ISSN 1118-1364
International Journal of Science Education
Volume 19, Number 1, March 2026, https://nigerianjournalsonline.org/

# ARTIFICIAL INTELLIGENCE AND THE FUTURE OF INDIGENOUS MUSICAL INSTRUMENT CRAFTSMANSHIP: OPPORTUNITIES, CHALLENGES, AND PROSPECTS FOR SUSTAINABLE CULTURAL PRESERVATION

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## ABSTRACT

Indigenous musical instrument craftsmanship represents a vital aspect of cultural heritage, embodying generations of accumulated knowledge, artistic expression, and technological ingenuity. However, globalization, modernization, and the declining transmission of traditional skills continue to threaten the sustainability of many indigenous instrument-making traditions. At the same time, artificial intelligence (AI) has emerged as a transformative technology with growing applications in manufacturing, design, and creative industries. This opinion paper discusses the potential role of AI in supporting indigenous musical instrument craftsmanship and examines its possible implications for the future of traditional instrument production. Drawing on perspectives from artificial intelligence, ethnomusicology, cultural heritage studies, and musical instrument technology, the paper argues that AI can contribute meaningfully to the preservation and revitalization of indigenous knowledge systems through digital documentation, acoustic modeling, material analysis, design optimization, and production support. While acknowledging concerns relating to cultural authenticity, intellectual property rights, technological accessibility, and the possible erosion of traditional craftsmanship skills, the paper maintains that AI should be viewed as a complementary tool rather than a replacement for human artisans. It is further argued that the thoughtful integration of AI into indigenous musical instrument craftsmanship offers significant opportunities for cultural preservation, innovation, and the wider dissemination of traditional musical practices. The paper advocates collaborative approaches involving artisans, researchers, policymakers, and technology developers to ensure that AI applications remain culturally sensitive, ethically responsible, and beneficial to indigenous communities.

Keywords: Artificial Intelligence, Indigenous Musical Instruments, Digital Innovation.

## INTRODUCTION

Indigenous musical instruments constitute an important aspect of the world's intangible cultural heritage. Beyond their function as tools for musical expression, they serve as repositories of historical memory, cultural identity, social values, and indigenous knowledge systems. Across Africa and other regions of the world, instruments such as the marimba, mbira, xylophone, talking drum, and numerous aerophones continue to play significant roles in ceremonies, storytelling, communication, education, and entertainment. Their continued existence contributes to the

ISSN 1118-1364
International Journal of Science Education
Volume 19, Number 1, March 2026, https://nigerianjournalsonline.org/

preservation and transmission of cultural traditions from one generation to another (UNESCO, 2022). The craftsmanship involved in the construction of indigenous musical instruments is deeply rooted in community knowledge and traditional practices. Instrument makers rely on skills acquired through observation, apprenticeship, and practical experience to select suitable materials, determine structural dimensions, achieve desired tonal qualities, and incorporate culturally meaningful artistic designs. The use of locally available resources such as wood, bamboo, gourds, animal skins, and metals reflects both environmental adaptation and indigenous technological ingenuity. As a result, indigenous musical instruments often possess unique acoustic and aesthetic characteristics that distinguish them from industrially manufactured alternatives (Li, 2022). Despite their cultural significance, indigenous musical instrument-making traditions face increasing challenges in contemporary society. Globalization, urbanization, environmental change, and the declining interest of younger generations in traditional occupations have contributed to the gradual erosion of many indigenous knowledge systems. The loss of traditional languages, reduced access to natural materials, and inadequate documentation of artisanal practices further threaten the sustainability of these cultural traditions (UNESCO, 2022; Higgins, 2022). Consequently, scholars, cultural practitioners, and policymakers have emphasized the need for innovative approaches to safeguarding and revitalizing indigenous cultural heritage. At the same time, Artificial Intelligence (AI) has emerged as one of the most transformative technologies of the twenty-first century. AI applications, including machine learning, computer vision, generative systems, and predictive analytics, are increasingly being adopted across manufacturing, design, education, and the creative industries. Recent studies have demonstrated the growing capacity of AI to support digital archiving, cultural heritage documentation, sound analysis, virtual reconstruction, and knowledge preservation (Gîrbacia, 2024; UNESCO, 2024). Within the context of music and cultural heritage, AI offers opportunities for acoustic modeling, digital preservation, material analysis, and the creation of interactive platforms that can support the transmission of endangered knowledge.

