MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

OCTOBER 2026, VOLUME 14, ISSUE 4, 83-107
E-ISSN NO: 2289 – 4489

LEADING RESPONSIBLE ARTIFICIAL INTELLIGENCE INTEGRATION IN CHINESE TRADITIONAL MUSIC EDUCATION: EDUCATIONAL LEADERS' PERSPECTIVES ON AI LEADERSHIP FOR CULTURAL SUSTAINABILITY

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Article History:
Received: 4 August 2026
Revised: 28 August 2026
Accepted: 18 September 2026
Published: [Day Month Year]

ABSTRACT

Artificial intelligence is transforming higher education and presenting new opportunities for innovation in music education. However, integrating artificial intelligence into Chinese traditional music education presents challenges for educational leaders. While the integration of artificial intelligence in higher education settings has been widely studied, limited attention has been given to leadership in the integration of artificial intelligence in disciplines that hold considerable cultural significance for China. Using an interpretivist approach, this study explored the perspectives of educational leaders in the context of artificial intelligence leadership for the sustainability of Chinese traditional music education. An interpretivist qualitative study was conducted with fifteen nationally recognised educational leaders and expert educators of Chinese traditional music from China's universities and conservatories. These participants were selected through criterion sampling. Interviews with the participants used a semi-structured interview guide to explore their experiences and perspectives, which were analysed using reflexive thematic analysis. Five themes emerged from the analysis: experiencing artificial intelligence as educational transformation, leading responsible integration of artificial intelligence, negotiating tensions between artificial intelligence and music teaching traditions, balancing artificial intelligence with cultural sustainability, and developing the capacity of educational institutions for artificial intelligence leadership. The results of this study indicate that educational leaders recognise the value of artificial intelligence as an educational resource for supporting music education if it is responsibly integrated through the guidance of experienced music educators. However, they reject integrating artificial intelligence into aspects of music education that undermine music teaching traditions. The results of this study highlight the importance of educational leadership for the sustainable integration of artificial intelligence into music education. The outcomes of this study add to the growing discourse on artificial intelligence leadership in higher education. More specifically, the findings of this study propose directions for higher education institutions to follow in the responsible integration of artificial intelligence into the education of Chinese traditional music. The findings position responsible AI integration as an institutional leadership and management responsibility requiring coordinated governance, curriculum leadership, professional development, and organisational support.

Keywords: **Artificial intelligence, educational leadership, Chinese traditional music education, cultural sustainability, responsible AI, higher education, qualitative research.**

INTRODUCTION

Artificial intelligence (AI) and, more specifically, generative AI technologies, are beginning to impact and transform the field of higher education. AI technologies can assist with a variety of processes within higher education, from the learners themselves to various administrative processes within those institutions. Higher education institutions are beginning to consider in what ways AI can be best implemented within their institutions to enhance the educational experience of the students that attend those institutions (Bond et al., 2024; Khairullah et al., 2025; Yusuf et al., 2024). Within higher education, it is clear that educational leadership is one of the most important elements in the implementation of AI within those educational institutions (Polat et al., 2025; Sposato, 2025). AI has the potential to impact nearly every aspect of education, and it is the responsibility of the educational leaders within those institutions to determine in what ways AI can be integrated into the educational system in manners that do not negatively impact education itself.

Within the field of music education, AI is beginning to have an impact upon composition, performance, and even the understanding of music theory. However, scholars within the field of music education have begun to raise concerns regarding the authenticity of music that is created with AI, the potential negative impacts that AI may have upon the creative abilities of students within music classrooms, and other potential issues that may arise with the integration of AI into music classrooms and departments (Cheng, 2025; Mazlan et al., 2026; Peng et al., 2026). Yet, as with other subjects within education, those scholars and educators recommend that AI is utilized within music education as a tool that assists teachers within the classroom, yet one that does not replace the teachers themselves within those classrooms (AI in music education: challenges and opportunities for educators, n.d.).

The same challenges exist in Chinese traditional music education. Within Chinese traditional music education, there are certain responsibilities of the teachers within conservatories and music schools. These responsibilities include preserving the culture of traditional music education, teaching appreciation of that culture, and teaching the techniques required of musicians in traditional music. Studies in Chinese traditional music education have shown that AI is often used in the preservation and teaching of those techniques and culture. However, educators are often concerned about the potential impact of AI upon the embodied skills required of musicians, their understanding of the culture of Chinese traditional music, and their appreciation of the heritage of that type of music education (An et al., 2025; Huang et al., 2024, 2025; Jiang et al., 2026).

Thus, the integration of AI into Chinese traditional music conservatories presents a complex challenge to the educational leaders of those institutions. As educational leaders of conservatories and music schools in China, the leaders are both tasked with the management and integration of AI into the conservatories and music schools to enhance music education within China, yet they are also responsible for protecting the cultural and educational values inherent to traditional music education in China. Therefore, integrating AI into conservatories in China should be the task of educational leaders who understand the challenges inherent in both the integration of AI and the preservation of the cultural values of music education.

Currently, research regarding AI and its integration into music education is expanding at a rapid rate. However, much of the research that has been performed within the field of music education and AI has focused on studies regarding the technology acceptance of musicians and educators, the applications of AI within music education, the impact of AI upon music learning, and technical analyses of the applications of AI within music education. Few studies have been performed, however, that investigate the role of educational leaders within the integration of AI into music education, especially into subjects like Chinese traditional music that have both cultural and educational significance within music education. Furthermore, few studies have been performed that investigate the experiences of educational leaders regarding the challenges to the integration of AI into traditional music education, especially within the context of Chinese traditional music education.

Despite the available information regarding AI and its integration into music education in general, there is a critical

area for research within music education and artificial intelligence: in understanding the perspectives of educational leaders regarding the integration of AI into the field of Chinese traditional music education. The educational leaders of conservatories in China will determine the future of AI and its integration into the field of traditional music education. Thus, understanding the challenges and experiences of the educational leaders of Chinese traditional music conservatories will assist music education and conservatories in general to provide appropriate recommendations regarding the integration of AI yet preserving the cultural heritage of music education.

This study, therefore, aims to investigate the perceptions and experiences of educational leaders with the integration of AI into the field of Chinese traditional music education. An interpretivist qualitative study was performed with 15 nationally-recognized educators and experts in Chinese traditional music who were leaders within conservatories and music schools across the country in China. These experts were interviewed regarding their knowledge of the various aspects of the field of Chinese traditional music education, their experiences with their role as educational leaders within that field, and their recommendations regarding the integration of AI into the field of traditional music education within the context of China.

The study addresses the following research questions:

1. How do educational leaders experience the emergence and integration of artificial intelligence in Chinese traditional music education?
2. How do educational leaders enact AI leadership in teaching and learning?
3. How do educational leaders negotiate the pedagogical, ethical, institutional, and cultural tensions associated with AI integration in Chinese traditional music education?
4. How do educational leaders balance AI integration with the cultural sustainability of Chinese traditional music?
5. What leadership strategies and institutional recommendations do educational leaders propose for strengthening responsible AI integration in Chinese traditional music education?

Finally, this study contributes to educational leadership literature by advancing the concept of AI Leadership for Cultural Sustainability, which conceptualises responsible AI integration as a leadership practice that combines strategic governance, ethical judgement, curriculum leadership, professional learning, and cultural stewardship. Drawing upon the perspectives of experienced educational leaders, the study proposes a conceptual framework that may assist universities, conservatories, and policymakers in implementing AI responsibly while preserving the educational and cultural integrity of Chinese traditional music.

LITERATURE REVIEW

Artificial Intelligence and Educational Leadership in Higher Education

Artificial intelligence is one of the most significant developments that has emerged in higher education in the last few years. Many of the functions of higher education can be influenced by AI, from the learning of students within the classroom to the way in which teachers manage the higher education institutions in which they teach. The development of generative AI has only further enabled these universities to change their educational environments and institutions. Consequently, many scholars believe that implementing AI within higher education institutions is an issue of organization and leadership within those educational institutions (Bond et al., 2024; Khairullah et al., 2025; Yusuf et al., 2024).

