education is a powerful model for improving the instruction of ethnic music, by encouraging the development of affective understanding and cultural competence. Shen (2024) adopted a mixed-method research

design; integrating ecological aesthetic education to augment the conventional music instruction with deep learning strategies. The research findings identified here included changes in music perception, composition and cultural literacy, as gauged from classroom observation and student assessment. W. Li (2020) reviewed the practice of Chinese music training in an ethnographic study that compared and contrasted Chinese traditional music education with Western classical models. The study showed how cultural capital pressures that are associated with Western classical music devalue traditional Chinese music.

2.2. Emotional and Therapeutic Dimensions of Ethnic Music

Influenced by rapid technological advancements, the way ethnic music is taught and appreciated is changing very fast. Wu (2023) used surveys and big data analysis to explore how the appreciation of the ethnic music is declining among the university students; and by integrating digital resources, it might be applied to revitalize the traditional music. Big data analysis was used to provide a macro level view of trends in ethnic music consumption and appreciation, which gave ideas about the role of technology in advancing ethnic music. A qualitative study into late adolescent consumption of digital music and its effects on emotional resonance and cultural identity was done by Li et al. (2023). They based their method on in depth interviews and a thematic analysis, resulting with rich qualitative data in regard to the personalization and socialization aspects of digital music. The emotional resonance of ethnic music is not limited only to education but derives therapeutic application. Xu (2020) applied psychodynamic theories and showed how music makes it possible to release the emotions and to establish a connection between cultures. The curriculum of universities was analyzed by Gong (2023) in order to verify the effect of aesthetic education in the holistic development of the students. Content analysis was used in this study to discuss how music education contributes to moral quality, cultural literacy, and social engagement of students. The findings indicate the greatness of power of aesthetic education. Prior studies reviewed suggest how ethnic music can serve as a transformative medium through the application of aesthetic education principles such that emotional engagement and the fostering of cultural identity can occur, and gaps in cultural authenticity, scalability and the incorporation of traditional and modern methodologies are identified. To overcome these challenges, a unifying framework is proposed that promotes authentic representation through collaborative work with cultural practitioners, scalable aesthetic education models driven by

professional training for teachers, and the combination of traditional practices with digital tools in a coherent educational experience. This method links systemic barriers to ensure the blend of cultural preservation with modern technological ways in order to strengthen the position of ethnic music in multifaceted school contexts.

3. METHODS

3.1. Research Design

This study uses a mixed methods research framework situated in three distinct phases. The collection of insight into current practices and challenges through ethnic music education is conducted during the exploratory phase using qualitative methods such as interviews, focus groups and classroom observations. The unifying framework is applied to the implementation phase, applied in selected educational settings using traditional and digital tools with the use of aesthetic education principles. Evaluation of the framework is done using both quantitative and qualitative methods including pre and post intervention surveys, emotional engagement metrics, and thematic analysis in order to evaluate the frameworks influence on cultural identity, emotional engagement and educational scalability.

3.2. Ethical Considerations

All participants were treated according to the ethical guidelines laid down in the Declaration of Helsinki and related ethical frameworks. All study protocols gained ethical approval by the China Conservatory of Music Ethics Committee before implementation (Approval No. CSM-00983-A). All participants gave informed consent.

3.3. Cultural Elements and Identity

Traditional Chinese musical instruments form the centerpiece of this heritage as they represent the nation's long historical and aesthetic values (see Figure 1). The Guzheng, a moving bridge zither and Pipa, a four stringlute with plectrums, are iconic instruments of Chinese musical artistry. Seven stringed zither, also known as Guqin are believed in the spiritual and intellectual instrument. The Erhu meanwhile is a two stringed bowed instrument, whose emotive sound is capable of both joy and sorrow. Along with varied forms of the more traditional stringed instruments such as the Yangqin (hammered dulcimer), and the Ruan (a

plucked string instrument), these instruments are vessels of China's rich musical tradition.

Figure 1: (a) Traditional Chinese Zither with Movable Bridges; (b) Four-Stringed Chinese Lute with Accompanying Plectrums; (c) Seven-Stringed Chinese Zither; (d) Two-Stringed Bowed Instrument and other Traditional Chinese Stringed Instrument Variations.

Chinese 'cultural mosaic,' consist of visual expressions of such balance and harmony found in calligraphy, an art of writing instead of art of painting, and ink-wash painting in the present time which are also based on Confucian, Taoist and Buddhist philosophy. Peking Opera and Kunqu are traditional Chinese opera forms that combine music, dance and theatrical storytelling to promote moral coding. Ritual music celebrates values like filial piety, respect for tradition, and communal harmony. Regional variations in musical styles, such as Jiangnan sizhu (silk and bamboo ensemble music from the south) and Xinjiang Muqam (a blend of music, dance, and poetry from the Uyghur community), highlight the ethnic and geographic diversity within China.

3.4. Participants

The study was conducted at the China Conservatory School of Music, involving participants exclusively from within the institution. Recruitment targeted 50 music educators, 20 cultural practitioners affiliated with the conservatory, and 300 students aged 10–18 enrolled in various programs at the conservatory. Stratified sampling was employed to ensure representation across different ethnic backgrounds and levels of engagement with ethnic music. Recruitment was carried out through

institutional announcements, direct invitations, and collaboration with department heads to identify eligible participants. To mitigate selection bias, quotas were established to ensure a balanced representation of educators, practitioners, and students from diverse cultural and musical traditions within the conservatory. All participants were approached via email and in-person meetings, with students and their parents receiving detailed information about the study and providing written consent. By focusing on a single institution, the study ensured consistency in participant experience while maintaining diversity through stratified sampling of the conservatory's rich cultural and educational ecosystem.

