

Mini Review of Emerging Trends in Ethnomusicology and Scientific Innovation in Chinese Musical Heritage Research (2020–2025)

¹Hu Yujing*, ²Flory Ann Mansor Gingging*

¹Department of Music and Music Education, Music and Performing Arts Faculty, Sultan Idris Education University, 35900, Tanjung Malim, Perak, Malaysia

²Department of Music and Music Education, Music and Performing Arts Faculty, Sultan Idris Education University, 35900, Tanjung Malim, Perak, Malaysia

*Corresponding Authors

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ABSTRACT

Ethnomusicology has traditionally focused on the study of music within its cultural and social contexts, emphasizing ethnographic investigation of musical practices and communities. In recent years, however, technological innovation and interdisciplinary research approaches have increasingly influenced the ways in which musical traditions are documented, analysed, and transmitted. This study examines the intersection between ethnomusicology and scientific innovation in relation to Chinese musical culture through a mini-review of Scopus-indexed publications published between 2020 and 2025. Using thematic analysis, nine selected studies were analysed to identify emerging research trends and interdisciplinary developments within this field. The findings reveal four primary research themes: digital innovation in ethnomusicology, technological applications in cultural heritage preservation, analytical approaches to research and innovation mapping, and transnational Chinese musical identity. The analysis demonstrates that contemporary ethnomusicology increasingly incorporates digital technologies such as artificial intelligence, virtual learning platforms, and computational analytical tools, which expand the methodological possibilities for studying musical traditions. At the same time, technological innovation has created new opportunities for safeguarding intangible cultural heritage through digital archives, immersive media technologies, and online dissemination platforms. In addition, the review highlights the growing use of bibliometric analysis and computational methods to examine research trends and innovation systems related to cultural heritage studies. Finally, studies on diaspora communities illustrate how Chinese musical traditions continue to evolve through processes of migration, cultural exchange, and global cultural interaction. Overall, the findings suggest that ethnomusicology is increasingly positioned at the intersection of cultural heritage research, digital humanities, and interdisciplinary innovation studies. By synthesizing recent literature, this study provides insights into how ethnomusicological research related to Chinese musical culture is evolving within technologically mediated and globally interconnected research environments.

Keywords: Ethnomusicology; Chinese folk music; Intangible cultural heritage; Digital innovation; Cultural heritage preservation; Scientific innovation; Transnational music identity; Mini review

INTRODUCTION

Ethnomusicology is broadly understood as the study of music within its cultural, social, and historical contexts. Rather than focusing solely on musical structures, ethnomusicology examines how music is created, experienced, and interpreted by communities within specific cultural environments (Titon, 2015). As an interdisciplinary field closely related to anthropology and cultural studies, ethnomusicology investigates the relationships between music, identity, social practices, and cultural knowledge (Koskoff, 2020). Research in this field therefore extends beyond musical analysis to include ethnographic investigation of musical communities, performance practices,

and cultural meanings associated with music-making (Sturman, 2022). Within this framework, music is not merely a sonic artifact, but a dynamic cultural practice embedded in everyday life and collective identity.

China represents one of the most significant contexts for ethnomusicological research due to its vast diversity of traditional musical forms and its long history of cultural heritage preservation. Chinese folk music traditions, including regional vocal forms, instrumental practices, and ritual performances, reflect the cultural experiences and historical development of various ethnic groups across the country (Chen, 2024). These traditions constitute an essential component of China's intangible cultural heritage (ICH), which encompasses knowledge systems, artistic practices, and cultural expressions transmitted across generations (Yang et al., 2025). Since the early 2000s, China has implemented extensive national initiatives aimed at safeguarding intangible cultural heritage, resulting in the documentation and preservation of thousands of traditional cultural practices, including music and performing arts (Boyu et al., 2015).

The safeguarding of intangible cultural heritage in China has increasingly become a complex process involving multiple stakeholders, including government institutions, cultural practitioners, local communities, and commercial actors (Xiao & Long, 2024). Scholars have noted that heritage policies often involve negotiations between cultural preservation and economic development, particularly in contexts such as tourism, cultural industries, and urban cultural planning (Su, 2020). In some cases, heritage protection initiatives have transformed community-based cultural practices into publicly curated heritage resources that contribute to broader cultural and economic strategies (Zhu & Liu, 2021). These developments highlight the evolving role of traditional music not only as a cultural artifact but also as a strategic resource within contemporary cultural governance systems.

Alongside heritage policies and cultural governance initiatives, technological developments have introduced new possibilities for the preservation, analysis, and dissemination of traditional music. Digital technologies have been increasingly applied to document and archive intangible cultural heritage, enabling new forms of cultural storage, sharing, and interpretation (Zhou et al., 2019). In recent years, technological innovations such as big data analytics, machine learning, and multimedia platforms have further expanded the ways in which traditional musical knowledge can be recorded, analyzed, and disseminated across digital environments (Xu & Zou, 2022). These developments have contributed to the emergence of new interdisciplinary research areas that integrate ethnomusicology with fields such as digital humanities, computational musicology, and cultural data science.