The leadership of higher education institutions will play a vital role in the implementation of AI within their institutions. Each of these educational leaders will need to develop a strategy for the implementation of AI within their institutions to ensure that the implementation of AI does not have any negative impact upon the education of the students within their institutions. Additionally, the leadership of these institutions will need to make decisions regarding issues like data privacy, equity in education, the accountability of the higher education institutions in the

use of AI, and the impact that AI can have upon education in general (Polat et al., 2025; Sposato, 2025). Furthermore, the leadership within these institutions plays a critical role in educators' willingness and capacity to implement artificial intelligence within their classrooms, particularly because successful digital transformation requires attention to technology integration, staff capability development, pedagogical compatibility and institutional resource allocation (Zhang et al., 2026). Various factors within the institutions will impact the willingness that educators within those institutions have to use AI within their own classrooms (Cheng & Wang, 2023; Kovačević et al., 2025; Tarisayi, 2024). Thus, the leadership of the educational institutions will have an impact upon educators' decision to incorporate AI into their classrooms.

Artificial Intelligence in Music Education

Artificial intelligence and its applications within the field of music education have been rapidly developing. AI technologies related to music education include intelligent tutoring systems for music education, musical assessment technologies, AI-assisted music composition and playing applications, and various other technologies that have been developed to enhance the music learning experience of students within higher education institutions (Cheng, 2025; Mazlan et al., 2026). The use of AI technologies in music education has the potential to enhance the learning experience of students by increasing the efficiency of learning music, enabling creativity in music education, and allowing students to receive immediate feedback upon their creation of musical content. However, various scholars suggest that the use of AI in music education has the potential to have negative impacts on music education, specifically in relation to the reduction of students' independent musical thinking and creativity (Cheng, 2025; Peng et al., 2026). Thus, music educators will need to become familiar with artificial intelligence and its impacts upon music education to ensure that its implementation into music classrooms is a responsible one.

Furthermore, another factor that will impact the implementation of AI within music classrooms is the readiness of the teachers within those classrooms to implement these technologies. Music teachers will need to demonstrate readiness and confidence in the implementation and use of artificial intelligence technologies within their classrooms, as they will be responsible for effectively incorporating these technologies into their classrooms and music teaching practices (He & Ren, 2025). Thus, investigating the factors that impact music teachers' readiness to implement artificial intelligence technologies will be a critical task of the educational leaders within the teacher education programs for music teachers. Research on technology-supported teaching similarly indicates that effective integration depends upon teacher leadership, pedagogical knowledge, continuous exposure to technology-related training, and the appropriate revision of curricula (Mamat et al., 2023).

Chinese Traditional Music Education and Cultural Sustainability

In contrast to the discussion of the applications of artificial intelligence to music education in general, various scholars have begun to investigate the impact of AI on the sustainability of China's musical culture and heritage. China implements forms of traditional music education to allow students to learn and appreciate the country's cultural heritage. However, various challenges threaten the sustainability of these music education programs. For instance, Chinese higher education institutions appear to struggle to preserve the country's traditional musical culture and heritage (Huang et al., 2024; Huang et al., 2025). Various reasons for the challenges to the sustainability of music education programs include the lack of interest in learning traditional Chinese music among younger generations of Chinese individuals, the influence of Western musical culture in China, the lack of an approach to music education to preserve traditional Chinese musical heritage among teachers of that type of music and students, and the weakening of the relationships between teachers and apprentices of traditional Chinese musical heritage. Various recommendations for improving the sustainability of the traditional music education programs include the implementation of digital resources into music education programs, the improvement of teacher preparation programs for teachers of traditional Chinese music, and the increasing support for traditional music education within the higher education institutions within China.

Additionally, other scholars have suggested the implementation of new music education curricula within the country to develop musical competencies within music educators. For instance, Jiang et al. (2026) suggest that incorporating

experiences in music education programs within conservatories throughout China will enhance students' cultural awareness and allow them to meet the demands of the changing education system throughout the country. Furthermore, Zhang et al. (2024) state that many educators of traditional music within China lack knowledge of China's traditional musical instruments, their skills in teaching music to students, and knowledge of the country's traditional culture. Thus, enhancing the musical and cultural knowledge of music educators throughout China is essential for the sustainability of the country's traditional musical heritage.

AI Leadership for Cultural Sustainability

There have been a variety of studies performed regarding artificial intelligence, educational leadership, music education, and even the preservation of China's traditional musical heritages and culture. However, there are few studies that have evaluated the topic of artificial intelligence leadership and its implications for the sustainability of the traditional musical heritages of China. The majority of the studies that have been performed on the topic of artificial intelligence and leadership relate to the leadership of educational institutions in the incorporation of artificial intelligence as a means of transforming their educational environments and improving the educational experiences of their students. Furthermore, the majority of the studies that have been performed on the topic of the sustainability of China's traditional musical heritages have focused upon the methods of preserving that musical culture and heritage. However, few of those studies have concerned the impact that artificial intelligence may have upon such discussions regarding the preservation of that heritage. Yet, incorporating the concepts of artificial intelligence and leadership into the discussions of music education and cultural sustainability presents critical perspectives on the development of traditional Chinese music. Artificial intelligence leadership for cultural sustainability relates to the leadership of educational institutions to incorporate artificial intelligence technologies into music education programs while ensuring that such incorporation does not have any negative impact on the sustainability of the musical heritage of China.

Furthermore, recommendations for the leadership of educational institutions in the incorporation of artificial intelligence into education can be applied to artificial intelligence leadership for cultural sustainability, such as ensuring that the leaders of educational institutions incorporate artificial intelligence in ways that enhance the educational experiences of their students rather than any that inhibit those educational experiences (Bond et al., 2024; Khairullah et al., 2025). Though artificial intelligence technologies have the potential to enhance the sustainability of China's traditional musical heritages, they also have the potential to threaten their sustainability if not incorporated into the classrooms in the appropriate manner by educational leaders. Thus, educational leaders in the music conservatories throughout China will need to make judgements regarding the proper application of artificial intelligence technologies in music education to ensure that such incorporation enhances the educational experiences of students in China without threatening the sustainability of its musical culture.

Artificial intelligence leadership for cultural sustainability can be defined as the leadership of educational institutions to incorporate artificial intelligence into music education in ways that are responsible and ensure that they do not have any negative impacts on the sustainability of the heritage of China's traditional musical culture. This concept can be utilized to investigate the experiences of the educational leaders of conservatories throughout China and to discuss the implications of such an investigation for the literature that has been published on educational leadership and management in general.

Research Gap

Current scholarship demonstrates growing interest in AI implementation, educational leadership, music education, and cultural sustainability. However, three important gaps remain.

First, most AI studies emphasise technological adoption, instructional effectiveness, or student outcomes, with comparatively limited attention to educational leaders' strategic roles in guiding responsible AI implementation.

Second, research examining AI within music education has focused largely on creativity, composition, assessment,

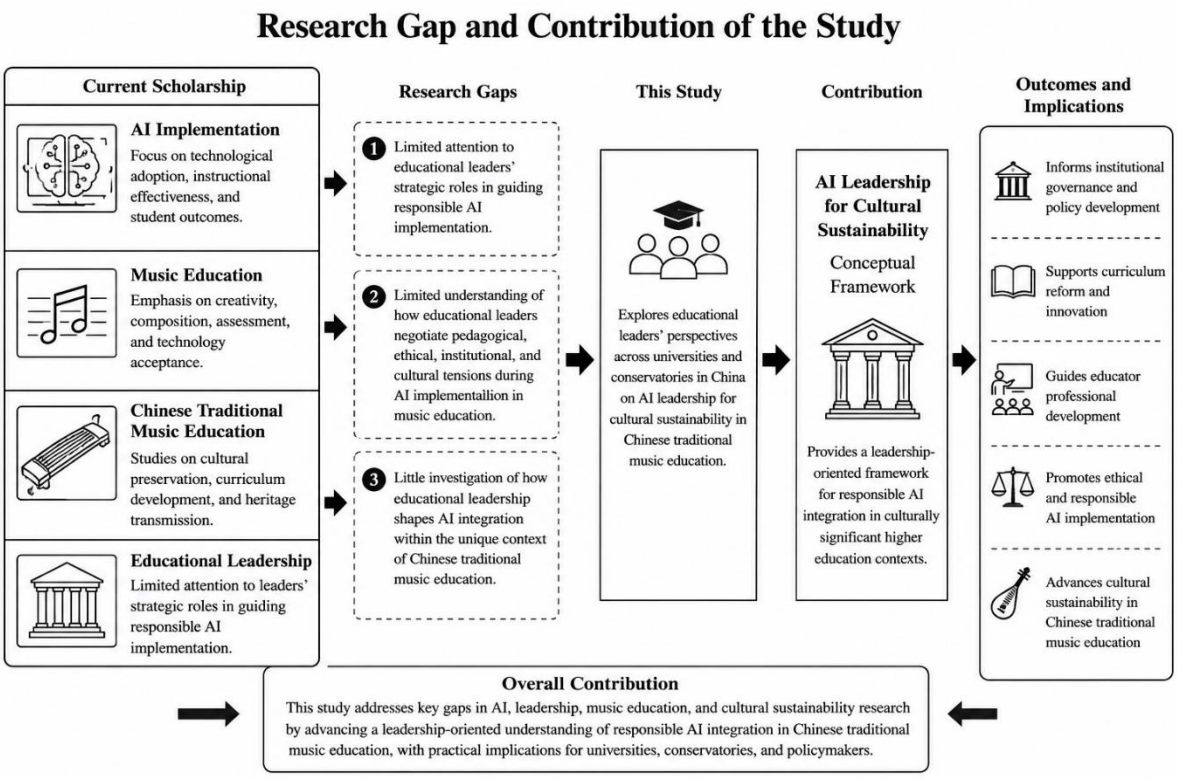
and technology acceptance, while providing limited understanding of how educational leaders negotiate pedagogical, ethical, institutional, and cultural tensions during implementation.