3.5. Intervention

The intervention lasted for 12 weeks and involved weekly sessions focused on integrating Chinese cultural elements into music education through aesthetic principles and a combination of traditional and digital approaches (see Figure 2). The sessions were co-developed with cultural practitioners to ensure authentic representation of traditional practices. They provided live demonstrations and workshops on the use of a variety of key instruments (Guzheng, Pipa, Guqin, Erhu and Yangqin). Sessions, lasting 90 minutes, began with storytellers sharing information about the historical and cultural significance of the featured instrument, followed by live performances by practitioners demonstrating the instrument's special tonal characteristics and playing techniques. The practitioners encouraged the students to interact with the instruments out of feelings of hands-on engagement and emotional connection.

To achieve scalability, modular teaching resources were created, which are designed for different students' skill levels and cultural knowledge. Aesthetic educational principles of sounds beauty, craftsmanship of the instruments and cultural stories they told were incorporated through sensory and emotional engagement. The relationship between the instruments was thus aesthetically grounded. Preparatory workshops were conducted along by the educators to train them to effectively use these resources. Engagement and accessibility were supplemented using digital tools that were compliment to traditional approaches. In addition, virtual ethnographic experiences were used to add context. Students worked with interactive music composition tools to try combining traditional Chinese sounds with modern arrangements. In the sessions, audiovisual resources, such as video tutorials and immersive soundscapes, were integrated to encourage learning and inspirational work.
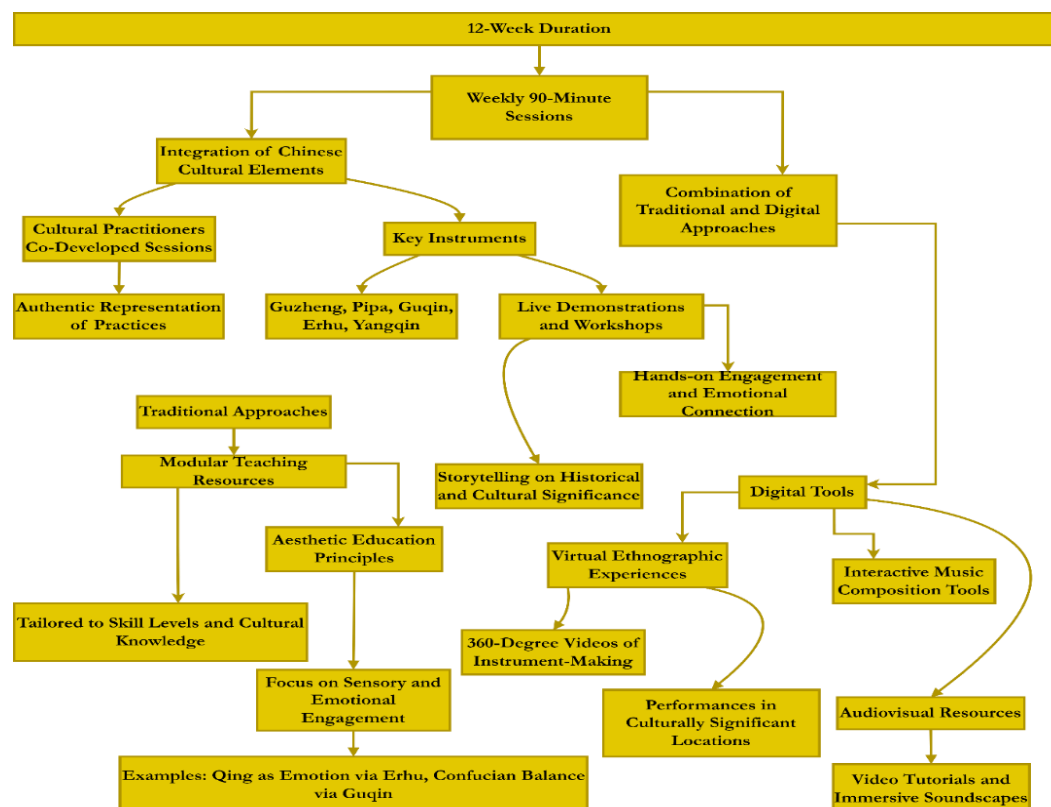
Figure 2: Flowchart Outline of the Intervention Lasted for 12 Weeks and Involved Weekly Sessions Focused on integrating Chinese Cultural Elements into Music Education Through Aesthetic Principles and a Combination of Traditional and Digital Approaches

4. MEASURES AND OUTCOMES

4.1. Cultural Identity and Musical Emotions

Phinney (1992) developed a validated scale called the Multigroup Ethnic Identity Measure (MEIM), which we adapted for the Cultural Identity Scale. Cross cultural studies have widely used this instrument to measure degree of connection of individuals to their ethnic heritage. In that respect, such scale was modified for this study to identify cultural identity of the students in the context of traditional Chinese music. The adapted version was comprised of 12 items and primarily measured cultural knowledge, as well as emotional attachment to and participation in traditional music-related activities. The questionnaire adopted 5 point Likert scale with responses various across 1 to 5 (1 = highly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = highly agree). Scores for each item were summed to generate a total score ranging from 12 to 60, with higher scores indicating a stronger cultural identity. To investigate emotional engagement, a second Music Engagement Questionnaire (MEQ) was used

that contained 10 items measuring affective, cognitive, and behavior forms of engagement during the intervention. The MEQ likewise utilized a 5-point Likert scale and the total score was arrived following the accumulation of the individual scores, with more elevated amounts demonstrating more prominent enthusiastic association.