Digital platforms have also reshaped the ways in which traditional music circulates within contemporary societies. Social media technologies and online platforms have become important tools for transmitting intangible cultural heritage to wider audiences, enabling traditional cultural practices to reach new generations of participants and audiences (Fu, 2024). At the same time, digital technologies create new opportunities for innovative approaches to musical analysis and creative production. For example, computational models and machine learning techniques have been used to analyze musical characteristics of Chinese folk traditions and even generate new compositions inspired by traditional musical structures (Wang & Zheng, 2022). Such technological developments illustrate how traditional musical heritage can intersect with scientific innovation, creating new research directions that combine cultural studies with technological experimentation.

In addition to technological innovation, contemporary ethnomusicological research increasingly examines the global circulation of musical traditions and the ways in which cultural practices are transmitted across national and diasporic contexts. Chinese traditional music has spread widely beyond mainland China through migration and transnational cultural exchange, contributing to the formation of diasporic musical communities and hybrid cultural identities (Shuying & Chuangprakhon, 2025). These transnational dynamics highlight the continuing relevance of ethnomusicology for understanding how music functions as a medium of cultural continuity, adaptation, and negotiation within changing social environments.

Despite the growing body of research on Chinese traditional music and intangible cultural heritage, existing studies are often dispersed across multiple disciplinary fields, including cultural studies, musicology, digital humanities, tourism studies, and innovation research. As a result, there remains a need to synthesize recent scholarship in order to understand how ethnomusicological research intersects with broader developments in scientific innovation and technological transformation. Previous bibliometric analyses have demonstrated the usefulness of mapping research trends in order to identify emerging themes and interdisciplinary directions

within ethnomusicological scholarship (Hazarika & Kashyap, 2021). However, there is still limited synthesis focusing specifically on the intersection between ethnomusicology, technological innovation, and Chinese musical heritage in recent years.

In response to this research gap, the present study conducts a mini-review of Scopus-indexed publications between 2020 and 2025 in order to examine how contemporary research addresses the relationship between ethnomusicology and scientific innovation in the Chinese context. By synthesizing recent literature across multiple disciplines, this study aims to identify key research themes, methodological developments, and emerging areas of scholarly interest within this evolving field. Specifically, the study addresses the following research questions:

- RQ1: What are the main research themes in ethnomusicology-related studies connected to Chinese musical culture between 2020 and 2025?
- RQ2: How do contemporary studies integrate technological innovation and analytical methods into ethnomusicological research?
- RQ3: What roles do cultural heritage preservation and transnational cultural transmission play in shaping recent ethnomusicological scholarship related to Chinese music?

Through thematic analysis of selected studies, the findings provide insights into how ethnomusicology increasingly intersects with digital technologies, cultural heritage preservation strategies, and interdisciplinary analytical approaches. The results contribute to a broader understanding of how traditional musical knowledge can engage with contemporary scientific innovation while continuing to serve as an important medium of cultural identity and heritage transmission. While previous studies have contributed valuable insights into Chinese musical heritage, digital technologies, and cultural governance, the integration of these perspectives within contemporary ethnomusicological scholarship remains fragmented. Therefore, it is necessary to clarify the specific research gap and scholarly contribution addressed by this study.

Research Gap and Study Contribution

Although a growing body of research has examined Chinese traditional music, intangible cultural heritage preservation, and digital technologies in cultural studies, these studies are often conducted within separate disciplinary domains. For instance, existing research has explored ethnomusicological perspectives on musical culture and community practices (Titon, 2015; Koskoff, 2020), while other studies focus on heritage governance, policy frameworks, and cultural management in China (Su, 2020; Xiao & Long, 2024). In parallel, technological research has investigated digital preservation systems, big data applications, and computational approaches to music analysis (Xu & Zou, 2022; Zhou et al., 2019). Despite these developments, the relationship between ethnomusicology and scientific innovation has not been systematically synthesized within a single analytical framework. Furthermore, the rapid expansion of digital technologies and interdisciplinary research methods has introduced new possibilities for studying traditional music, including computational analysis, digital archives, and online cultural dissemination platforms. However, existing scholarship tends to examine these developments in isolated contexts rather than considering how they collectively reshape ethnomusicological research and cultural heritage practices. Consequently, there remains limited synthesis of recent research addressing how technological innovation, cultural heritage preservation, and transnational musical communities intersect within contemporary ethnomusicological scholarship related to Chinese music.

To address this gap, the present study conducts a focused mini-review of Scopus-indexed publications from 2020 to 2025 in order to identify emerging research themes and analytical approaches within the intersection of ethnomusicology and scientific innovation. By synthesizing recent studies across multiple disciplinary perspectives, this research aims to clarify the evolving landscape of ethnomusicology research related to Chinese musical culture and highlight key directions for future scholarly investigation. Examining recent publications, this study identifies several emerging directions that characterize the intersection between ethnomusicology and scientific innovation. These directions include the integration of digital technologies into ethnomusicological research, the role of technological tools in cultural heritage preservation and dissemination, the application of

analytical approaches to innovation research, and the exploration of Chinese musical identity within transnational contexts. Identifying these themes provides a clearer understanding of how ethnomusicology is evolving within broader interdisciplinary research environments. The following sections describe the methodological approach used to collect and analyse the selected literature, followed by the presentation of thematic findings and the conceptual framework derived from the analysis.