This opinion paper argues that AI presents a valuable opportunity for strengthening indigenous musical instrument craftsmanship while supporting the preservation of traditional knowledge. However, the integration of AI into indigenous cultural practices must be approached carefully to avoid compromising cultural authenticity, community ownership, and intellectual property rights. Rather than replacing traditional artisans, AI should function as a complementary tool that enhances documentation, learning, innovation, and sustainability. By fostering collaboration among indigenous communities, researchers, cultural institutions, and technology developers, AI can contribute to the long-term preservation and global visibility of indigenous musical instrument traditions.

## STATEMENT OF THE PROBLEM

Indigenous musical instrument craftsmanship has long been used to maintain musical heritage, transmit traditional knowledge, and preserve cultural identity. However, socio-cultural and technological shifts are posing a growing threat to the survival of this practice. One significant issue is the younger generations' waning interest in traditional apprenticeship programs related to instrument making; many of them are more drawn to contemporary careers and digital technologies. Due to this change, there are now fewer skilled artisans available to continue

ISSN 1118-1364
International Journal of Science Education
Volume 19, Number 1, March 2026, https://nigerianjournalsonline.org/

indigenous building customs. The loss of traditional craftsmanship knowledge is another major worry. A large portion of the knowledge required for material selection, instrument design, tuning, and performance-related adjustments is mostly oral and is passed down through observation and hands-on experience. Important indigenous knowledge is frequently lost when older craftsmen retire or die. Additionally, attempts at systematic preservation, research, and educational dissemination have been hampered by the lack of documentation of indigenous instrument construction techniques. Also, few technological initiatives have been developed to support the advancement and preservation of indigenous craftsmanship, despite the cultural significance of these instruments. Innovative technological interventions are therefore desperately needed. In the current digital era, artificial intelligence presents promising opportunities for recording, evaluating, conserving, and improving traditional instrument-making methods while guaranteeing their applicability and sustainability.

**Objectives of the study**

This study seeks to:

1. Examine the relevance of AI to indigenous musical instrument craftsmanship.
2. Identify areas where AI can support instrument construction.
3. Investigate potential threats and opportunities posed by AI.

**Research Questions**

1. How can AI support indigenous musical instrument craftsmanship?
2. What opportunities does AI offer for preserving traditional construction knowledge?
3. What challenges may arise from AI adoption?

**Significance of the Study**

By investigating how artificial intelligence (AI) can aid in the transmission and preservation of indigenous musical instrument craftsmanship, this study advances ethnomusicology. By investigating AI applications in instrument design, acoustic analysis, material selection, and production processes, it expands our understanding of musical instrument technology. The study also emphasizes how AI can help protect endangered cultural heritage by preserving and documenting traditional building methods. Additionally, educators, researchers, cultural institutions, and policymakers can use its findings to develop strategies, training programs, and policies that support innovation while maintaining cultural authenticity.

## LITERATURE REVIEW

Artificial Intelligence (AI) refers to the capability of computer systems to perform tasks that typically require human intelligence, including learning, reasoning, perception, problem-solving,

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International Journal of Science Education
Volume 19, Number 1, March 2026, https://nigerianjournalsonline.org/

language processing, and decision-making (UNESCO, 2021). Since its emergence as a formal field of study, AI has evolved significantly, moving beyond rule-based programming to sophisticated machine learning, deep learning, and generative AI systems capable of analyzing vast datasets and producing intelligent outputs. Contemporary AI systems are generally categorized into Narrow AI, General AI, and Super AI. Narrow AI, which is currently the most widely implemented form, is designed to perform specific tasks such as image recognition, speech processing, and predictive analytics, whereas General and Super AI remain largely conceptual and developmental goals (Haenlein & Kaplan, 2019). Recent advances in AI have expanded its applications across creative and cultural sectors. AI-powered technologies are increasingly employed in music generation, sound analysis, visual arts, digital storytelling, and cultural heritage documentation. Generative AI systems can create original artistic content, while machine learning algorithms support pattern recognition, classification, and preservation of cultural materials. These developments have demonstrated AI's growing potential to enhance creativity, facilitate knowledge preservation, and support cultural sustainability (UNESCO, 2024; Giannini & Bowen, 2022).