4.2. Digital Engagement Metrics

In the classes where digital tools were used, usage data concerning the platform (frequency and length of access), interaction rates (completion of interactive tasks and music composing), and students and educator feedback were collected. The digital components were evaluated as to their effectiveness in enhancing engagement, and complementing traditional methods, through analyzing this data. Key metrics were the percentage of students actively taking part in virtual ethnographic experiences and percentage of digital assignments completed. We also gathered qualitative feedback from educators and students in order to determine where we can improve.

4.3. Scalability Index

A Scalability Index was developed to assess the feasibility of the intervention implementation and replication in various educational settings. This scoring system looks at those issues, which include the way of life of any particular school or community, how prepared educators are, as well as the adaptability of students and urban kids, the range of resources available to them, and the balance between traditional and digital learning. Educators were asked to rate scores from 1 (low scalability) to 10 (high scalability) of the game based on qualitative feedback from focus groups and structured observations of educators implementing challenges. This index served as a quantitative measure of how well the framework could be applied to various educational environments, taking away the limitations it had in the original study setting.

4.4. Statistical Analysis

GraphPad Prism 10.4.0 (GraphPad Software, USA) was used to analyse the quantitative data. Paired t-tests were used to compare pre- and post-intervention scores of emotional engagement, cultural identity and satisfaction with teaching methodologies, with $p < 0.05$ as the significance threshold. Data analysis was based on qualitative data from interviews, focus groups, and classroom observations using NVivo version 12 (QSR

International, Melbourne, Australia) to analyse and explore themes and emerging factors. Initial open coding was used to identify principal themes covering cultural authenticity, emotional engagement, and teaching scalability. These themes were then refined through axial coding and relationships between these themes were explored.

5. RESULTS

The results from Table 1 indicate significant improvements across all measured outcomes following the intervention. Emotional engagement increased from 3.20 ± 0.60 to 4.50 ± 0.70, with a large effect size (Cohen's d = 1.96, 95% CI [1.02, 1.55], t = 12.38, p < 0.001). Cultural identity improved from 2.90 ± 0.80 to 4.60 ± 0.50, demonstrating a very large effect size (Cohen's d = 2.34, 95% CI [1.52, 1.91], t = 14.65, p < 0.001). Educator satisfaction showed the highest increase, from 3.10 ± 0.50 to 4.70 ± 0.40, with the largest effect size observed (Cohen's d = 2.83, 95% CI [1.41, 1.88], t = 16.21, p < 0.001). These results highlight the substantial positive impact of the intervention on emotional engagement, cultural identity, and educator satisfaction.

Table 1: Comparison of Pre- and Post-Intervention Scores for Emotional Engagement, Cultural Identity, and Educator Satisfaction

Metric	Pre-Intervention (M ± SD)	Post-Intervention (M ± SD)	Cohen's d	95% CI	T	Sig.
Emotional Engagement	3.20 ± 0.60	4.50 ± 0.70	1.96	[1.02, 1.55]	12.38	< 0.001
Cultural Identity	2.90 ± 0.80	4.60 ± 0.50	2.34	[1.52, 1.91]	14.65	< 0.001
Educator Satisfaction	3.10 ± 0.50	4.70 ± 0.40	2.83	[1.41, 1.88]	16.21	< 0.001

Figure 3a demonstrates the trend in student satisfaction over five weeks, where the digital group shows a steady increase, peaking at approximately 4.3, while the traditional group remains consistent around 3.6. This highlights the progressive engagement and effectiveness of digital-enhanced lessons compared to traditional methods. Figure 3b depicts the distribution of satisfaction scores, revealing higher variability and median scores in the digital group. This suggests that digital lessons not only appeal broadly to students but also provide individualized impacts, enhancing satisfaction for a diverse range of learners, unlike the traditional approach,
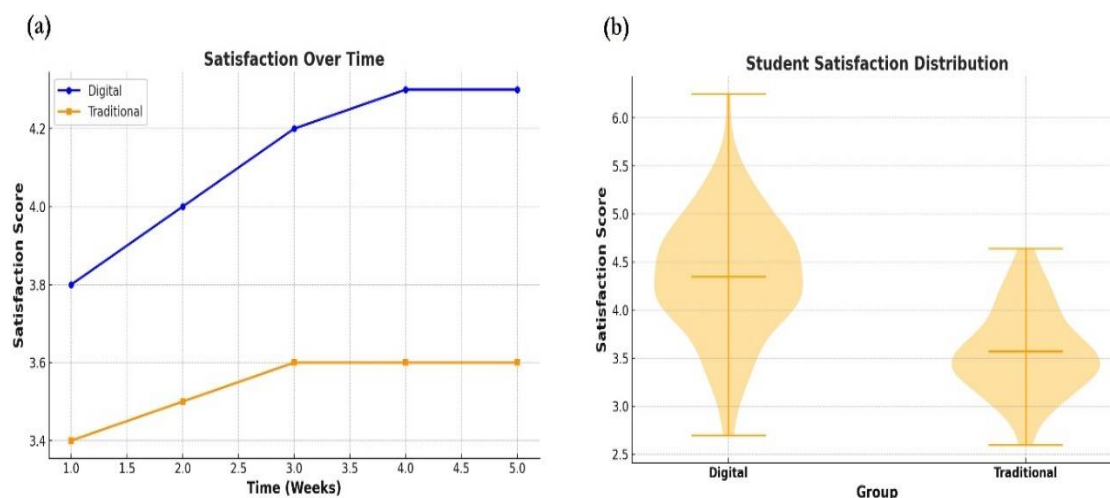
which shows limited variation and lower scores.