METHODOLOGY

This section describes the methodological procedures used to conduct the mini review. It outlines the research design, data sources, literature selection criteria, analytical approach, and the development of the conceptual framework used to interpret the findings.

Research Design

This study adopts a mini-review approach to synthesize recent scholarly research on ethnomusicology and scientific innovation related to Chinese musical culture. Literature reviews are widely used to summarize existing knowledge, identify emerging research trends, and highlight gaps in current scholarship (Leenaars et al., 2021). Compared with large-scale systematic reviews, a mini review provides a focused analysis of a smaller set of relevant publications while maintaining transparency in the literature selection process. The purpose of this study is therefore not to provide an exhaustive systematic review but rather to offer a targeted synthesis of recent research developments within the intersection of ethnomusicology, digital innovation, and cultural heritage studies. By examining selected publications, the study aims to identify key thematic directions that characterize contemporary research in this field. The final number of nine studies reflects the application of strict inclusion criteria, focusing only on studies that directly address both ethnomusicology and scientific innovation within the Chinese context. This also indicates that the research area is still emerging and not yet extensively developed.

Data Source and Search Strategy

The literature used in this study was retrieved from the Scopus database, which is widely recognized as one of the largest curated databases of peer-reviewed scientific literature. Scopus provides extensive global coverage across multiple disciplines and includes high-quality bibliographic metadata that supports bibliometric and literature review studies (Baas et al., 2020). The database is frequently used in academic research due to its comprehensive indexing of journal articles, conference proceedings, and book chapters across scientific and social science disciplines (Valente et al., 2022). Previous studies have highlighted that Scopus offers robust search functionalities that allow researchers to retrieve publications using combination of keywords across article titles, abstracts, and keywords fields (Andalia et al., 2010). These search features facilitate efficient identification of relevant literature while ensuring that the retrieved records are directly related to the research topic. The search was conducted in the Scopus database on 7 March 2026 using the following search string: (“ethnomusicology” OR “traditional music” OR “folk music”) AND (“China” OR “Chinese”) AND (“innovation” OR “technology” OR “digital” OR “AI”). The search focused on records within the title, abstract, and keyword fields. The initial search yielded a set of records, which were subsequently screened based on relevance to the research topic.

Inclusion and Screening Criteria

To ensure the relevance and quality of the selected literature, several inclusion criteria were applied during the screening process. First, the publications had to be indexed in the Scopus database to ensure that they met established academic quality standards (Baas et al., 2020). Second, the publications had to be published between 2020 and 2025, reflecting recent developments in ethnomusicological research and technological innovation. Third, the studies needed to address topics related to Chinese musical culture, ethnomusicology, cultural heritage preservation, or technological innovation associated with music studies.

Literature review studies emphasize the importance of applying clear selection criteria in order to maintain methodological transparency and reduce potential bias in literature synthesis (Leenaars et al., 2021). The screening process involved reviewing article titles, abstracts, and keywords to determine their relevance to the research topic. Studies focusing on unrelated technological or scientific fields without connections to music,

culture, or heritage research were excluded. After applying these criteria, nine publications were retained for analysis, representing a focused dataset suitable for a mini-review study. The initial search produced a broader set of records, which were screened based on relevance to ethnomusicology, cultural heritage, and technological innovation. After applying the inclusion criteria, nine publications were retained for detailed analysis.

Data Analysis

The selected publications were analysed using thematic analysis, a widely used qualitative research approach that enables researchers to identify recurring patterns and conceptual themes within a dataset (Braun & Clarke, 2021). Thematic analysis is particularly useful for literature-based research because it allows scholars to organize findings from multiple studies into coherent thematic categories. The analytical process involved several stages. First, each publication was reviewed in order to identify its primary research focus, methodological approach, and innovation dimension. Second, similarities and recurring concepts across the studies were identified through iterative reading and comparison of the literature. Third, related concepts were grouped into broader research themes that captured the main directions of scholarly discussion.

Thematic analysis emphasizes the systematic identification and interpretation of patterns across qualitative data sources, enabling researchers to generate meaningful insights from diverse forms of evidence (Morgan & Nica, 2020). Recent methodological discussions also highlight the usefulness of thematic approaches for analysing literature datasets and identifying emerging research topics within interdisciplinary fields (Fitkov-Norris & Kocheva, 2023). Through this analytical process, four major research themes were identified: digital innovation in ethnomusicology, cultural heritage preservation and dissemination, research analytics in innovation studies, and transnational Chinese music identity.