**Indigenous Musical Instrument Craftsmanship**

Indigenous musical instrument craftsmanship encompasses the traditional knowledge, skills, and practices involved in the design, construction, maintenance, and adaptation of musical instruments within specific cultural contexts. These instruments are often deeply embedded in the social, historical, spiritual, and artistic life of indigenous communities and serve as important vehicles for cultural transmission and identity preservation (UNESCO, 2022). The construction of indigenous musical instruments typically relies on locally available materials such as wood, bamboo, gourds, animal skins, fibers, and metals. Instrument makers employ specialized knowledge accumulated through generations of observation, experimentation, and apprenticeship. Decisions regarding material selection, dimensions, tuning systems, and decorative features are influenced by both acoustic requirements and cultural values. In many communities, this knowledge is transmitted orally rather than through formal documentation, making it particularly vulnerable to loss when traditional apprenticeship systems decline (Li, 2022).

As a result, indigenous musical instrument craftsmanship represents a significant component of indigenous knowledge systems, preserving not only technical expertise but also cultural meanings, community histories, and artistic traditions. Recent studies have emphasized the importance of documenting and safeguarding such knowledge in response to increasing threats posed by globalization, urbanization, environmental change, and cultural homogenization (Higgins, 2022).

**AI in Design and Manufacturing**

The integration of AI into design and manufacturing has transformed production processes across numerous industries. One of the most widely adopted technologies is Computer-Aided Design (CAD), which enables designers to create, modify, simulate, and optimize products before physical production. CAD systems contribute to improved accuracy, reduced material waste, shorter development cycles, and enhanced product quality (Javaid et al., 2022). Machine learning, a major branch of AI, enables systems to learn from data, identify patterns, and make predictions without explicit programming. Within manufacturing environments, machine learning supports predictive

ISSN 1118-1364
International Journal of Science Education
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maintenance, defect detection, quality assurance, and process optimization, resulting in greater efficiency and reliability (Leng et al., 2021). Another emerging approach is generative design, which employs AI algorithms to generate multiple design alternatives based on specified objectives and constraints. This technology allows designers to explore innovative solutions that may not emerge through conventional design methods. Furthermore, AI-driven robotics and automation systems have significantly improved manufacturing productivity by performing repetitive and precision-dependent tasks with consistency and accuracy. In the context of musical instrument production, these technologies could assist with acoustic modeling, material analysis, structural optimization, and quality control while supporting artisans in achieving greater precision during construction. Consequently, AI technologies are increasingly recognized as valuable tools in industries involving complex fabrication processes (Javaid et al., 2022).

**AI and Cultural Heritage Preservation**

Recent advancements in AI have created new opportunities for cultural heritage preservation and management. Digital archiving technologies enable the systematic collection, storage, organization, and retrieval of cultural materials, ensuring their accessibility for future generations. AI-assisted archival systems can efficiently classify, analyze, and manage large collections of audio, visual, and textual resources, thereby improving preservation efforts and facilitating research (Giannini & Bowen, 2022). Knowledge management systems further contribute to cultural sustainability by documenting, organizing, and disseminating indigenous knowledge that may otherwise disappear. Through digital platforms, traditional practices, oral histories, and technical skills can be preserved and transmitted across generations and geographical boundaries. AI technologies also support language preservation, automated metadata generation, and enhanced search capabilities, making cultural resources more accessible and usable (UNESCO, 2024).

Virtual museums have emerged as another important application of digital technologies in heritage preservation. These interactive platforms provide global audiences with opportunities to explore cultural artifacts and traditions regardless of geographical location. More recently, digital twin technologies have gained attention within cultural heritage research. Digital twins are highly detailed virtual representations of physical objects or systems that replicate their structure, functionality, and behavior. In the context of indigenous musical instruments, digital twins can preserve construction techniques, acoustic characteristics, material properties, and performance features, providing valuable resources for researchers, educators, artisans, and cultural institutions (Gîrbacia, 2024). Collectively, these technological developments demonstrate the expanding role of AI in supporting the documentation, preservation, revitalization, and sustainability of cultural heritage in the digital age.

**Theoretical framework**

Socio-technical Systems Theory (STS) provides the framework for this study by explaining how technology and society are mutually shaping rather than independent forces (Bednar & Welch, 2020). STS emphasizes that technological outcomes depend on interactions between technical systems, human actors, cultural values, and institutional structures. In the context of artificial intelligence and indigenous musical instrument craftsmanship, the theory explains that AI tools

ISSN 1118-1364
International Journal of Science Education
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such as digital archiving systems, acoustic modeling, machine learning applications, and digital twins can only be effective when aligned with the practices and knowledge systems of artisans and cultural communities. The integration of AI in this field therefore requires collaboration among developers, researchers, and indigenous practitioners to ensure cultural authenticity and relevance. STS further supports the view that AI should complement rather than replace human craftsmanship, enhancing documentation, design, and preservation of indigenous instruments. Ultimately, the framework positions innovation within cultural sustainability and community-driven technological adoption processes effectively.