Third, studies concerning Chinese traditional music education predominantly examine cultural preservation, curriculum development, and heritage transmission, with little investigation of how educational leadership shapes AI integration within this unique educational context.

By exploring educational leaders' perspectives across universities and conservatories in China, this study addresses these gaps and advances a leadership-oriented understanding of responsible AI integration for cultural sustainability. As shown in Figure 1, the findings contribute to educational leadership literature by proposing AI Leadership for Cultural Sustainability as a conceptual framework capable of informing institutional governance, curriculum reform, educator professional development, and responsible AI implementation within culturally significant higher education contexts.

Figure 1

Research Gap for the Study



METHODOLOGY

Research Paradigm and Design

The interpretivist research paradigm was adopted for this study to explore the topic of responsible AI integration in the context of Chinese traditional music education. The interpretivist research paradigm assumes that the reality of a phenomenon is constructed by individuals within specific contexts and through their experiences (Creswell & Poth, 2018; Merriam & Tisdell, 2016). Considering the aim of this study to investigate the topic of AI leadership within music education, the interpretivist research paradigm was the most appropriate methodology for this investigation.

An interpretivist qualitative research design was used to explore how educational leaders understood and enacted

responsible AI integration within Chinese traditional music education. This design was appropriate because the study sought an in-depth understanding of participants' experiences, professional judgements and interpretations. Although participants represented different universities, conservatories, leadership roles and musical specialisations, they were treated as knowledgeable contributors to a shared phenomenon rather than as separate cases. The interview data were therefore analysed across the participant group using Reflexive Thematic Analysis to construct patterns of shared meaning relevant to the research questions (Braun & Clarke, 2022; Creswell & Poth, 2018)

Research Context

The study was conducted within selected universities and conservatories in China, where there are formal programmes in the study of Chinese traditional music. These institutions perform both a role in the preservation of intangible cultural heritage and in meeting the demands of the digital transformation of the institution.

Finally, these types of institutions are an appropriate venue in which to study these education leaders regarding their institutions' priorities of technology, education, and preservation. Placing the participants into their organizations allows the study to observe the organization's leaders in their native environment, rather than in an experimental situation (Creswell & Poth, 2018).

Participants and Sampling

Fifteen nationally recognised educational leaders and expert Chinese traditional music educators participated in this study. Participants were recruited using purposive criterion sampling, which is widely recommended for qualitative studies seeking participants with substantial experience and specialised knowledge relevant to the research phenomenon (Creswell & Poth, 2018; Patton, 2015).

Participants satisfied the following inclusion criteria:

1. A minimum of ten years' teaching experience in Chinese traditional music within higher education;
2. Current involvement in teaching, curriculum leadership, programme management, departmental leadership, or educational administration;
3. Recognised expertise demonstrated through scholarly publications, curriculum development, artistic performance, educational leadership, professional awards, or other recognised contributions to Chinese traditional music education; and
4. Experience using, evaluating, leading, or making institutional decisions regarding AI or digital technologies in teaching and learning.

The participants represented professors, associate professors, department heads, programme coordinators, curriculum leaders, and senior educators from different universities and conservatories. They also reflected diverse disciplinary expertise, including traditional instrumental performance, vocal music, ensemble performance, composition, music theory, and Chinese traditional music pedagogy. Such diversity enabled the study to capture multiple perspectives regarding responsible AI leadership across different educational settings.

The sample size was guided by the principle of information power, which suggests that studies involving participants with extensive expertise and narrowly defined research aims require fewer participants because each interview contributes substantial analytical depth (Malterud et al., 2016). Recruitment continued until sufficient conceptual depth had been achieved and additional interviews no longer generated substantially new insights relevant to the research questions.

Data Collection

Data were collected online through semi-structured individual interviews conducted between January and June 2026. Interviews were conducted either face-to-face or through the Zoom platform, according to participants'

preferences and availability. Semi-structured interviews are particularly suitable for qualitative research because they provide sufficient flexibility to explore participants' experiences while maintaining consistency across interviews through a common interview protocol (Kallio et al., 2016). The interview protocol was developed directly from the five research questions and explored:

1. Educational leaders' experiences of AI integration;
2. AI leadership practices;
3. Pedagogical, ethical, institutional, and cultural tensions;
4. Balancing technological innovation with cultural sustainability; and
5. Institutional leadership strategies for responsible AI implementation.

Open-ended questions encouraged participants to describe specific experiences, leadership decisions, institutional practices, and critical incidents rather than expressing only general opinions. Follow-up questions were used to clarify meanings, probe emerging concepts, and obtain detailed examples of leadership practice.

Each interview lasted approximately 30 to 60 minutes. With participants' consent, all interviews were audio-recorded and transcribed verbatim to preserve the accuracy and richness of participants' accounts.

Data Analysis

The interview data were analysed using Reflexive Thematic Analysis (RTA) following Braun and Clarke's (2022) six-phase analytical framework. Reflexive thematic analysis was selected because it supports interpretive qualitative research by enabling researchers to identify patterns of shared meaning while recognising that themes are actively developed through researchers' reflexive engagement with the data rather than passively discovered.

The analysis followed six recursive phases:

1. Familiarisation with the data;
2. Systematic generation of initial codes;
3. Construction of candidate themes;
4. Reviewing and refining themes;
5. Defining and naming themes; and
6. Producing the analytical narrative (Braun & Clarke, 2022).

Coding was conducted manually and organised through a Google Sheet, which facilitated systematic management of transcripts, code development, retrieval of supporting quotations, and comparison across participants. Throughout the analytical process, the researchers engaged in constant comparison, reflexive memo writing, and iterative theme refinement to ensure that the emerging interpretations accurately reflected participants' perspectives while remaining conceptually coherent (Saldaña, 2021). The final analysis generated five overarching themes that collectively addressed the research questions and informed the development of the proposed AI Leadership for Cultural Sustainability Framework.

Trustworthiness

The trustworthiness was established using the criteria proposed by Lincoln and Guba (1985).

1. Credibility was strengthened through purposive recruitment of highly experienced educational leaders, prolonged engagement with the interview data, iterative questioning during interviews, and continuous comparison across participant accounts. Reflexive memoing throughout the analytical process further supported accurate interpretation of participants' perspectives.
2. Transferability was enhanced through detailed descriptions of the research context, participant characteristics, institutional settings, and analytical procedures, enabling readers to determine the

applicability of the findings to comparable educational contexts (Lincoln & Guba, 1985).

3. Dependability was supported by maintaining a comprehensive audit trail documenting participant recruitment, interview procedures, coding decisions, theme development, and analytical reflections. This transparent documentation enhanced the consistency and traceability of the research process.
4. Confirmability was promoted through reflexive practice, systematic documentation of analytical decisions, continual examination of alternative interpretations, and explicit efforts to ensure that the reported findings remained grounded in participants' narratives rather than researchers' personal assumptions (Lincoln & Guba, 1985).

Ethical Considerations

Ethical approval was obtained from the relevant institutional research ethics committee before the commencement of data collection efforts [UM.TNC(P&I)/UMREC_5083].

Each of the participants in the study completed a participant information sheet before the study, which contained information regarding the study objectives, procedures, voluntary nature of participation, confidentiality of the discussions, risks of participation in the study, and the right of the participants to withdraw from the study at any time without penalty. Electronically recorded informed consent was obtained from each of the participants prior to the commencement of the interviews.

The participants' identities were assigned codes (P01 to P15). Any information that could potentially identify the participants or their institutions was removed from any transcripts or discussion of the data. The audio recordings, transcripts, and documents related to the study were stored in a password-protected digital data storage location that was accessible only to the research team.