Development of the Conceptual Framework

Based on the thematic analysis, a conceptual framework was constructed to illustrate the relationships among the identified research themes. Conceptual frameworks are commonly used in literature-based studies to organize theoretical insights and demonstrate connections between key research domains. Framework development involved synthesizing the thematic findings identified during the analysis stage and organizing them into a structured model representing the evolving landscape of ethnomusicology research related to Chinese musical culture. Conceptual frameworks are frequently employed in literature reviews to visually represent relationships among research themes and facilitate interpretation of complex interdisciplinary topics (Leenaars et al., 2021). The resulting framework highlights four interconnected research dimensions: digital innovation, cultural heritage preservation, research analytics, and transnational music identity. These dimensions collectively illustrate how ethnomusicology increasingly intersects with technological developments, interdisciplinary analytical methods, and global cultural contexts.

RESULTS

This section presents the findings derived from the thematic analysis of the selected literature. The results include an overview of the identified studies, the thematic distribution of research directions, and the conceptual framework illustrating the relationship between ethnomusicology and scientific innovation.

Overview of Selected Studies

The Scopus search identified a limited but diverse body of literature examining ethnomusicology and related innovations associated with Chinese musical culture between 2020 and 2025. After screening the records based on relevance to ethnomusicology, cultural heritage, and technological innovation, nine publications were retained for analysis. These publications represent a range of methodological approaches, including ethnographic research, conceptual analysis, bibliometric studies, educational experiments, and technological applications.

Collectively, the selected studies reflect the interdisciplinary development of contemporary ethnomusicology, particularly in relation to digital technologies, cultural heritage preservation, and transnational cultural exchange. They also demonstrate the growing interaction between music scholarship and related fields such as digital

technology, innovation studies, and cultural management. While most studies focus on China as the primary research context, several contributions examine Chinese musical traditions within diaspora communities, highlighting the global circulation and cultural transmission of Chinese music.

Although some studies are not strictly situated within ethnomusicology, they are included to provide contextual insights into broader technological innovation systems that shape interdisciplinary research in this field. Table 1 summarizes the key characteristics of the selected studies.

Table 1. Overview of Selected Studies on Ethnomusicology and Innovation (2020–2025)

Authors & Year	Study Focus	Method / Approach	Innovation Dimension	Study Context
Wang (2020)	Chinese national music and musical anthropology	Ethnomusicological and anthropological analysis	Theoretical development of ethnomusicology	China
Hu & Wang (2021)	Mobile technologies in ethnomusicology education	Educational experiment	Mobile learning and digital pedagogy	China
Wilford (2023)	Digital ethnomusicology practices during COVID-19	Conceptual and interdisciplinary discussion	Online research methods	Global / methodological
Niu et al. (2024)	Topic evolution of Chinese technological innovation research	Topic modelling (LDA) and text analysis	Research analytics and innovation mapping	China
Hu (2025)	AI-curated soundscapes for intangible cultural heritage music	Statistical analysis of soundscape projects	Artificial intelligence in heritage preservation	China
Li et al. (2025)	Spatiotemporal analysis of technological innovation in marine fisheries	Spatial econometric modelling	Innovation system analysis	China
Liu et al. (2025)	Bibliometric analysis of Chinese folk music research	Bibliometric mapping and thematic analysis	Digital cultural management	China
Li (2025)	Music and identity in overseas Chinese communities	Ethnographic fieldwork	Cultural identity and migration	New Zealand
Zhang & Razali (2025)	Cultural transmission of guzheng in Chinese communities	Systematic-informed integration review	Cultural heritage transmission	Malaysia

The studies summarized in Table 1 reflect the expanding scope of ethnomusicology, which increasingly engages with interdisciplinary research areas including digital innovation, computational research methods, and global cultural exchange.

Thematic Distribution of Research

Analysis of the selected literature revealed four primary research themes that characterize the intersection between ethnomusicology and scientific innovation in recent scholarship. These themes include digital innovation in ethnomusicology, cultural heritage preservation and dissemination, research analytics in innovation studies, and transnational Chinese music identity.

Digital Innovation in Ethnomusicology

One of the most prominent trends identified in the dataset is the increasing integration of digital technologies into ethnomusicological research and practice. These technologies are used not only to document and analyse musical traditions but also to facilitate new forms of musical interaction and learning. For example, Hu (2025) investigated the use of artificial intelligence to curate urban soundscapes incorporating traditional Chinese music as part of intangible cultural heritage preservation. The study analysed seventy-five AI-driven soundscape projects across major Chinese cities and reported a substantial increase in technology-mediated heritage initiatives between 2018 and 2023. The findings highlight the potential of artificial intelligence to reshape the ways traditional music is experienced and preserved in urban environments.

Similarly, Hu and Wang (2021) explored the integration of mobile learning technologies into ethnomusicology education. Their study demonstrated that mobile platforms could enhance student engagement and provide flexible learning environments for music education. In addition, Wilford (2023) discussed how the COVID-19 pandemic accelerated the adoption of online research methods in ethnomusicology, encouraging scholars to conduct virtual fieldwork and digital collaboration. Together, these studies indicate that digital technologies, including artificial intelligence, mobile platforms, and online communication tools, are increasingly transforming both ethnomusicological research methodologies and pedagogical practices.