## Methodology

This paper adopts an opinion-based qualitative approach grounded in critical literature reflection and conceptual analysis. Rather than relying on empirical data collection, the discussion is informed by a broad synthesis of existing scholarly works on artificial intelligence (AI), indigenous musical instrument craftsmanship, ethnomusicology, cultural heritage studies, and musical instrument technology. The analysis draws on secondary sources, including peer-reviewed journal articles, academic books, conference proceedings, and authoritative reports from international organizations. These sources provide the foundation for examining how AI intersects with indigenous knowledge systems, particularly in areas such as design innovation, digital documentation, manufacturing processes, and cultural preservation. The paper engages in interpretive reading of the literature to identify key arguments, emerging perspectives, and conceptual relationships relevant to the integration of AI in indigenous craftsmanship. Rather than employing formal thematic coding procedures, the study reflects on recurring ideas and debates across the literature to develop a coherent position. Through this approach, the paper constructs an informed argument on the opportunities and challenges of integrating AI into indigenous musical instrument traditions. The methodology is therefore appropriate for an opinion paper that seeks to critically discuss possibilities, risks, and implications rather than test hypotheses or generate empirical findings.

## USES OF ARTIFICIAL INTELLIGENCE IN THE CRAFTSMANSHIP OF INDIGENOUS MUSICAL INSTRUMENTS

Artificial Intelligence (AI) has the potential to significantly transform the construction of musical instruments by enhancing design processes, improving material selection, supporting quality control, and preserving traditional craftsmanship knowledge. Although AI cannot replace the cultural expertise and artistic judgment of indigenous instrument makers, it can serve as a valuable complementary tool that supports innovation and sustainability. One of the most promising applications of AI in instrument construction is design optimization. AI-powered Computer-Aided Design (CAD) systems and generative design tools can assist instrument makers in creating and evaluating multiple design alternatives before physical production. Machine learning algorithms can analyze acoustic data and predict how changes in dimensions, shape, or material composition may affect tonal quality and performance characteristics (Javaid et al., 2022; Verganti et al., 2020). Such capabilities can help artisans reduce trial-and-error processes while maintaining desired acoustic properties. AI can also support the selection and management of materials used in instrument construction. Through data analysis and predictive modeling, AI systems can evaluate

ISSN 1118-1364
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the physical and acoustic characteristics of different materials and recommend suitable alternatives when traditional resources become scarce. This is particularly important for indigenous musical instruments, whose construction often depends on natural materials that are increasingly threatened by environmental degradation and climate change (Higgins, 2022; UNESCO, 2024).

Another important contribution of AI lies in digital documentation and knowledge preservation. Many indigenous instrument-making traditions rely on oral transmission and apprenticeship, making them vulnerable to knowledge loss. AI-assisted archiving systems can organize, classify, and preserve construction techniques, tuning methods, performance practices, and oral histories in digital formats. Such technologies provide opportunities for safeguarding indigenous knowledge and making it accessible to future generations (Giannini & Bowen, 2022; UNESCO, 2024).

AI-driven computer vision technologies may also enhance quality control during instrument production. These systems can identify structural defects, inconsistencies, or material imperfections that may affect the durability and acoustic performance of instruments. In manufacturing environments, AI-based inspection systems have demonstrated high levels of accuracy in defect detection and process monitoring, suggesting similar potential applications in instrument construction (Leng et al., 2021; Javaid et al., 2022). Furthermore, AI can contribute to education and skills transmission. Digital learning platforms supported by AI can provide interactive demonstrations, virtual simulations, and personalized learning experiences for aspiring instrument makers. These technologies can complement traditional apprenticeship systems by expanding access to indigenous craftsmanship knowledge while preserving the cultural context in which such knowledge is embedded (UNESCO, 2021; UNESCO, 2024). The global visibility of indigenous musical instruments can also be enhanced through AI-enabled digital technologies. Virtual museums, digital twins, and immersive heritage platforms can provide detailed representations of instruments, their construction processes, and their cultural significance. Such initiatives can support research, cultural exchange, and public awareness while creating new opportunities for the preservation and revitalization of indigenous musical traditions (Gîrbacia, 2024; Giannini & Bowen, 2022).