As the discussions among the participants included information regarding the leadership and governance of institutions and their implementation of AI, care was taken in the reporting of the results to ensure that no information was disclosed that could potentially reveal the identities of the participating institutions or their individual participants. Thus, the participants felt comfortable in discussing issues related to their institutions while maintaining the confidentiality of those institutions.

FINDINGS

The reflexive thematic analysis generated five interconnected themes that explained how educational leaders understood, enacted, and governed AI integration in Chinese traditional music education. The findings showed broad support for carefully bounded AI use, but participants consistently rejected technology-led approaches that displaced professional judgement, artistic interpretation, embodied learning, or cultural transmission. Across the participant accounts, responsible AI integration was framed as an educational leadership responsibility involving curriculum decisions, ethical governance, faculty development, institutional support, and cultural stewardship.

Experiencing AI As Conditional Educational Transformation

Participants did not describe their acceptance of AI as immediate or unconditional. Most began with caution, curiosity, or pragmatic experimentation. Initial concerns focused on whether AI could respect the cultural characteristics of traditional music, represent artistic meaning accurately, and contribute genuine educational value. P01 explained, "Initially I was cautious because I questioned whether AI could respect the cultural characteristics of Chinese traditional music." P03 similarly recalled approaching AI "with curiosity" while questioning whether it could understand interpretation or cultural meaning.

Acceptance increased when participants observed practical benefits in their own teaching and leadership contexts. AI was used extensively for lesson preparation, curriculum planning, literature searches, translation, archive management, resource organisation, assessment support, rehearsal preparation, and administrative tasks. P01

reported using AI for "lesson preparation, curriculum planning, archive searches, translation, assessment support, and administrative work." P05 used it for curriculum planning and teaching-material organisation, while performance specialists described applications in technical practice, rhythm analysis, accompaniment, rehearsal support, and formative feedback.

These practical experiences shifted many participants from uncertainty towards selective acceptance. However, increased confidence did not lead to unrestricted adoption. Participants differentiated consistently between functions that AI could support and areas in which it lacked legitimate authority. P05 noted that AI improved planning efficiency, "but I quickly realised that educational decisions still depended on the teacher's professional judgement." P04 stated that although AI applications improved efficiency, "performance interpretation always remains the responsibility of teachers and students."

The limits became particularly visible when AI-generated outputs appeared technically plausible but culturally or artistically weak. P06 described students accepting simplified translations of traditional opera materials before recognising that cultural meaning could not always be translated literally. P07 became more willing to use AI for documentation and research but remained cautious about artistic interpretation. P08 similarly accepted AI for preparation and resource management but maintained that it could not replace cultural explanation or artistic interpretation.

AI was therefore experienced as a form of educational transformation, but not as a replacement for established professional roles. Participants regarded it as useful when it expanded access, reduced routine work, improved organisation, or strengthened technical preparation. Its educational legitimacy remained conditional upon human interpretation, contextual evaluation, and alignment with the cultural purposes of traditional music education.

Enacting AI Leadership Through Selective Governance and Capacity Building

Participants enacted AI leadership by establishing criteria for adoption rather than promoting technology for its own sake. Decisions were guided primarily by educational value, cultural appropriateness, reliability, ethics, student readiness, access, and continued teacher control. P03 explained that AI applications were evaluated according to "cultural appropriateness, reliability, ethical issues, student readiness, and whether teachers remain in control of educational decisions." P02 added privacy, copyright, cost, and equitable access as important considerations.

This purpose-led approach positioned curriculum outcomes before technological novelty. Participants argued that AI should address an identifiable learning need and strengthen rather than redirect course objectives. P02 emphasised that "AI use should match learning outcomes." Across institutions, educational leaders introduced AI selectively into preparation, rehearsal, research, translation, and formative learning, while restricting its role in high-stakes assessment, artistic interpretation, and final educational decisions.

Several participants described concrete governance decisions that placed boundaries around AI use. P03 led the development of a postgraduate policy requiring students to disclose AI use, verify references independently, and explain their own critical evaluation. P05 permitted AI-assisted lesson planning during teacher education but required students to justify every instructional decision. P06 allowed AI-supported translation as a preliminary aid while requiring students to verify meanings and explain the cultural context independently. Similar decisions were reported in performance assessment, where AI analytics were used for practice or supplementary evidence but not as the final basis for grading.

Responsible learner guidance formed another important aspect of AI leadership. Participants consistently required students to verify AI outputs, disclose assistance, consult authoritative sources, and retain independent artistic or pedagogical judgement. P01 advised students to "verify AI information, acknowledge its use, and rely on teacher guidance when making artistic or cultural decisions." P07 warned students against repeating AI-generated explanations without developing their own interpretations. P09 emphasised that AI feedback should be treated as

one source rather than an absolute judgement.

Leadership also involved strengthening faculty capability. Participants organised workshops, mentoring sessions, demonstrations, collaborative curriculum discussions, and peer sharing. P01 described "workshops, mentoring sessions, and discussions where colleagues share practical teaching experiences." P04 deliberately included both successful and unsuccessful examples so that colleagues could understand AI's limitations. Participants preferred supportive and gradual professional learning over pressure-driven adoption, particularly for experienced educators whose concerns centred on educational quality rather than resistance to change.

The findings therefore characterised AI leadership as a combination of selective adoption, policy design, curriculum alignment, learner guidance, and professional capacity building. Leadership was demonstrated not by the volume of AI implementation but by the quality of the judgement used to govern it.

Negotiating Pedagogical, Ethical, Institutional, and Cultural Tensions

Although participants identified practical benefits, they also described substantial tensions requiring active leadership. The most consistent pedagogical concern was student dependence. Participants observed that immediate AI feedback could encourage students to value quick answers, measurable scores, or automated recommendations over sustained practice, critical reflection, careful listening, and independent judgement. P01 warned that students might "depend too much on AI and reduce independent practice or critical thinking." P02 noted that learners could focus excessively on "what can be measured," while P10 observed that technical scores sometimes distracted students from artistic expression.

These concerns differed across musical contexts but shared a common pattern. Instrumental specialists worried that algorithmic feedback privileged rhythm, pitch, or accuracy while overlooking tone, phrasing, individuality, and emotional expression. Ensemble leaders found that AI-supported rehearsal could improve preparation but weaken responsiveness to other musicians. Vocal and opera educators emphasised that pronunciation, gesture, emotional communication, dialect, and stage practice required direct human modelling. Ethnomusicologists cautioned that digital summaries could displace fieldwork and community engagement.

Ethical concerns included authorship, originality, copyright, academic integrity, privacy, transparency, consent, cultural ownership, and responsible use of recordings. P01 identified "copyright, academic integrity, privacy, transparency, and responsible use of AI-generated materials" as central concerns. P02 emphasised that consent was required when recordings were uploaded. P11 extended the issue to community ownership, arguing that AI-supported heritage work must respect the people whose musical traditions were documented.

Participants also reported institutional barriers. Policies remained uneven across departments, professional development was often generic rather than music-specific, infrastructure and access varied, and assessment rules had not always kept pace with AI use. P01 called for "clearer policies, professional development, stronger infrastructure, and consistent leadership support." P02 observed that available training was "not always connected to music education." These gaps created uncertainty about acceptable practice and placed responsibility on individual leaders to formulate local rules.

Cultural tensions were especially important. AI could recognise patterns, classify recordings, or generate technically convincing outputs, but participants found that it often overlooked regional diversity, stylistic nuance, philosophical meaning, community context, and embodied performance traditions. P03 argued that "technical accuracy is not the same as cultural understanding." P07 explained that AI could organise information effectively but often missed historical nuance and philosophical meaning. P11 described instances in which AI grouped distinct ethnic traditions because its training data did not represent local differences adequately.

The central tension was therefore not between technology and tradition in absolute terms. It concerned the

conditions under which efficiency, accessibility, or automation might begin to displace interpretation, diversity, relational learning, and cultural depth.

Balancing Innovation with a Human-Led Cultural Core

Participants defined cultural sustainability as continuing traditional music as a living educational and cultural practice. It involved more than preserving recordings or repertoire. Students were expected to inherit artistic techniques, performance values, cultural identity, historical knowledge, regional diversity, philosophical meanings, and responsibilities for future transmission. P03 described sustainability as enabling students to inherit "not only repertoire but also performance values, cultural identity, historical understanding, and respect for different regional traditions." P13 emphasised preservation of "musical language, artistic philosophy, and cultural values" while allowing thoughtful innovation.