Cultural Heritage Preservation and Digital Dissemination

Another important theme concerns the role of technology in preserving and disseminating traditional musical heritage. As cultural institutions increasingly adopt digital tools, ethnomusicological research has begun to examine how these technologies support heritage conservation and public engagement. A bibliometric study conducted by Liu et al. (2025) analysed research trends related to Chinese folk music and performing arts management in the digital era. The findings revealed a noticeable increase in publications after 2020, reflecting the growing integration of digital platforms in cultural heritage preservation and artistic management.

Digital media and online dissemination channels have become important mechanisms for promoting traditional music to wider audiences. In addition, studies focusing on cultural preservation highlight how technological innovations can support the documentation and revitalization of traditional musical practices. These developments demonstrate that digital technologies are increasingly positioned as tools for both heritage preservation and cultural communication.

Research Analytics and Innovation Studies

A third theme emerging from the literature involves the use of analytical and computational methods to examine innovation systems and research trends. Advances in data analysis techniques have enabled scholars to explore patterns of scientific development and technological innovation using large datasets. For instance, Niu et al. (2024) applied topic modelling techniques to analyse patterns in Chinese technological innovation literature. Using a Latent Dirichlet Allocation (LDA) model, the study identified several dominant research themes including regional development, industrial upgrading, innovation resource allocation, rural revitalisation, and the digital economy. Although the research is not limited specifically to ethnomusicology, it provides valuable insight into the broader innovation ecosystem that influences interdisciplinary research fields.

Similarly, Li et al. (2025) examined spatial patterns of technological innovation in China using econometric modelling techniques. Their findings highlight regional disparities in innovation capacity and emphasize the importance of coordinated development strategies. These analytical approaches demonstrate how computational

methods such as topic modelling and bibliometric analysis are increasingly applied to understand research development and innovation dynamics.

Transnational Chinese Music and Cultural Identity

Ethnomusicological research also continues to explore the relationship between music and cultural identity, particularly within transnational and diaspora contexts. These studies examine how musical traditions are maintained, adapted, and transmitted among migrant communities. For example, Li (2025) explored the role of traditional Chinese instrumental music within Chinese migrant communities in New Zealand. The study highlighted how musical performance serves as a medium for maintaining cultural identity and strengthening community cohesion among diaspora populations.

Similarly, Zhang and Razali (2025) examined the cultural transmission of the guzheng within Malaysian Chinese communities. Their findings emphasize the importance of institutionalised music education, intergenerational learning, and community participation in sustaining traditional musical practices outside China. These studies demonstrate that ethnomusicology remains a critical field for understanding music as a medium of cultural identity formation, migration experience, and cross-cultural interaction.

Together, these four themes illustrate how ethnomusicological research related to Chinese music increasingly integrates technological innovation, interdisciplinary analytical approaches, and global cultural perspectives.

Conceptual Framework of Ethnomusicology and Scientific Innovation

Based on the thematic synthesis of the selected studies, a conceptual framework was developed to illustrate the relationship between ethnomusicology research and scientific innovation associated with Chinese musical culture. The framework identifies four interconnected research themes: digital innovation, cultural heritage preservation, research analytics, and transnational music identity. Figure 1 presents the thematic framework derived from the analysis of the selected studies and the relationships among these themes.

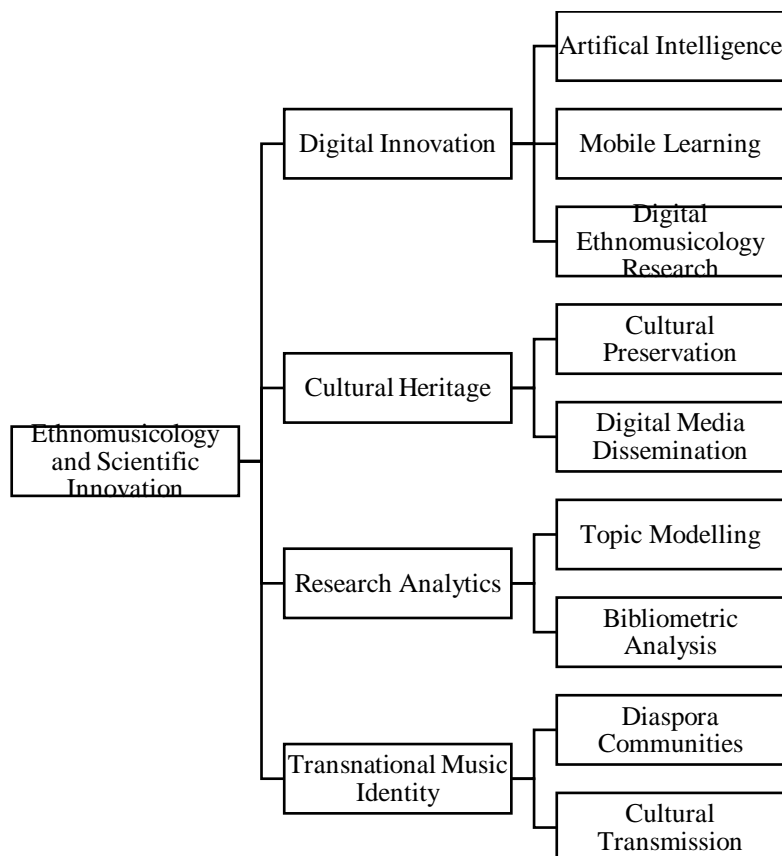


Figure 1. Thematic framework of ethnomusicology and scientific innovation related to Chinese musical culture (2020–2025).