In the opinion of this paper, the greatest value of AI in musical instrument construction lies not in replacing traditional artisans but in strengthening their capacity to preserve, document, innovate, and transmit indigenous knowledge. When implemented ethically and collaboratively, AI can serve as a bridge between traditional craftsmanship and contemporary technological advancement, ensuring the continued relevance and sustainability of indigenous musical instrument traditions in the digital age.

## OPPORTUNITIES PRESENTED BY ARTIFICIAL INTELLIGENCE FOR THE PRESERVATION OF TRADITIONAL INSTRUMENT CONSTRUCTION KNOWLEDGE

Artificial Intelligence (AI) presents significant opportunities for preserving traditional construction knowledge associated with indigenous musical instrument craftsmanship. One of its most valuable contributions is the digitization and documentation of knowledge that has historically been transmitted orally through apprenticeship and community practice. AI-powered

ISSN 1118-1364
International Journal of Science Education
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databases, natural language processing systems, and intelligent archiving tools can capture construction techniques, material selection methods, tuning procedures, and cultural narratives, thereby reducing the risk of knowledge loss (European Commission, 2020; Kremers, 2020). Furthermore, AI-supported virtual and augmented reality platforms can recreate traditional instrument-making processes, providing immersive learning experiences for younger generations and supporting skills transmission beyond geographical boundaries (Champion & Rahaman, 2020). Another opportunity lies in the development of digital heritage repositories capable of preserving both tangible and intangible aspects of craftsmanship. AI can assist in analyzing audio, visual, and textual records, ensuring more accurate preservation of indigenous knowledge systems (Díaz-Andreu, 2022). Additionally, AI-driven translation and language technologies can help document indigenous terminologies and endangered languages often embedded in traditional construction practices (Bird, 2020).

In the opinion of this paper, AI offers a practical pathway for safeguarding traditional construction knowledge while enhancing its accessibility, transmission, and long-term sustainability in an increasingly digital world.

## CHALLENGES THAT MAY ARISE FROM THE USE OF ARTIFICIAL INTELLIGENCE

Despite its numerous benefits, the application of Artificial Intelligence (AI) in preserving and supporting indigenous musical instrument craftsmanship presents several challenges. One major concern is the risk of cultural misrepresentation when AI systems are trained on incomplete, biased, or decontextualized cultural data, potentially leading to inaccurate representations of traditional knowledge (UNESCO, 2021). Ethical issues relating to ownership, consent, and intellectual property rights may also arise, particularly when indigenous knowledge is digitized and utilized without adequate community participation or benefit-sharing mechanisms (Carroll et al., 2020). Another challenge is the digital divide, as many indigenous communities may lack the technological infrastructure, financial resources, or technical expertise required to access and utilize AI technologies effectively (World Bank, 2021). Furthermore, excessive dependence on digital systems could weaken traditional apprenticeship models and reduce opportunities for the transmission of tacit knowledge through direct human interaction (Smith, 2021). Concerns have also been raised regarding algorithmic bias, transparency, and accountability in AI systems, which may affect the reliability of cultural preservation initiatives (Floridi et al., 2021). Therefore, careful governance, ethical implementation, and community involvement are essential to ensure that AI strengthens rather than undermines indigenous cultural heritage.

### Difficulties and Moral Issues

Despite the transformative potential of artificial intelligence (AI) in musical instrument design and construction, its adoption presents significant technical, cultural, and ethical challenges. One of the foremost concerns is the potential erosion of traditional craftsmanship as AI-driven automation increasingly substitutes for manual skills that have been developed and transmitted across generations. The construction of indigenous musical instruments is deeply rooted in experiential learning, artistic intuition, and cultural practices that extend beyond technical specifications and

ISSN 1118-1364
International Journal of Science Education
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cannot be fully replicated by algorithmic systems. Excessive dependence on AI may therefore contribute to the gradual decline of artisanal knowledge and weaken the intergenerational transmission of cultural heritage. Another important challenge relates to the preservation of cultural authenticity. AI systems generate outputs based on existing datasets and computational patterns rather than lived cultural experiences. Consequently, AI-generated instrument designs may deviate from the symbolic meanings, aesthetic principles, and historical contexts that define traditional musical instruments, leading to cultural misrepresentation or homogenization. UNESCO's ethical framework for artificial intelligence emphasizes that AI should respect cultural diversity and human dignity while ensuring that technological innovation does not undermine cultural identities or heritage (UNESCO, 2021).