A clear boundary emerged around areas that should remain human-led. Interpretation, embodied technique, tone production, emotional expression, ensemble communication, creative judgement, assessment, cultural explanation, and teacher-student mentorship were repeatedly identified as non-substitutable. P01 stated that "artistic interpretation, performance coaching, emotional expression, mentoring, assessment, and cultural explanation should remain human-led." P02 included embodied technique and ensemble sensitivity, while P11 identified fieldwork and community engagement as essential human responsibilities.

AI was viewed as appropriate for archiving, documentation, retrieval, translation, notation, lesson preparation, practice scheduling, technical feedback, rehearsal planning, and wider access. P04 explained that AI could "preserve recordings, organise archives, improve public access, and introduce younger audiences to Chinese traditional music." P07 highlighted preserving rare manuscripts and historical recordings. Such uses were considered valuable because they supported access and efficiency while allowing educators to devote more time to interpretation, mentoring, and artistic development.

Participants distinguished acceptable adaptation from cultural distortion. Adaptation was legitimate when it improved learning without altering musical logic, style, historical meaning, or community values. P10 explained that adaptation was acceptable when it improved learning while preserving "traditional performance style and cultural meaning." Distortion occurred when regional differences were standardised, complex traditions were simplified for convenience, or technology encouraged mechanical imitation.

Some participants argued that cultural decisions should involve more oversight. P02 recommended including teachers, performers, researchers, and community representatives. P11 stressed that communities should have authority in evaluating digital representations of their own traditions. Cultural sustainability was therefore understood as participatory stewardship rather than institutional preservation alone.

Building Institutional Conditions for AI Leadership for Cultural Sustainability

Participants proposed that responsible AI integration required comprehensive institutional governance. Participants consistently called for clear policies covering acceptable use, disclosure, assessment, authorship, copyright, academic integrity, privacy, data protection, and the handling of cultural materials. P01 recommended policies addressing "acceptable AI use, assessment, copyright, academic integrity, disclosure, privacy, and ethical governance." P07 added heritage preservation, while P11 included community consent and cultural ownership.

Resources and organisational support were equally important. Participants identified funding, infrastructure, technical assistance, protected time, pilot projects, preservation investment, and collaborative research as necessary enabling conditions. P03 argued that teachers required sufficient time to evaluate AI before implementation. P07 called for funding for preservation projects and interdisciplinary collaboration. These recommendations indicated that responsible adoption could not depend solely on individual teacher initiative.

Professional development needs to be discipline-specific. Participants rejected generic AI workshops that failed to address performance, creativity, cultural interpretation, assessment, or heritage ethics. Training should combine AI literacy with music pedagogy, curriculum design, copyright, ethical decision-making, verification, assessment, and cultural evaluation. P04 recommended preparation in "AI literacy, ethics, copyright, curriculum design, assessment, and practical classroom applications."

Curriculum committees were expected to evaluate AI against educational value, cultural authenticity, assessment fairness, teacher readiness, student needs, and long-term development. P01 recommended examining "educational value, cultural authenticity, teacher readiness, assessment quality, and student learning outcomes." Participants also favoured small-scale pilots before permanent curriculum integration.

Finally, institutions should monitor long-term effects rather than measure implementation through usage rates. Suggested indicators included musicianship, creativity, cultural understanding, teacher-student interaction, ensemble capability, community engagement, curriculum quality, teacher readiness, graduate outcomes, and preservation outcomes. Monitoring was viewed as a continuing leadership responsibility because both AI technologies and educational conditions would continue to change.

Taken together, the findings support the concept of AI Leadership for Cultural Sustainability. This form of leadership combines strategic governance, curriculum judgement, ethical accountability, professional capacity building, human-centred pedagogy, and cultural stewardship. Participants did not reject AI. They argued that its value depended on educational leaders maintaining firm human authority over the artistic, cultural, and ethical purposes of traditional music education.

The study therefore advances the concept of AI Leadership for Cultural Sustainability. This concept positions educational leaders as mediators between technological innovation and cultural responsibility. Their role is not merely to introduce AI, but to determine how, where, and under what conditions it can strengthen education without displacing the human relationships and cultural knowledge that sustain Chinese traditional music.

For universities and conservatories, the main implication is clear. AI should remain a carefully governed educational assistant rather than an autonomous authority. When leadership is grounded in evidence, ethics, professional judgement, and cultural values, AI can support innovation while contributing to the long-term sustainability of Chinese traditional music education.

DISCUSSION

Responsible AI Integration is Fundamentally an Educational Leadership Process

The findings indicate that educational leaders do not view AI as another piece of technology to be integrated into education. Instead, AI integration is recognized as a leadership process that involves decisions regarding curriculum, professional learning, and leadership of the cultural heritage of Chinese traditional music. While the technology was found to be beneficial in the areas of lesson preparation, rehearsal, documentation, translation, and learning, the same leaders rejected technologies that had the potential to negatively impact those same areas. Thus, the leadership of AI integration was found to actually be more dependent upon the leaders' ability to make educational decisions with the knowledge that the technology could potentially impact the educational process.

These findings are in alignment with those of other researchers who have discussed the leadership of AI implementation. For instance, Sposato (2025) has written of how AI leadership encompasses aspects like strategic planning, policy, curriculum leadership, professional learning, and educational leadership. Each of these aspects relates to the findings of this study in that educational leaders within Chinese traditional music are also the custodians of that cultural heritage, and thus, its preservation is another aspect of the AI leadership role.

The findings of this study also demonstrate the role of education in the leadership of AI. Specifically, AI was only implemented in areas of education in which it was deemed that it would increase the effectiveness of teachers and the learning of students. Thus, while Khairullah et al. (2025) have found that strategic leadership is required to effectively implement AI in education, the findings of this study additionally show that selective leadership of AI in specific educational contexts is also a leadership competency that should be recognized.

Human Judgement Remains the Foundation of Responsible AI Leadership

In addition to recognizing that the leadership of AI relates to the role of education in general, the findings of this study also indicate the role of human judgement. While AI was found to increase the efficiency in tasks related to the curriculum, lesson preparation, rehearsal, translation, and learning, the leaders maintained that AI should never be permitted to replace teachers and their judgements of students, performances, and their abilities within the subject.

These findings align with other research in higher education. For instance, Bond et al. (2024) have found that AI systems require more rigour, collaboration, and human oversight than many educational processes currently permit. Similarly, Yusuf et al. (2024) have recognized that AI cannot be integrated into education in a way that diminishes educational integrity. Furthermore, within the field of music education, both Cheng (2025) and Mazlan et al. (2026) have found that issues related to originality, authenticity, assessment, and teaching expertise must be accounted for in the integration of AI into the classroom.

In this particular study, however, AI leadership was additionally found to require human judgement in relation to AI's capabilities. AI technology was unable to fulfil the same role within music education as that of teachers and students in relation to expressing emotions, being creative, performing authentic music as a means of communicating with audiences, and understanding the cultural meaning of the music that is performed.

Furthermore, leaders within this study made an effort to encourage students to utilize their own judgements regarding the information that is provided by AI. The students were required to verify the information that is released by AI, to recognize its use in creating the information, in making decisions within the education process, and in creating their own interpretations of the information that is released by AI. These findings are in alignment with those of Peng et al. (2026), who have also found that educational leadership should reduce the reliance of students upon artificial intelligence systems for assessments and decisions.

Thus, overall, the judgements of teachers and educational leaders are required for the successful leadership of AI in the classrooms. The role of human judgement ensures that the educational process is not diminished in quality due to the introduction of AI technology.

AI Leadership Extends Beyond Technology Adoption to Curriculum Leadership

An important finding of this study was that AI leadership relates to curriculum leadership. Educational leaders evaluated whether the introduction of AI would be beneficial within their curriculum, especially in the context of preserving the heritage of Chinese traditional music. Thus, AI was to be used in ways that benefitted learners while also avoiding any potential negative impact upon the authenticity of the art form and its educational value.

These findings are in alignment with other studies related to AI in education. For instance, Cheng and Wang (2023) have found that educational leaders are responsible for removing barriers to AI implementation, confidence of teachers in the use of AI, and the support of teachers during the implementation process. Additionally, Cordero et al. (2024) have found that successful AI leadership in education relates to curriculum planning, staff training, institutional policies, and evaluations of the implementation of AI technologies.

However, the findings of this study extended previous findings in that curriculum leadership in the context of Chinese traditional music additionally relates to the preservation of its cultural authenticity in education. Thus, educational

leaders are required not just to ensure that AI is beneficial and effective in the classroom, but also to ensure that it does not detract from the authenticity, originality, or cultural meaning of the music that is taught.