As illustrated in Figure 1, these themes collectively demonstrate how contemporary ethnomusicology increasingly intersects with digital technologies, interdisciplinary research approaches, and global cultural exchange. Digital innovation enables new methods of documentation and musical engagement, while cultural heritage research focuses on the preservation and dissemination of traditional music. At the same time, analytical techniques such as topic modelling and bibliometric analysis contribute to understanding research trends and innovation systems. Finally, studies on diaspora communities highlight the transnational dimensions of Chinese musical identity and cultural transmission. Together, these developments indicate that ethnomusicology is evolving beyond traditional fieldwork-based research to incorporate technological innovation, interdisciplinary methodologies, and global cultural perspectives.

To further synthesize the findings, Table 2 summarizes the major research themes identified in the reviewed studies and highlights their corresponding technological or methodological innovations. This synthesis illustrates how contemporary ethnomusicology increasingly integrates digital technologies, analytical research tools, and transnational cultural perspectives to investigate the development and transmission of Chinese musical heritage.

Table 2. Summary of Key Research Themes and Innovation Implications in Ethnomusicology Research (2020–2025)

Research Theme	Key Focus in Reviewed Studies	Methodological / Technological Innovation	Implications for Ethnomusicology Research
Digital Innovation in Ethnomusicology	Integration of artificial intelligence, mobile learning platforms, and digital collaboration tools in music research and education (Hu, 2025; Hu & Wang, 2021; Wilford, 2023)	AI-assisted soundscape analysis, mobile learning environments, digital research infrastructures	Expands methodological possibilities for analysing and documenting musical traditions through digital environments
Cultural Heritage Preservation and Digital Dissemination	Application of digital technologies to safeguard and disseminate intangible cultural heritage (Liu et al., 2025; Li, 2020)	AR/VR heritage storytelling, digital archives, multimedia platforms	Enhances accessibility and long-term preservation of traditional music while supporting public engagement with cultural heritage
Research Analytics and Innovation Studies	Use of computational methods to analyse research trends and innovation systems (Niu et al., 2024; Li et al., 2025)	Topic modelling (LDA), bibliometric analysis, spatial econometric modelling	Enables systematic mapping of interdisciplinary research development and innovation ecosystems
Transnational Chinese Music and Cultural Identity	Exploration of musical identity and cultural transmission within diaspora communities (Li, 2025; Zhang & Razali, 2025)	Ethnographic research, transnational cultural analysis	Demonstrates how musical traditions evolve through migration, cultural exchange, and global cultural interaction

The synthesis presented in Table 2 highlights the multidimensional nature of contemporary ethnomusicological research related to Chinese musical heritage. The reviewed studies demonstrate that ethnomusicology is increasingly shaped by the convergence of digital technologies, cultural heritage preservation strategies, and interdisciplinary analytical approaches. Rather than functioning as isolated research directions, these themes collectively illustrate how ethnomusicology is evolving within broader technological and socio-cultural transformations. The integration of computational tools, digital preservation platforms, and transnational cultural

perspectives reflects a growing recognition that musical traditions are embedded within complex systems of cultural production, technological mediation, and global cultural exchange. Building on these thematic findings, the following discussion critically examines the implications of these developments for the future direction of ethnomusicology and its relationship with scientific innovation.

DISCUSSION

The results of this mini-review reveal that contemporary ethnomusicology research related to Chinese musical culture is increasingly shaped by technological innovation, interdisciplinary analytical methods, and global cultural mobility. By synthesizing recent studies published between 2020 and 2025, four interconnected themes emerged: digital innovation in ethnomusicology, technological mediation in cultural heritage preservation, analytical approaches to innovation research, and transnational Chinese musical identity. Rather than representing isolated developments, these themes collectively illustrate a broader transformation in how ethnomusicology engages with scientific innovation and cultural heritage research.

Addressing RQ1, the findings demonstrate that recent ethnomusicology-related research on Chinese music is no longer confined to traditional ethnographic documentation. Instead, scholars increasingly engage with digital infrastructures, computational methods, and interdisciplinary analytical frameworks. This shift reflects broader developments within the humanities where cultural research is progressively integrated with digital technologies and data-driven analytical tools (Fitkov-Norris & Kocheva, 2023). As a result, ethnomusicology is evolving toward a hybrid methodological landscape that combines cultural interpretation with technological experimentation.