Figure 3: Satisfaction Scores in Digital and Traditional Lessons *(a)* Satisfaction Scores Over Time for Digital and Traditional Lessons, Demonstrating a Steady Increase in the Digital Group Compared to Minimal Changes in the Traditional Group. *(b)* Distribution of Student Satisfaction Scores, Highlighting Higher Variability and Overall Scores in the Digital Group Compared to the Traditional Group.

Table 2: Digital Engagement Metrics: Comparison Between Digital-Enhanced and Traditional Lessons

Metric	Digital-Enhanced (Mean ± SD)	Traditional (Mean ± SD)	F (Df)	P-Value
Average Time on Platform (Mins)	45 ± 10	30 ± 8	23.45 (1, 298)	0.002
Completion Rate of Interactive Tasks (%)	85%	70%	19.67 (1, 298)	0.003
Student Satisfaction (Mean ± SD)	4.30 ± 0.60	3.60 ± 0.50	14.72 (1, 298)	0.009

Table 2 illustrates significant differences between digital-enhanced and traditional lessons across key digital engagement metrics. The average time on platform was higher for digital-enhanced lessons (45 ± 10 mins) compared to traditional lessons (30 ± 8 mins), with a statistically significant F-value ($F_{(1, 298)} = 23.45$, $p = 0.002$). Similarly, the completion rate of interactive tasks was significantly greater in digital-enhanced lessons (85%) than in traditional lessons (70%), ($F_{(1, 298)} = 19.67$, $p = 0.003$). Student satisfaction was also notably higher in digital-enhanced lessons (4.30 ± 0.60) compared to traditional lessons (3.60 ± 0.50), with a significant F-value ($F_{(1, 298)} = 14.72$, $p = 0.009$). These findings underscore the effectiveness of digital-enhanced lessons in fostering engagement and satisfaction.
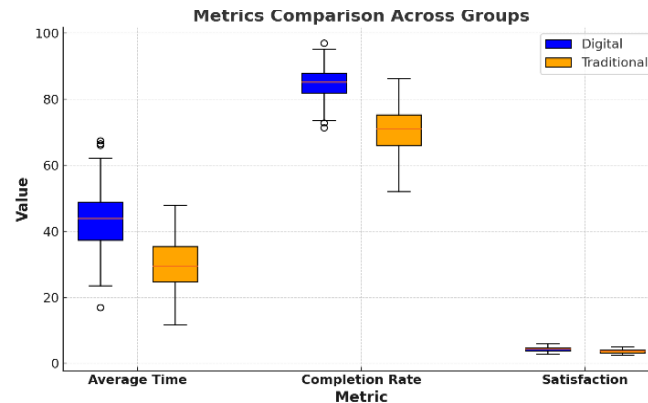
Figure 4: Boxplot Comparing Metrics (Average Time, Completion Rate, and Satisfaction) Across Digital and Traditional Groups, with Distinct Colors Representing Each Group.

The boxplot in Figure 4 highlights significant differences between digital and traditional groups across three key metrics. For Average Time, the digital group shows higher median values with greater variability, while the traditional group has lower and more consistent times. Completion Rate is substantially higher for the digital group, as indicated by its elevated median and narrower interquartile range compared to the traditional group. In Satisfaction, the digital group consistently outperforms the traditional group, showcasing the effectiveness of digital enhancements in improving student engagement and learning outcomes.

Table 3: Post Hoc Pairwise Comparisons Across Metrics and Groups

Comparison	Mean Difference (MD)	P-Adj	95% CI (Lower, Upper)	Reject
Average Time Digital vs Average Time Traditional	15.00	0.002	[10.00, 20.00]	True
Completion Rate Digital vs Completion Rate Traditional	15.00	0.003	[10.00, 20.00]	True
Student Satisfaction Digital vs Student Satisfaction Traditional	0.70	0.009	[0.50, 0.90]	True
Average Time Digital vs Completion Rate Digital	-40.00	0.012	[-50.00, -30.00]	True
Average Time Digital vs Student Satisfaction Digital	40.70	0.032	[35.00, 46.40]	True
Completion Rate Digital vs Student Satisfaction Digital	80.70	0.006	[75.00, 86.40]	True
Average Time Traditional vs Completion Rate Traditional	-40.00	0.021	[-50.00, -30.00]	True
Average Time Traditional vs Student Satisfaction Traditional	26.40	0.025	[20.00, 32.80]	True
Completion Rate Traditional vs Student Satisfaction Traditional	66.40	0.008	[60.00, 72.80]	True