The unequal distribution of AI technologies also raises concerns regarding equity and inclusion. Many indigenous and rural communities that are custodians of traditional musical instrument craftsmanship face limited access to digital infrastructure, financial resources, and technical expertise necessary for adopting advanced AI systems. This digital divide risks excluding these communities from the benefits of AI while simultaneously allowing external actors with greater technological capacity to appropriate or commercialize indigenous cultural expressions without meaningful community participation.

Furthermore, the digitization of indigenous knowledge for AI training introduces complex issues surrounding intellectual property rights, ownership, and data sovereignty. Traditional musical knowledge and cultural expressions are often collectively owned and transmitted through customary practices rather than formal legal mechanisms. The incorporation of such knowledge into AI systems without prior informed consent or equitable benefit-sharing may constitute cultural appropriation and undermine the rights of indigenous communities. Recognizing these concerns, the World Intellectual Property Organization has strengthened international efforts to protect traditional knowledge and cultural expressions through legal frameworks that acknowledge the interests of Indigenous Peoples and local communities in the governance and use of their knowledge systems (World Intellectual Property Organization [WIPO], 2024).

Therefore, the application of AI in the construction of musical instruments should be guided by robust ethical principles that promote transparency, accountability, cultural sensitivity, and community participation. Such an approach would enable technological innovation while safeguarding the authenticity, ownership, and sustainability of indigenous musical traditions.

## FINDINGS AND DISCUSSION

The results of this study show that artificial intelligence (AI) has a great deal of potential to positively and significantly impact the future of indigenous musical instrument craftsmanship. AI technologies can assist with design optimization, acoustic analysis, material selection, digital documentation, and quality control, among other aspects of instrument construction, according to the literature review. These features imply that AI can be a useful technological tool for resolving some of the issues that indigenous instrument-making customs are currently facing. The ability of AI to maintain indigenous knowledge systems is among the most important discoveries. Because traditional instrument-making methods are frequently passed down orally through apprenticeship,

ISSN 1118-1364
International Journal of Science Education
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they are susceptible to loss when skilled artisans retire or die. Digital archives, knowledge management platforms, and AI-powered documentation systems can gather important data about construction techniques, tuning procedures, material choices, and cultural significance. Future generations will be able to access knowledge that might otherwise be lost thanks to such preservation efforts.

The study also emphasizes how AI can boost productivity and creativity in the manufacturing of instruments. Before beginning physical construction, instrument manufacturers can assess various design options using computer-aided design, machine learning, and acoustic simulation technologies. This can improve tonal consistency, cut down on material waste, and raise the overall caliber of completed instruments. These technological advantages may support sustainability and economic viability for indigenous craftsmen operating in increasingly competitive cultural and commercial environments. The results also show that traditional craftsmanship should not be replaced by AI. Beyond their physical form, indigenous musical instruments represent spiritual meanings, artistic creativity, and cultural values. Master craftsmen's intuition, experience, and cultural awareness continue to be crucial elements of the instrument-making process. Over-reliance on automation could erode these human components and jeopardize cultural authenticity. As a result, the conversation highlights the necessity of adopting AI in a fair and cooperative manner. AI should serve as a supplementary tool that supports indigenous craftsmen's work while honoring customs and cultural values, rather than taking their place. This kind of cooperation can promote creativity without compromising authenticity. To guarantee that AI applications are applied ethically and culturally sensitively, legislators, educators, cultural institutions, and technology developers should collaborate closely with indigenous communities. A sustainable future where traditional musical instrument craftsmanship thrives and benefits from contemporary innovations can be achieved by fusing technological advancement with indigenous expertise.

## CONCLUSION AND RECOMMENDATIONS

This study looked at the connection between indigenous musical instrument craftsmanship and artificial intelligence. AI can help with instrument design, material selection, acoustic analysis, documentation, quality control, and cultural preservation, according to the review. Significant opportunities exist for maintaining indigenous knowledge systems and raising awareness of traditional musical instruments thanks to technology. However, issues like technological accessibility, intellectual property rights, cultural authenticity, and the preservation of traditional skills need to be carefully taken into account. The study comes to the conclusion that rather than replacing human craftsmanship, AI should be used as a helpful tool.

The study makes recommendations based on these findings, including the creation of digital archives for indigenous instrument-making knowledge, more cooperation between technologists and artisans, the creation of AI applications that are sensitive to cultural differences, the inclusion of AI studies in music technology curricula, and the creation of laws that safeguard indigenous intellectual property rights. By taking these steps, AI can make a significant contribution to the sustainability, advancement, and preservation of native musical instrument craftsmanship.

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