Furthermore, these findings help to indicate that one of the most significant aspects of AI integration within education is the role of curriculum leadership itself. By utilizing curriculum leadership, educational leaders can ensure that AI is always subordinate to the educational objectives of the students and the goals of education itself.

Educational Leaders Negotiate Tensions Within AI Integration in Music Education Through Responsible AI Governance

Educational leaders within the field of music education encountered a variety of tensions relating to the integration of AI into music education. These tensions included pedagogical concerns, ethical considerations, institutional challenges, and cultural concerns. In this study, educational leaders did not seek to eliminate these tensions. Instead, they developed governance strategies that allowed them to effectively balance the considerations of educational quality, ethics, and cultural preservation in relation to the integration of AI into their music education programs.

Within music education, AI had the potential to reduce the independent thinking, creative thinking, and artistic skills of student musicians. Furthermore, many of the music educators within this study noted that students often did not question the suggestions of AI as opposed to forming their own musical suggestions or decisions. To combat these concerns, many music educators implemented strategies within their classrooms that required these students to verify the suggestions of AI, to develop their own interpretations of the music suggested by AI, and to discuss their interpretations of that music with teachers.

These findings help to support those of Peng et al. (2026), who also found that AI implementation within music education can lead to students relinquishing their independence from their education and music instructors. Furthermore, Cheng (2025) also determined that the use of AI within music education should never eliminate the creativity, judgement, or reflective skills of students themselves. Therefore, as educational leaders within music education, these teachers implemented changes to their teaching strategies to ensure that the students themselves retained their creative and critical thinking skills.

Additional tensions within the implementation of AI within music education relate to issues of ethics. For instance, music educators were often challenged by the ethics of copyright codes, academic integrity, data privacy, authorship of music created with AI, the potential for bias within the AI systems, and the responsible use of AI within music education. Each of these issues was considered by music educators as essential elements of both educational quality and governance of AI within music classrooms. As such, many developed guidelines that required students to disclose the use of AI in the creation of music assignments, to verify the information published by AI systems, to independently evaluate such music for authenticity, and to discuss such ethical considerations in the discussions of their music assignments.

These findings are in agreement with those of Polat et al. (2025), who found that issues of ethics within AI implementation include issues of transparency, accountability, fairness, privacy, and in what ways the AI can be ethically governed within educational settings. Additionally, findings of Crawford et al. (2023) indicated that educational leaders should create ethical assessment strategies within music education that both consider the ethics of AI systems and the needs and learning of students within the music classrooms. The findings of this study, however, help to extend these discussions to music education, a culturally significant subject of instruction, as many of the ethical issues relate to authenticity in music creation and the preservation of knowledge passed within music communities.

In addition to ethics-related tensions, music educators also encountered various institutional challenges. Many of these challenges included the lack of institutional policies related to AI in music education, lack of technological infrastructure to support the implementation of AI within music education, lack of professional development related

to AI in music education for music teachers, lack of technical support for music educators in their efforts to implement AI into their classrooms, and general institutional uncertainties regarding music education and the implementation of AI as an instructional tool. Music educators mitigated these challenges through the development of local policies, infrastructure, training strategies, and support strategies within their classrooms.

These findings are in agreement with those of Cheng and Wang (2023), who determined that music educators must play an important role in the removal of institutional barriers to the effective implementation of AI within music education. Additionally, the findings of Cordero et al. (2024) related to music education indicate that music educators and institutions must develop policies related to AI in music education, implement professional development related to AI within music education for music teachers, and implement technical support strategies to support music educators in their efforts to implement AI within their music education programs. While these recommendations are similar to those made by the participants of this study, the findings of the current study reveal an additional requirement of institutions: the development of policies that relate to the authenticity of music as well as to the preservation of knowledge within music education.

Finally, the music educators also encountered challenges related to cultural concerns. For instance, AI technology is often able to recognize different musical patterns within music education, to suggest accompaniments for piano pieces, to archive musical pieces related to a certain composer, and to translate music education materials into various languages. However, AI technology is often lacking in its consideration of diversity within music education, such as regional music diversity, the historical context of various types of music, music philosophy within different regions of the world, and the subtle forms of musical interpretation of Chinese traditional music. Music educators, therefore, applied a level of caution when utilizing AI systems that may be used to represent the culturally significant knowledge of Chinese traditional music.

While the majority of AI research and publications relate to the capabilities and benefits of AI, especially within the field of music education, music educators indicated that their main concern was not with the capabilities of AI to fulfil these tasks, but instead with the potential of AI to overlook these cultural considerations. Thus, human judgement in relation to the cultural authenticity of the knowledge shared within music education programs is an essential requirement prior to the integration of AI into these educational programs.

Cultural Sustainability as a Dimension of AI Leadership Within Music Education

The most significant finding of this research is that educational leaders within music education understood their role in relation to the concept of cultural sustainability. More specifically, cultural sustainability was considered by music educators both in relation to the preservation of Chinese traditional music and in relation to the maintenance of the practice of that musical tradition itself. Beyond the digital preservation of manuscripts, archives, and musical knowledge regarding Chinese traditional music, the educators recognized the importance of the transmission of those musical practices and knowledge through relationships within the educational setting and the community itself.

While AI technology creates opportunities for music educators to preserve Chinese traditional music manuscripts, archives, and knowledge of traditional music, music educators are unwilling to replace the essential part of the education of that traditional music with AI technology. Therefore, while AI technology may be able to preserve the knowledge of Chinese traditional music, it cannot perform the role of transmitting such knowledge of its tradition to others. Music educators are required to continue to provide such knowledge and skills to others in their educational settings.

These findings are in agreement with Huang et al. (2024, 2025), who have published recommendations for the preservation of Chinese traditional music, recommending the use of educational strategies for its preservation. Furthermore, Jiang et al. (2026) published recommendations for the reform of music education curricula to incorporate learning experiences that are related to the preservation of Chinese traditional music, as well as

knowledge of that culture and its related knowledge. An et al. (2025) published findings that indicate that while digital technologies have had an impact on the accessibility of education of the *guqin* (a traditional Chinese musical instrument), the authentic learning of that instrument still requires the knowledge and skills of an individual in performing that instrument. These findings support the findings of this study that music educators are able to recognize the importance of cultural sustainability in preserving the knowledge of Chinese traditional music, and their role in the determination of cultural authenticity and the continuation of the tradition itself.

Interestingly, the music educators did not reject AI technology within the music classrooms as a result of the potential threat that AI posed to the culture of Chinese traditional music. Instead, though, they welcomed the use of AI technology in ways that did not detract from the culture of that music, such as in the preservation of music manuscripts, the digitalization of musical archives, the organization of collections of traditional Chinese music manuscripts and recordings, and the improvement in the accessibility of such musical recordings. Furthermore, music educators became concerned with the use and development of AI technology in methods of musical creation, rehearsal, performance, and documentation of performances.

These findings are in agreement with previous research related to cultural sustainability within music education. For instance, previous publications related to music education have mainly discussed the importance of curricular reforms for cultural sustainability, preservation of heritage in music education, the digitalization of music archives, and the development of music teacher competencies in relation to preserving the knowledge of Chinese traditional music. Yet, music educational leaders are the crucial component of music education that manages and implements each of these recommendations. Thus, cultural sustainability of Chinese traditional music itself is not just a requirement of music education in general, but of the educational leaders themselves.

AI Leadership for Cultural Sustainability: A Conceptual Contribution

The AI Leadership for Cultural Sustainability Framework proposed in this study is an empirically informed conceptual framework rather than a validated framework. Its dimensions were developed interpretively from the five themes generated through reflexive thematic analysis. Theme 1 established purposeful and selective AI integration as the underlying orientation; Theme 2 informed strategic vision, ethical governance, curriculum leadership, and professional learning; Theme 3 further established the need for ethical governance and institutional support; Theme 4 informed human-centred pedagogy and cultural stewardship; and Theme 5 identified the institutional support systems required to sustain these leadership practices. The framework therefore synthesises the empirical patterns across the themes into interconnected leadership dimensions rather than representing dimensions that have been independently tested or validated. By answering the five research questions posed within this research, AI leadership for cultural sustainability itself can be proposed as the main contribution of this research.

Existing literature related to AI leadership within education has mainly discussed aspects related to music education, such as digital transformation of music education, the readiness of educational institutions to implement AI within music education, musical strategy related to AI in music education, AI governance in music education, the development of policies related to AI within music education, and the professional development related to AI in music education for music educators (Khairullah et al., 2025; Sposato, 2025). While these aspects are important to music education, this research has revealed that they are not enough to ensure the success and sustainability of Chinese traditional music within music education programs.