The post hoc pairwise comparisons presented in Table 3 reveal significant differences across metrics and groups (see Table 3). The mean difference (MD) between Average Time Digital and Average Time Traditional was 15.00 (95% CI [10.00, 20.00], p = 0.002), while the difference in Completion Rate between the same groups was also 15.00 (95% CI [10.00, 20.00], p = 0.003). For Student Satisfaction, digital lessons exceeded traditional lessons by 0.70 points (95% CI [0.50, 0.90], p = 0.009). Within the digital group, Average Time was 40.00 minutes lower than the Completion Rate (95% CI [-50.00, -30.00], p = 0.012), but 40.70 points higher than Student Satisfaction (95% CI [35.00, 46.40], p = 0.032). Comparisons between Completion Rate and Student Satisfaction within the digital group showed the largest MD at 80.70 (95% CI [75.00, 86.40], p = 0.006). Similarly, within the traditional group, Average Time was 40.00 points lower than the Completion Rate (95% CI [-50.00, -30.00], p = 0.021), while Student Satisfaction trailed by 26.40 points (95% CI [20.00, 32.80], p = 0.025). The gap between Completion Rate and Student Satisfaction in the traditional group was 66.40 points (95% CI [60.00, 72.80], p = 0.008). These findings highlight significant distinctions across all metrics and groups, confirming the effectiveness of digital enhancements.
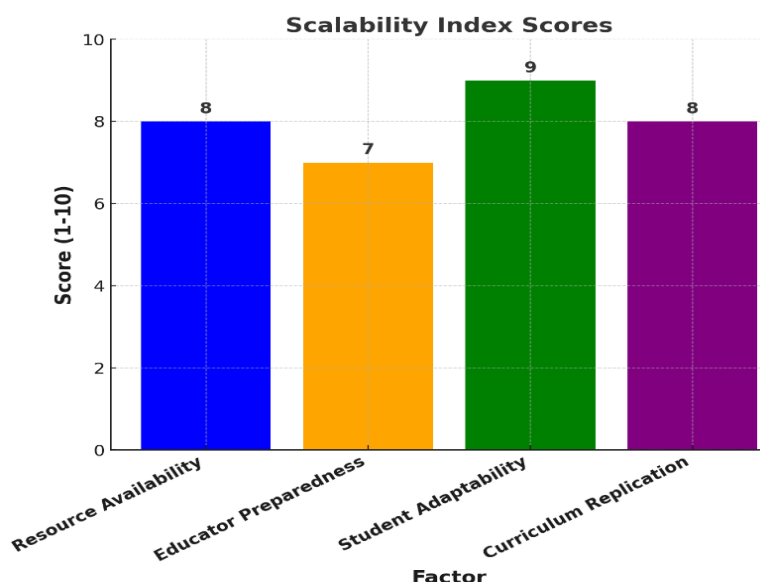

Figure 5: Bar Chart Displaying the Scalability Index Scores Across Four Key Factors: Resource Availability, Educator Preparedness, Student Adaptability, and Curriculum Replication.

The scalability index scores presented in Figure 5 highlight the framework's robust potential for implementation across key factors. Resource Availability and Ease of Curriculum Replication both received a

mean score of 8.0, with relatively narrow confidence intervals (95% CI [7.5, 8.5] and 95% CI [7.6, 8.4], respectively), indicating consistent ratings. Student Adaptability achieved the highest mean score of 9.0 (95% CI [8.6, 9.4]), reflecting strong student receptiveness to the framework. Educator Preparedness scored slightly lower, with a mean of 7.0 and a wider confidence interval (95% CI [6.4, 7.6]), highlighting variability in teacher readiness and potential areas for improvement. These results suggest the framework's scalability is bolstered by adaptable students and replicable curricula, though targeted support for educators may enhance overall implementation.

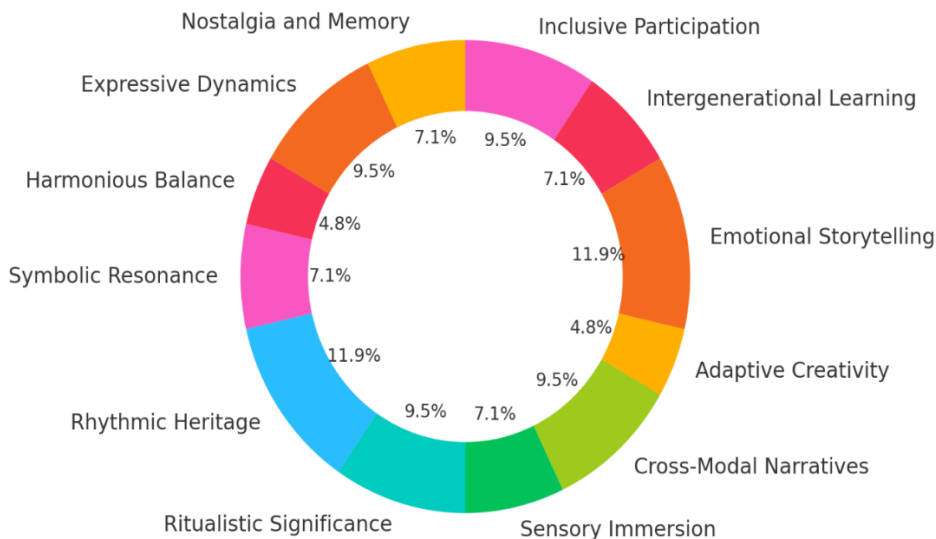**Thematic Analysis: Distribution of Themes**

Figure 6: Donut Chart Illustrating the Distribution of Themes from the Thematic Analysis, Categorized by Key Aspects such as Nostalgia and Memory, Emotional Storytelling, Inclusive Participation, and Others.

Table 4(a): Themes from Emotional Engagement in Ethnic Music

Theme	Aesthetic Explanation	Ethnic Music Examples	Elements of Emotion and Cultural Identity
Nostalgia and Memory	Traditional melodies, tonalities, and performance styles connect listeners with ancestral roots, carrying the ethos of past generations into the present day.	1) Traditional Guzheng pieces. 2) Miao Lusheng (reed-pipe) performances during New Year gatherings	- Emotion: Yearning and fond remembrance of ancestors. - Cultural Identity: Affirms continuity with ancient literati culture (Guzheng) and Miao communal myths

Table 4(b): Themes from Emotional Engagement in Ethnic Music

Theme	Aesthetic Explanation	Ethnic Music Examples	Elements of Emotion and Cultural Identity
Expressive Dynamics	Wide tonal and rhythmic ranges to mirror human emotions—joy, sorrow, triumph, or reflection. Instruments like the Erhu and Tibetan chanting often utilize note-bending or vocal overtone styles to mirror the ebb and flow of lived experiences.	1) Erhu in folk storytelling (e.g., "Moon Reflected on Second Spring"). 2) Tibetan Prayer Chants accompanying monastic rites	- Emotion: Intense sorrow or exaltation, spiritual awe. - Cultural Identity: Links to communal folklore (Erhu) and deep-rooted Tibetan spiritual identity (prayer chants).
Harmonious Balance	Emphasis on blending melodic lines into a cohesive whole, reflecting Confucian ideals of social and cosmic harmony.	1) Guqin meditative solos. 2) Mongolian Long Song (Urtin duu) capturing vast grassland spirit	- Emotion: Tranquility, introspection. - Cultural Identity: Confucian pursuit of self-cultivation (Guqin) and nomadic pride in the open steppe (Mongolian Long Song).