Digital Transformation of Ethnomusicological Research

One of the most significant developments identified in this review is the growing integration of digital technologies into ethnomusicological research practices. Studies within the dataset demonstrate how artificial intelligence, mobile learning platforms, and digital collaboration tools are reshaping both research methodologies and pedagogical approaches in music studies (Hu, 2025; Hu & Wang, 2021; Wilford, 2023). These developments align with broader transformations in digital humanities research, where computational technologies are increasingly used to analyse cultural data and support interdisciplinary inquiry. Digital infrastructures have also begun to reshape the practical workflow of ethnomusicological research. For instance, Cunningham et al. (2023) proposed a spatial hypermedia research environment that integrates audio recordings, annotations, and analytical notes within a unified digital workspace. Such systems enable researchers to manage complex audiovisual materials and construct evolving digital archives of musical knowledge. In this sense, digital technologies are not merely tools for documentation but increasingly function as epistemological infrastructures that shape how ethnomusicological knowledge is produced and organised.

Nevertheless, the increasing reliance on digital technologies also raises critical methodological questions. Ethnomusicology has historically emphasized participant observation, cultural immersion, and long-term engagement with musical communities (Sturman, 2022). The expansion of digital research environments therefore challenges scholars to reconsider how technological mediation might influence the authenticity and contextual richness of ethnographic research. While digital methods can expand access to musical data and facilitate collaborative analysis, they also risk reducing complex cultural practices to decontextualized digital artefacts if not accompanied by culturally grounded interpretation. This also highlights a potential tension between technological innovation and cultural authenticity, as digital approaches may risk simplifying complex, context-dependent musical practices.

Technological Innovation and Cultural Heritage Preservation

Addressing RQ2, the findings demonstrate that technological innovation is increasingly positioned as a central mechanism for safeguarding intangible cultural heritage. Across the reviewed studies, digital technologies are applied not only for documentation but also for dissemination, education, and creative reinterpretation of traditional musical practices. Emerging technologies such as virtual reality, augmented reality, and artificial intelligence have been proposed as tools for preserving and transmitting cultural heritage in digital environments.

For example, VR-based systems have been explored as immersive platforms capable of capturing and presenting intangible cultural traditions in ways that allow broader public engagement (Li, 2020). Similarly, recent research demonstrates how AR/VR storytelling, AI-generated narratives, and social media platforms can facilitate new forms of heritage communication and cultural participation (Liu et al., 2025). These technological innovations expand the possibilities for preserving traditional music while simultaneously transforming how cultural knowledge is experienced by contemporary audiences.

However, technological innovation alone cannot guarantee sustainable heritage preservation. Studies examining the spatial distribution of intangible cultural heritage reveal that cultural traditions tend to cluster in regions with strong socio-economic infrastructure and institutional support (Zhang et al., 2024; Cheng & Pu, 2025). These findings highlight the importance of considering heritage preservation as a socio-political process shaped by policy frameworks, cultural governance, and community participation. In this context, digital technologies function as enabling tools rather than independent solutions. Furthermore, heritage scholars have noted that digital preservation initiatives may inadvertently transform living cultural practices into static museum-like representations if community engagement is insufficient (Monova-Zheleva et al., 2020). For ethnomusicologists, this tension underscores the importance of balancing technological innovation with participatory cultural practices that maintain the dynamic and community-based nature of musical traditions.

Analytical Approaches and the Mapping of Research Innovation

A third theme emerging from the analysis involves the growing use of computational and analytical methods to examine research trends and innovative systems. While ethnomusicology has traditionally relied on qualitative ethnographic approaches, recent studies demonstrate increasing engagement with data-driven analytical techniques such as bibliometric analysis, topic modelling, and spatial mapping. These analytical tools allow researchers to identify patterns in academic knowledge production and to map interdisciplinary research networks. For example, bibliometric studies using big-data methods can visualize emerging research clusters and intellectual relationships within the field of intangible cultural heritage studies (Wu & Chen, 2025). Such analytical approaches contribute to a more systematic understanding of how ethnomusicology interacts with related disciplines including cultural policy, tourism studies, and digital humanities.

Spatial analysis has also emerged as a particularly valuable methodological perspective. Studies examining the geographical distribution of intangible cultural heritage demonstrate that cultural traditions are shaped by historical migration patterns, regional economic development, and environmental factors (Li & Wang, 2022). These findings indicate that cultural heritage cannot be understood solely through symbolic or aesthetic analysis; rather, it is embedded within complex socio-spatial systems that influence the transmission and transformation of musical traditions. The integration of these analytical approaches suggests that ethnomusicology is increasingly engaging with interdisciplinary research frameworks that combine ethnographic insights with computational analysis. This methodological convergence expands the analytical capacity of ethnomusicology while also aligning the field more closely with broader developments in innovation research and digital scholarship.

Transnational Musical Identity and Diaspora Communities

Addressing RQ3, the findings highlight the continuing importance of diaspora and transnational cultural transmission in contemporary ethnomusicological research. Migration and global mobility have significantly reshaped the circulation of musical traditions, leading to the emergence of transnational cultural networks in which music functions as a key medium of identity formation and cultural continuity. Diaspora studies have long emphasized the role of music in maintaining symbolic connections between migrant communities and their cultural heritage (Monson, 2018). Musical performance within diaspora contexts often operates as a form of cultural memory that preserves historical narratives and collective identities. At the same time, diasporic musical practices are rarely static; they are continuously reshaped through interactions with host cultures and global cultural flows.