The findings indicate that educational leaders simultaneously perform six interconnected leadership functions:

1. Developing strategic institutional vision for responsible AI implementation;
2. Establishing ethical governance and institutional accountability;
3. Exercising curriculum leadership to align AI with educational objectives;
4. Strengthening teachers' professional capability through continuous learning;
5. Preserving human-centred pedagogy, artistic judgement, and authentic assessment; and

6. Safeguarding cultural authenticity through community engagement and intergenerational knowledge transmission.

The distinctive contribution of the framework lies in how these dimensions reframe the role of educational leadership in AI integration. Existing digital and AI leadership perspectives commonly emphasise technological transformation, institutional readiness, strategy, governance, policy development, and professional learning (Khairullah et al., 2025; Sposato, 2025). The present findings extend these perspectives by identifying four interconnected leadership principles that are particularly important in culturally significant educational settings. First, human judgement remains the final authority over curriculum, assessment, artistic interpretation, and cultural representation rather than being delegated to AI systems. Second, ethical AI governance requires leaders to establish boundaries and accountability concerning authorship, copyright, privacy, assessment integrity, transparency, and cultural ownership. Third, selective AI adoption means that the extent of technology use does not measure responsible leadership; leaders may adopt, adapt, restrict, postpone, or reject particular AI applications according to their pedagogical value, ethical acceptability, and cultural appropriateness. Fourth, cultural stewardship extends AI leadership beyond organisational transformation by making the protection of artistic authenticity, embodied knowledge, community relationships, and intergenerational transmission a central leadership responsibility. Accordingly, the framework shifts the emphasis from leading the adoption of AI to exercising informed leadership judgement over where, why, how, and under what conditions AI should be used.

Unlike conventional technology leadership models that primarily emphasise adoption and organisational change, the proposed framework positions cultural stewardship as an equally important leadership responsibility. AI therefore functions not as the driver of educational transformation but as a carefully governed resource operating within broader educational, ethical, and cultural priorities.

Accordingly, AI Leadership for Cultural Sustainability may be defined as:

The strategic, ethical, pedagogical, and culturally responsive leadership practice through which educational leaders guide the responsible integration of artificial intelligence while preserving educational quality, professional judgement, artistic authenticity, and the long-term sustainability of cultural heritage.

This conceptualisation extends existing educational leadership literature in three important ways.

First, it broadens AI leadership beyond organisational efficiency by integrating cultural stewardship into leadership theory.

Second, it positions selective educational judgement rather than technological adoption as the defining characteristic of responsible AI leadership.

Third, it provides a discipline-sensitive leadership framework applicable to higher education programmes responsible for preserving intangible cultural heritage.

The proposed framework therefore offers both theoretical and practical value by explaining how educational leaders can simultaneously encourage technological innovation while protecting the cultural and educational integrity of Chinese traditional music. Rather than viewing AI and tradition as competing priorities, the framework demonstrates that responsible educational leadership enables both to coexist through carefully governed, human-centred implementation.

IMPLICATIONS FOR EDUCATIONAL LEADERSHIP AND MANAGEMENT

The findings of this study have important implications for educational leadership theory, practice, and policy. More

importantly, the findings indicate that integrating AI into higher education is a leadership responsibility. Educational leaders influence the adoption of AI in education, as well as over how AI is to be used within educational environments and cultures.

Theoretical Implications

The framework extends existing digital and AI leadership perspectives by shifting the central leadership question from how institutions can increase AI adoption to how educational leaders exercise human judgement, ethical governance, selective adoption, and cultural stewardship in determining the appropriate place of AI within education.

The implications of this study for educational leadership theory are fourfold. First, this study proposes a model for AI leadership in the context of higher education that focuses upon cultural sustainability, specifically within the area of heritage-based education in China. Most previous studies that examined the topic of AI leadership in education have focused upon digital transformation, educational governance, educational strategy, educational ethics, teacher professional development, and other general leadership concepts in education (Khairullah et al., 2025; Sposato, 2025). However, few studies have addressed AI and its implementation in education that has heritage as one of its main educational objectives.

Second, the findings of this study indicate that educational leaders have a role to play in the preservation of culture within the AI integration process into Chinese traditional music education. These leaders are tasked with preserving the authenticity of the art form and protecting its knowledge from being lost over time. Thus, the leadership role in this process includes the ability to balance technological innovations with the preservation of cultural knowledge and authenticity.

Third, the findings of this study contribute to educational management literature in relation to AI leadership. Specifically, the findings indicate that educational leaders must use selective educational judgement in the implementation of AI in higher education. Rather than forcing all educational institutions to rapidly adopt AI technologies to remain competitive in the modern world, educational leaders are tasked with evaluating the purpose and benefit of integrating AI into specific educational environments. This contributes to a broader discussion of current educational leadership theories regarding the role that leaders should play in the introduction of AI to education.

Fourth, the implications of this study also include the development of a framework for AI leadership for cultural sustainability in higher education. This framework includes six main dimensions of leadership to be considered by AI and educational leaders in the integration of AI into higher education: having a vision for the educational institution, governing ethically with AI, leading the curriculum with AI in mind, engaging in professional learning with AI, adopting human-centred pedagogies with AI, and adopting a stewardship culture of the knowledge of China's traditional music. This discipline-sensitive approach is consistent with previous sustainability leadership research showing that leadership frameworks should be adapted to the distinctive objectives and conditions of specialised educational fields (Bajuri et al., 2023). However, the present study extends this perspective by incorporating ethical AI governance, selective AI adoption, human artistic judgement, and cultural stewardship within heritage-based education.

These dimensions of leadership can be applied not just to the area of music education within China, but also to other heritage-based areas of education within the country and the world.

Practical Implications

The findings of this study have several implications for higher education leaders, music conservatories, music departments, teacher educators, and educational development units responsible for the implementation of AI in higher education institutions.

From an educational leadership and management perspective, responsible AI integration requires coordinated action across different levels of the institution. University leaders should establish strategic direction, allocate resources, and ensure that AI initiatives remain aligned with institutional educational and cultural responsibilities. Department heads and programme leaders should translate institutional AI policies into discipline-specific practices and provide organisational support for educators managing technological and pedagogical change. Curriculum leaders should determine where AI can appropriately enhance teaching, assessment, practice, and resource development, while identifying areas in which human instruction, artistic judgement, and embodied learning must remain central. Professional development should move beyond technical AI skills to include ethical decision-making, assessment integrity, copyright, cultural representation, and critical evaluation of AI-generated content. At the institutional level, AI governance should provide clear mechanisms for accountability, transparency, data protection, intellectual property, and culturally responsible use. These responsibilities require organisational support through appropriate infrastructure, workload recognition, access to expertise, opportunities for collaborative experimentation, and mechanisms for monitoring the educational and cultural consequences of AI implementation.

First, the findings indicate that higher education institutions should establish governance frameworks for AI that go beyond the current focus on academic integrity. Such governance frameworks would need to include AI-related topics as described by the participants in this study, such as copyright, authorship, privacy, disclosure, assessment, cultural ownership, and ethical use of AI. Such a framework would allow institutions to establish guidelines for the implementation of AI that would be effective for the various music education disciplines within the institution.

Second, the professional development of educators should include elements related to the music education discipline. The training that is provided to music educators should not focus upon the technology of AI, but rather upon aspects of music education like music theory, musicianship, performance, music history, music appreciation, and music education technology.

Third, individuals in music education should have a role in making recommendations regarding the implementation of AI into music education curricula. These curricula should be evaluated in relation to their potential contribution to music education outcomes, music education effectiveness, music education innovation, musicianship, and long-term educational quality before the implementation of AI into those curricula.

Fourth, educational leaders should implement mechanisms to continuously evaluate the implementation of AI into higher education curricula. These evaluation systems could use indicators related to the musicianship, creativity, cultural understanding, confidence of music teachers, quality of the music curricula, development of collaborative learning within music education, engagement of students in music education communities, music education graduate programs, and the preservation of cultural knowledge within music education.

Finally, higher education institutions should continue to develop partnerships with other cultural organizations, musicians, and music communities. As described by the participants in this study, higher education and music communities need to continue to interact and maintain relationships with each other for the benefit of the preservation and development of the knowledge of China's traditional music.

Policy implications

Based upon these findings, recommendations can also be made for national education policy.