In Table 4, we highlight that ethnic music's emotional engagement is a theme central in connecting listeners to their cultural and emotional roots. Traditional melodies (Miao Lusheng performances), traditional performance styles (Guzheng pieces "High Mountain and Flowing Water"), are used to bring forth a yearning and to proclaim an ancestral continuity to give ethnic pride. The Erhu and Tibetan Prayer Chants, utilizing Expressive Dynamics, give us the scope of human emotions ranging from infamy to exultation, which associated with spiritual odium and communal narratives. Finally, we find Harmonious Balance, as embodied by Guqin meditative solos and Mongolian Long Songs, which mirror the Confucian values of harmony and serenity and which tie in introspection and self-cultivation with pride in geographic or philosophical identities.

Table 5: Cultural Identity through Instrumental Traditions

Theme	Aesthetic Explanation	Ethnic Music Examples	Elements of Emotion and Cultural Identity
Symbolic Resonance	The shape, playing technique, or ornamental design often reflects regional aesthetics and historical narratives, turning the instrument into a cultural icon that bridges generations.	1) Pipa compositions in Jiangnan style (e.g., "Spring River Flower Moon Night"). 2) Zhuang Buluotuo epic songs accompanied by traditional bowed lutes	- Emotion: Reverence for local heritage, pride in distinct folklore. - Cultural Identity: Jiangnan's refined elegance and the Zhuang people's epic storytelling traditions (Buluotuo)
Rhythmic Heritage	Rhythmic patterns are often preserved by a number of communities as the accompany to dance, ritual or daily tasks. Transmitted orally, these become drum patterns, percussive beats or clapping sequences enhancing communal solidarity.	1) Miao festival drumming for harvest dances. 2) Yi group (彝族) fire-dance drumming	- Emotion: Collective excitement, unity in celebration. - Cultural Identity: It links agricultural cycles (Miao) and rites of passage (Yi) to bonds among the members through a common tradition or festive gathering.
Ritualistic Significance	As ceremonial functions, musical elements honor the ancestors, mark out life cycle events, or sanctify communal spaces. Confucian principles of filial piety, Taoist cosmological balance or local spiritual beliefs are often integrated into these rituals and reinforce moral codes and responsibilities within the community.	1) Funeral music in Confucian ceremonies. 2) Tibetan Buddhist dungchen (long horn) used in religious rituals	Emotion: Mostly, respect and spiritual devotion. - Cultural Identity: Participates in aligning participants with cultural values like xiao (filial piety) in Confucian contexts or in fostering communal piety driven in Tibetan Buddhism where one reveres both, ancestors and deities.

Table 5 shows how Instrumental traditions support cultural identity through symbolic, rhythmic and ritualistic elements. Instruments become

symbols of ethnic pride and regional aesthetics with Pipa compositions such as 'Spring River Flower Moon Night' and Zhuang Buluotuo epic songs via Symbolic Resonance as an homage to local heritage and a means by which to meld cultural identity with geographic and mythological setting. Miao harvest dance and festival drumming, as well as Yi fire dance drumming, also have rhythmic heritage, and serve all to engender collective excitement and unity through communal activities preserving unique patterns, and to support the tradition related to agricultural cycle and ceremonial rites. Ritualistic Significance emphasizes music's ceremonial acts of honoring ancestors or sanctifying communal spaces, such as Confucian funeral music or Tibetan Buddhist dungchen performances that make participants act filially pious or spiritually devout.

Table 6(a): Aesthetics Education in Ethnic Music

Theme	Aesthetic Explanation	Ethnic Music Examples	Elements of Emotion and Cultural Identity
Sensory Immersion	The more traditional way we see the environment is a multi-sensory environment that performs with sights, sounds and sometimes even aromas (like incense in a temple setting). The immersive nature of the narrative goes far beyond the interpretive and enables greater emotional response as well as a more intimate understanding of the cultural lineage of the music from which this music most clearly derives, prompting audiences to be a part of tradition, not simply observe it.	1) Live Guzheng and Pipa demonstrations in conservatories. 2) Naxi (纳西) ancient music with incense and ritual dances	- Emotion: Awe, heightened appreciation. - Cultural Identity: Encourages deep engagement with Han classical traditions (Guzheng, Pipa) or the unique syncretic culture of Naxi people, blending Dongba religious elements with melodic heritage.
Cross-Modal Narratives	Instrumental music, choreographed movement, and symbolically designed costume of Chinese operatic forms and some ethnic dance dramas fuse. Audiences experience a layered cultural literacy of historical or legendary stories, comprised of an interplay of visual cues, dramatic expression, and musical motifs.	1) Peking Opera performances (京剧). 2) Yunnan Dai peacock dance dramas with accompanying flute music	- Emotion: Dramatic tension, fascination. - Cultural Identity: Reinforces Beijing's centuries-old operatic artistry (Peking Opera) or the Dai community's reverence for nature (peacock as spiritual symbol), weaving moral lessons and cultural myths into multi-sensory storytelling.