Recent research on music and migration highlights how diaspora communities create hybrid musical forms that combine traditional cultural elements with contemporary influences (Chatterjee, 2023). Within these

transnational networks, music functions simultaneously as a mechanism of cultural preservation and as a site of cultural adaptation. The findings of this review indicate that Chinese diaspora communities play an important role in sustaining traditional musical practices beyond mainland China through educational institutions, community organizations, and cultural festivals. These developments demonstrate that ethnomusicology remains essential for understanding how musical traditions evolve within globalized cultural environments. Rather than viewing cultural heritage as geographically bound, contemporary ethnomusicological research increasingly conceptualizes musical traditions as dynamic cultural processes that circulate across national and cultural boundaries.

Implications for Ethnomusicology and Scientific Innovation

Taken together, the findings of this mini review suggest that ethnomusicology is undergoing a significant methodological and conceptual transformation. The integration of digital technologies, analytical research methods, and transnational cultural perspectives reflects a broader shift toward interdisciplinary approaches in the study of musical culture. From a scientific innovation perspective, ethnomusicology is increasingly positioned at the intersection of cultural heritage research, digital humanities, and computational analysis. This interdisciplinary convergence enables new forms of research collaboration and expands the methodological possibilities available for studying musical traditions. At the same time, the increasing technological mediation of cultural heritage raises important ethical and methodological considerations. While digital technologies offer powerful tools for preserving and disseminating musical traditions, their effectiveness ultimately depends on their ability to support community participation and cultural authenticity. Future research should therefore explore how emerging technologies, including artificial intelligence, immersive media, and digital cultural archives, can be integrated into ethnomusicological research in ways that respect cultural diversity and community agency.

CONCLUSION

This study conducted a mini-review of Scopus-indexed publications published between 2020 and 2025 in order to examine the intersection between ethnomusicology research and scientific innovation related to Chinese musical culture. By synthesizing nine selected studies through thematic analysis, the research identified four major themes that characterize recent developments in this interdisciplinary field: digital innovation in ethnomusicology, technological mediation in cultural heritage preservation, analytical approaches in innovation research, and transnational Chinese musical identity. Addressing the first research question, the findings indicate that contemporary ethnomusicology related to Chinese music increasingly extends beyond traditional ethnographic approaches. While ethnographic fieldwork continues to play a foundational role in understanding musical practices and cultural contexts, recent studies demonstrate growing engagement with digital technologies, computational analysis, and interdisciplinary research methods. These developments reflect broader transformations within the humanities, where digital infrastructures and data-driven analytical tools are becoming integral components of cultural research.

In relation to the second research question, the analysis reveals that technological innovation plays an increasingly significant role in the preservation, dissemination, and reinterpretation of intangible cultural heritage. Emerging technologies such as artificial intelligence, virtual reality, digital archives, and social media platforms are expanding the possibilities for documenting and transmitting traditional musical knowledge. However, the findings also highlight that technological solutions alone are insufficient to ensure sustainable heritage preservation. Effective cultural safeguarding requires a combination of technological innovation, institutional support, and active participation from cultural communities. Addressing the third research question, the review demonstrates that ethnomusicological scholarship continues to emphasize the importance of transnational cultural exchange and diaspora communities in shaping the evolution of Chinese musical traditions. Musical practices within migrant communities function as mechanisms of cultural continuity, enabling individuals to maintain connections with their heritage while adapting to new social and cultural environments. These dynamics illustrate how musical traditions are continuously reshaped through processes of migration, globalization, and intercultural interaction.

Taken together, the findings suggest that ethnomusicology is increasingly evolving into an interdisciplinary research domain situated at the intersection of cultural heritage studies, digital humanities, innovation research, and migration studies. This transformation expands the methodological scope of ethnomusicology while also highlighting the importance of maintaining culturally grounded perspectives in technologically mediated research environments. Despite these contributions, this study is limited by the use of a single database (Scopus), which may exclude relevant studies, particularly those published in regional databases such as CNKI. Future research could expand the scope of analysis by incorporating additional academic databases, conducting bibliometric mapping studies, or exploring empirical case studies that examine the practical implementation of digital technologies in ethnomusicological research. Further investigation into the ethical implications of digital heritage preservation and the role of community participation in technological innovation would also provide valuable insights for the sustainable development of ethnomusicology in the digital era. Overall, this study contributes to a clearer understanding of how contemporary ethnomusicological scholarship related to Chinese musical culture engages with scientific innovation and interdisciplinary research. By synthesizing recent literature, the study highlights emerging research directions that demonstrate the evolving role of ethnomusicology in documenting, interpreting, and sustaining musical heritage within rapidly changing technological and cultural environments.

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No potential conflict of interest was reported by the authors.

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