First, the ministries of education of each country should develop AI governance guidelines that focus on those culturally significant and heritage-based education disciplines. The current policies related to AI in educational institutions tend to focus upon issues of academic integrity, privacy, and the implementation of technology into the education system.

Second, the national professional development frameworks for education should include aspects related to AI

leadership in education, especially among those educational leaders who are responsible for implementing change to music education and heritage-based education curricula.

Third, the governments of countries like China should increase their investments in the development of AI infrastructure and technologies that can contribute to cultural sustainability, such as intelligent archival systems for traditional music, translation technologies between different varieties of Chinese, digital heritage repositories, and AI-assisted cultural preservation technologies.

Finally, national policies related to education should encourage collaboration between educational institutions of all types, AI researchers and developers, cultural organizations of all kinds, and the communities in which those cultural organizations exist. As described by the participants in this study, protecting the traditional music of China is a shared responsibility amongst all of these groups.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Several limitations should be considered when interpreting the findings.

The study involved interviewing fifteen educational leaders and expert educators of Chinese traditional music from universities and conservatories in China. Although the participants represented a pool with extensive expertise in the field of music education, their perspectives are not statistically generalisable to those of other educational leaders with similar but non-Chinese musical expertise. The intention of this qualitative study was to develop an analytical understanding of the topic that could be later applied to similar contexts rather than to draw general conclusions about the population of educational leaders in general.

In addition to focusing on educational leaders and senior musicians in higher education institutions, other groups of individuals whose perspectives on AI in music education could have been gathered would have been students at all levels within the music programs in these institutions. Future studies could examine the perspectives of students on AI in music education to determine whether their perspectives align or differ from those of educational leaders.

Another potential limitation of this research study was the methodology that was used to gather the data. While interviewing educational leaders and expert musicians provided data on the role of AI in higher education music programs, other methodologies that could have been employed to gather additional data on the topic included observing music classrooms, reviewing the documents that are present within the institutions, reviewing music curricula, or observing educational leaders demonstrate their use of AI within their music classrooms.

The methodologies for analysing the data from this research study were limited to using a qualitative approach to analysing the interview data. The use of Reflexive Thematic Analysis (Braun & Clarke, 2022) indicates that the themes that were gathered through the interviews were not objectively discovered but were constructed by the researchers during the research process. Thus, other researchers may have drawn different themes and conclusions from the same data.

Another limitation of this research study was the specific focus of the framework that was developed from this study: AI leadership within the context of Chinese traditional music education. Future research studies could investigate whether this framework could also be applied to other forms of education and cultural heritages, such as performing arts, indigenous knowledge education, language education, museum education, fine arts education, and cultural conservation education.

The next stage of the research would involve investigating additional methodologies to determine how the integration of AI in higher education music programs may evolve, and which aspects of educational institutions may have the most significant impact on educational quality, teachers, students, and cultural sustainability.

CONCLUSION

Artificial intelligence (AI) is currently reshaping higher education in relation to the opportunities that it presents to enhance teaching, learning, and various other aspects of educational institutions. Within the field of Chinese traditional music education, however, the integration of AI by educational leaders presents challenges to those leaders, as they are required to embrace technological changes to music education while at the same time preserving the authenticity, heritage, and integrity of the music that is taught within Chinese traditional music programs. These various challenges can be met by educational leaders who are informed regarding the various aspects of the Chinese traditional music programs. Through interviewing fifteen recognized educational leaders and experts in the field of Chinese traditional music, it was determined that AI is often recognized as a valuable component of music education within traditional boundaries and for enhancing specific aspects of music education, but that elements of music that relate to authenticity, embodied learning, and teacher-student relationships should continue to be led and managed by the musicians and teachers themselves.

One of the main findings of this research study is that educational leaders are responsible for finding a balance between the need to embrace and integrate AI into music education programs and the need to preserve the authenticity and heritage of the music that is taught within those programs. Thus, rather than focusing solely upon the development and implementation of AI technologies themselves, educational leaders must focus upon their various and interconnected responsibilities in the management and leadership of music education programs to ensure that those AI technologies are beneficially integrated into the programs. In the meantime, the authenticity and heritage of the Chinese traditional music programs are preserved.

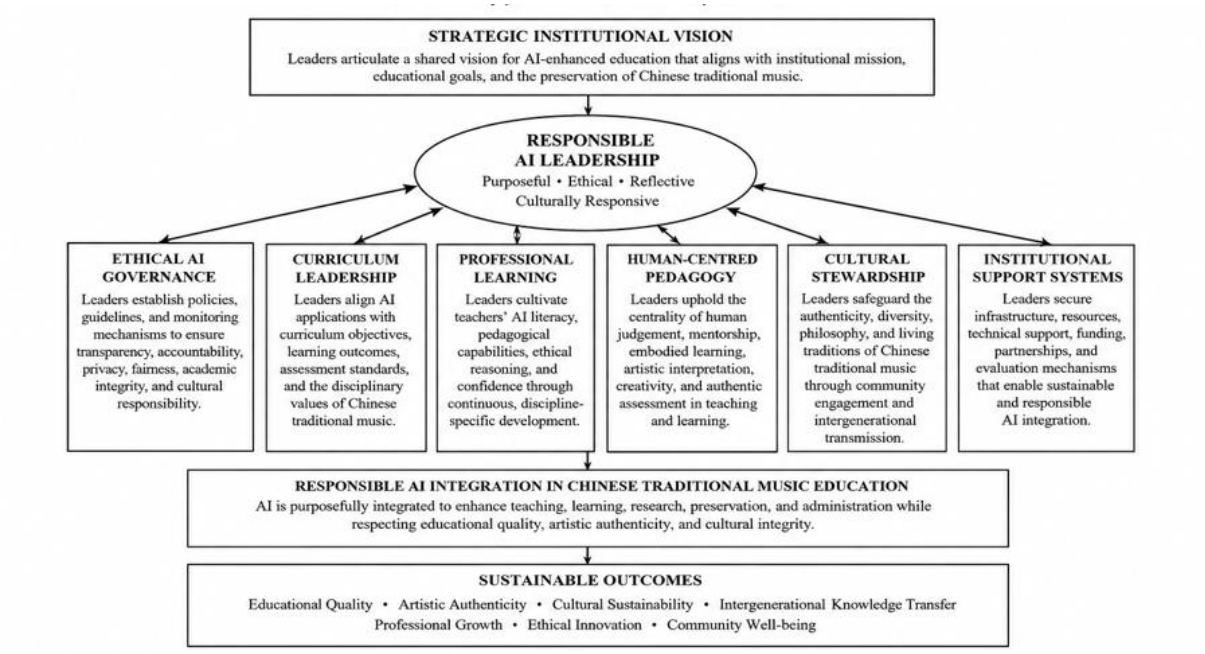
AI leadership in relation to the preservation of Chinese traditional music programs was discussed in this paper as a topic worthy of investigation due to the responsibilities of educational leaders to balance the demands of technological change and authenticity in the music programs. Furthermore, by proposing an AI leadership framework for the management and preservation of Chinese traditional music programs, educational leaders, conservatories, and music institutions can utilize such a framework to guide their efforts to integrate AI technologies into music education programs without compromising the heritage of the music programs themselves.

Based on the findings from the research study regarding AI and Chinese traditional music education, it is clear that the future of AI in higher education music programs should focus on evaluating the extent to which educational leaders in those institutions can develop informed and responsible professional judgements, develop ethical AI governance policies in their programs, enhance the capabilities of their teachers to incorporate AI into their music programs, deepen the learning of their students within those programs, and continue to preserve the cultural knowledge of the Chinese traditional music programs.

Accordingly, responsible AI integration should be treated as an institutional leadership and management responsibility requiring coordinated action across university leadership, department and programme management, curriculum leadership, professional development, institutional AI governance, and organisational support.

To synthesise the findings and discussion of this research study, therefore, not only has this research investigated the role of artificial intelligence in higher education music programs, but it has also proposed the AI Leadership for Cultural Sustainability Framework as a means of guiding the efforts of educational leaders to responsibly integrate AI into higher education music programs, while preserving the authenticity of those programs and the heritage of the music that is taught within them (Figure 2).

Figure 2
AI Leadership for Cultural Sustainability Framework



Ultimately, this study argues that responsible AI integration in Chinese traditional music education is most sustainable when innovation is guided by educational purpose, ethical responsibility, and cultural commitment. When educational leaders retain human authority over curriculum, assessment, artistic interpretation, and cultural transmission, AI becomes a valuable partner that enriches learning while protecting the traditions that give Chinese traditional music its enduring educational and cultural significance.

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