Table 6(b): Aesthetics Education in Ethnic Music

Theme	Aesthetic Explanation	Ethnic Music Examples	Elements of Emotion and Cultural Identity
Cross-Modal Narratives	Instrumental music, choreographed movement, and symbolically designed costume of Chinese operatic forms and some ethnic dance dramas fuse. Audiences experience a layered cultural literacy of historical or legendary stories, comprised of an interplay of visual cues, dramatic expression, and musical motifs.	1) Peking Opera performances (京剧). 2) Yunnan Dai peacock dance dramas with accompanying flute music	- Emotion: Dramatic tension, fascination. - Cultural Identity: Reinforces Beijing's centuries-old operatic artistry (Peking Opera) or the Dai community's reverence for nature (peacock as spiritual symbol), weaving moral lessons and cultural myths into multi-sensory storytelling.
Adaptive Creativity	Musicians and educators integrate modern tools—such as electronic soundscapes, social media, or cross-genre collaborations—to keep folk or classical forms relevant. This sparks innovation while honoring time-honored forms, appealing to younger audiences and ensuring that living traditions evolve instead of stagnating.	1) Digital remixes of Suzhou Pingtan. 2) Rap-infused Miao folk songs	- Emotion: Excitement, curiosity. - Cultural Identity: Celebrates cultural continuity while embracing modernity. By fusing centuries-old traditions (Pingtan, Miao folk music) with electronic beats or rap, artists expand the audience and highlight the adaptability of cultural roots.

Table 6 explores themes from aesthetic education in ethnic music, showcasing how sensory and creative approaches deepen engagement and cultural understanding. Sensory Immersion integrates sights, sounds, and rituals, as seen in live Guzheng and Pipa demonstrations and Naxi ancient music with incense and dances, evoking awe and fostering appreciation for Han classical traditions and Naxi syncretic culture. Cross-Modal Narratives blend instrumental music, movement, and costume to narrate cultural stories, exemplified by Peking Opera and Yunnan Dai peacock dance dramas, creating dramatic fascination while reinforcing Beijing's operatic legacy and the Dai community's reverence for nature. Adaptive Creativity modernizes traditional forms through digital remixes of Suzhou Pingtan and rap-infused Miao folk songs, sparking excitement and ensuring cultural continuity by fusing traditions with contemporary elements to appeal to younger audiences. Together, these themes demonstrate how aesthetic education keeps ethnic music vibrant and relevant.

Table 7: Themes from Emotional and Cultural Pedagogy

Theme	Aesthetic Explanation	Ethnic Music Examples	Elements of Emotion and Cultural Identity
Emotional Storytelling	Ballads, folk tales, and epic narratives carry communal memory, moral lessons, and emotional arcs. Musical ornamentations (e.g., note bending on string instruments) heighten dramatic moments, fostering empathy for characters and their dilemmas, while reinforcing collective values and historical consciousness.	1) Folk ballads with Erhu accompaniment (e.g., "Farewell My Concubine"). 2) Mongolian epic singing (e.g., narrative chanting with Morin Khuur)	- Emotion: Compassion, admiration, or sorrow for legendary figures. - Cultural Identity: Deepens communal roots by passing on moral exemplars (Han-based ballads) or heroic sagas (Mongolian epics), ensuring listeners inherit cultural ethos through emotionally charged storytelling.
Intergenerational Learning	Knowledge of instruments like the Guqin, the Mongolian Morin Khuur, or the Kazakh Dombra typically passes from master to student. Teaching sessions incorporate philosophical guidelines—Confucian humility or a nomadic code of cooperation—ensuring young learners absorb both technical skills and cultural virtues simultaneously.	1) Teaching Guqin in Confucian academies. 2) Kazakh Dombra lessons in Xinjiang	- Emotion: Respect for elders, dedication to craft. - Cultural Identity: Affirms ancestral lineage (Han literati tradition, Kazakh nomadic heritage) through direct mentorship, ensuring each new generation internalizes ethical norms alongside musical technique.
Inclusive Participation	Workshops and communal performances invite people of various skill levels and backgrounds to collectively engage in music-making. By being inclusive, this model creates a feeling of shared ownership of heritage and fosters social bonds and motivates everyone to celebrate cultural diversity in China's overall mosaic.	1) Collaborative drumming workshops for festival parades. 2) Zhuang singing festivals (对歌) in Guangxi	- Emotion: Joy, solidarity, community pride. - Cultural Identity: Emphasizes diversity (multi-ethnic involvement in drumming) and fosters intergroup harmony (Zhuang singing duets), reinforcing the idea that cultural practices gain vitality through collective participation.

Table 7 discusses themes: emotional and cultural pedagogy, how ethnic music emphasizes the enlivening of culture and the dissemination of values. Emotional Storytelling employs the use of the Morin Khuur or the Erhu-accompanied folk ballads such as "Farewell My Concubine" and Mongolian epic singing to convey communal memory and moral lessons

through emotional stories that bring compassion and lay importance on our ethos. The transmission of both philosophical and technical knowledge, as evidenced by Confucian academies that taught the Guqin and Kazakh Dombra lessons, how one teaches the other, ensures that cultural virtue and ancestral tradition together with its knowledge, is handed on during intergenerational learning. Inclusive Participation enhances communication between various groups through workshops and performance, including festival drumming workshops and Zhuang singing festivals, producing joy, solidarity and community pride, and celebrates cultural diversity within China's rich cultural heritage.

6. DISCUSSION

The results show significant improvement in all metrics of emotional engagement, cultural identity and satisfaction through the intervention. Over all metrics, such as the average platform time and completion, digital enhanced lessons proved to be consistently and significantly better than traditional approaches. Thematic analyses showed the richness of cultural content in ethnic music that contributed to the emotional narrative, intergenerational knowledge transfer, and mobilized access to ethnic music participation; adaptive creativity connected traditional to the contemporary music that kept it relevant and continuous. This is in agreement with Kaikai and Sornyai (2022) who revealed that including transformed folk song pieces such as those composed by Chu Wanghua can help students to better appreciate cultural values as presented in performance. For example, the results of research have also established that traditional melodies adapted by Chu, including those applied in piano accompaniment classes, helps in the preservation of intangible cultural heritage. This paper builds on this literature by demonstrating how ICTs including interactive social media platforms and virtual piano lessons can enhance folk music learning and teaching processes in different contexts. Expanding the scope of the study from piano accompaniment to other instruments and digital media, for example, live Guzheng performance, and digital Pipa lessons, we also see how our approach can overcome the drawbacks discussed by Kaikai and Sornyai (2022) and how it can facilitate the development of effective and accessible teaching strategies for a large number of students. Borrowing from Lee (2022) research on the conflict between cultural heritage safeguarding and modernization in Mongolian music customs, our results indicate that adaptive creativity reduces this conflict. For example,

evidence of blending modern tools and cultural preservation includes cross genre collaborations (Morin Khuu and digital remixes of Mongolian epic singing with narrative chanting) which suggest that modernization does not harm cultural preservation. What it does instead is create a space dynamic that allows for coexistence of traditional and modern elements needed to appeal to the younger audiences as well as traditionalists, while at the same time keeping the authentic nature of the ethnic music traditions. Our study builds on the work of Li and Choatchamrat (2024) who highlighted the involvement of government policies and local effort in sustaining folk music in Inner Mongolia. Though their study concentrated on geographically distinctive efforts (i.e., policies that gingerly assist the Buluotuo epic songs to be sung with traditional bowed lutes), we show that digital improving lessons (virtual performances and interactive lessons on Inner Mongolian instruments) can transcend regional limits. The way in which this integration process is facilitated in this case, however, provides a universal framework for putting ethnic music into the education, since local policies can work with global technological advancements to preserve culture on a larger scale. Hu and Wang (2024) figured out the necessity of having Chinese folk music inserted into university curricula to boost cultural understanding among students. We illustrate how this claim is empirically supported by our results, which show how the integration of the two areas promotes emotional engagement and cultural identity. Specifically, live Guzheng performances and virtually immersing one into Pipa compositions (i.e. 'High Mountain and Flowing Water') was the most efficacious in engaging students. We also fill the gap in Hu and Wang (2024) research by demonstrating how digital tools such as virtual ethnographic experiences and audiovisual tutorials can help bridge the gap between sociology and the students, making the curriculum more interactive and attractive to students. In Shuang (2024), a theoretical analysis was proposed for modernizing folk music education without shedding of tradition. We show how digital enhanced lessons can balance innovation and tradition, and provide empirical validation to back Shuang (2024) proposition. For instance, digital remixes of Suzhou Pingtan being used in classroom alongside traditional storytelling is an example of how easily they can be integrated. Our study illustrates how to put Shuang (2024) strategies in practice, integrating digital tools without compromising cultural authenticity, and it contributes to the discourse of how to modernize folk music education. F. Li (2020) through big data analysis on Chinese folk music found the impact of Western elements on Chinese folk music and pointed out the importance of maintaining Chinese style in the

exchange of culture. In this light, our findings demonstrate how digital tools can help make the case for the uniqueness of ethnic music traditions. For instance, innovation can also strengthen rather than weaken traditional practices, through cross modal narratives such as Yunnan Dai peacock dance dramas with flute music, or Miao festival drumming tutorials available online. However, this dissects the limitations in F. Li (2020) vocal music–centric analysis and expands (dissolves) beyond that into instrumental and ensemble traditions. According to Yang (2011), the incorporation of Hua'er folk music in university curricula faces such barriers as the lack of institutional support and of trained educators. We show with our study that digital enhanced lessons can bridge these gaps and reduce dependency on specialized training, while also providing scalable resources. Online training modules for teaching in Confucian academies (using Guqin) and for teaching in Xinjiang (Kazakh Dombra lessons) were demonstrated as effective in preparing teachers. Our findings address these systemic challenges and provide a practical solution for expanding Yang (2011) pedagogical strategies to enrich university level music education in various traditions. Liu and Othman (2022) argued that innovative teaching methods were required to get the primary school students interested to learn folk songs again. Despite that their study focused on primary education, our results reveal that the results from the digital enhanced lesson were just as effective for all other levels of education. For instance, pseudo community and pseudo music projects like collaborative drumming workshops for festival parades and Zhuang singing festivals (duige) in Guangxi help cultivating an appreciation for ethnic music for a lifetime. Our study demonstrates how emotional storytelling, intergenerational learning, and adaptive creativity can be integrated in innovative ways to span education curves and holistically respond to the overarching cultural preservation challenge.

7. CONCLUSION

This work reveals the digital lesson enhancement as an approach to energize emotional and cultural aspects of ethnic music education, and to enhance the satisfaction of the teachers. The intervention does a great work in combining the old practices with new digital tools to effectively fill the gap between the preservation of the culture and modernization. The results of this thesis contribute a flexible framework that can be used for developing ethnic music education across different settings. Further

research should examine the long-term sustainability of such interventions and look at ways of utilizing them in other educational and cultural contexts.

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