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# The Role of Technology in The Preservation and Dissemination of Folklore: A Systematic Literature Review

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**ABSTRACT -** The digital preservation of folklore, encompassing oral traditions, music, rituals, and customs, is crucial as these cultural expressions face the risk of being lost in the modern era. Various technological methods have been developed to address this issue, yet their effectiveness varies widely across different contexts. This systematic literature review, utilizing the PRISM (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method, aims to identify and analyze the most effective technological methods for preserving folklore, as reported in existing literature. The PRISM approach ensures a structured and transparent review process, enhancing the reliability of the findings. The review synthesizes data from studies on digitization, database creation, multimedia archiving, and artificial intelligence, evaluating the effectiveness of these techniques across different types of folklore. Key trends identified include the success of high-resolution digitization, metadata standardization, and community-driven archiving initiatives. The review also emphasizes the importance of community involvement and ethical considerations in preservation efforts. This analysis offers valuable insights for researchers, practitioners, and policymakers, providing a comprehensive overview of current best practices and identifying areas for future research to enhance the preservation and accessibility of cultural heritage in the digital age.

## INTRODUCTION

In today's rapidly evolving digital landscape, the intersection of technology and culture is transforming how traditional narratives, practices, and expressions are preserved and shared. Folklore, which comprises a rich tapestry of oral traditions, myths, legends, and customs, plays a crucial role in shaping cultural identities and fostering community bonds (Dimitropoulos et al., 2018). However, the challenges posed by globalization and modernization threaten the continuity of these invaluable cultural artifacts. The shift toward digital platforms offer both opportunities and challenges for preserving this intangible cultural heritage (ICH) in ways that are accessible to contemporary audiences while remaining true to their origins.

Existing literature emphasizes the importance of technology in documenting and disseminating folklore. For instance, Kumar (2024) highlights the role of digital technologies in India's efforts to document ICH, noting that community participation and mutual respect for cultural diversity are essential for the sustainability of these preservation initiatives. Similarly, Dimitropoulos et al. (2018) present a multisensory approach to capturing ICH, using digital tools to facilitate the exchange of knowledge between researchers and practitioners, thereby ensuring the transmission of ICH to future generations.

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While the digital preservation of folklore presents promising possibilities, it also raises important considerations. Rossau et al. (2019) explore the digitization of traditional craftsmanship, using 3D models and virtual reality (VR) to represent and disseminate traditional skills. Their research illustrates both the advantages and limitations of transferring ICH from its original context into a digital format, as digital tools may inadvertently disconnect cultural elements from their historical and social significance.

At the same time, Csesznek et al. (2024) argue that digital communication, including the use of social media platforms, plays a vital role in promoting local ICH as a resource for sustainable community development. Their research, conducted in Făgăraș Land, Romania, highlights how digital initiatives can increase the visibility of cultural heritage, thereby reinforcing community identity. Furthermore, Way and Wei (2023) demonstrate the potential of cloud-based VR systems to preserve and enhance traditional Chinese glove puppetry, providing users with an interactive platform that bridges the gap between traditional art forms and modern digital experiences.

Given these advancements, this systematic literature review explores the multifaceted role of technology in both the preservation and dissemination of folklore. By analyzing various studies and initiatives, it aims to shed light on the innovative methods employed in documenting and archiving folklore, the influence of digital storytelling and social media on cultural transmission, and the ethical implications of using digital platforms to preserve ICH. This review seeks to provide a comprehensive overview of how technology not only safeguards traditional narratives for future generations but also reimagines them for contemporary audiences, fostering a dynamic dialogue between past and present.

Here are three research questions that will guide the examination:

- RQ1. How does the digitization of folklore materials impact the preservation and accessibility of traditional narratives across diverse cultures?
- RQ2. What role do online archives and databases play in shaping the academic and public understanding of folklore, and how do they influence research methodologies in the field?
- RQ3. In what ways do social media and interactive technologies (such as VR and AR) transform the engagement and dissemination of folklore among younger audiences, and what implications does this have for cultural preservation?

Through this exploration, we aim to offer insights into how technology can serve as a powerful ally in the ongoing efforts to sustain and celebrate the rich diversity of global folklore (Aliakbari, 2023). By synthesizing the contributions of key researchers, this study will contribute to a better understanding of the opportunities and challenges inherent in digitizing folklore, ultimately guiding future initiatives in the field.

## LITERATURE REVIEW

The preservation of folklore, including oral traditions, music, rituals, and customs, has become increasingly vital in the digital age due to the risk of losing these cultural expressions. Technological advancements such as digitization, online databases, multimedia archiving, and interactive technologies like virtual reality (VR) and augmented reality (AR) have been implemented to address this challenge. This literature review synthesizes existing studies to provide a comprehensive overview of current best practices and challenges in digital folklore preservation, emphasizing the importance of community involvement and ethical considerations in these efforts.

Digitization significantly enhances the preservation and accessibility of traditional folklore materials by converting them into digital formats that can be stored, shared, and accessed globally. High-resolution digitization combined with metadata standardization ensures that cultural expressions are preserved in detail and can be integrated across different platforms. Hou and Cai (2024) emphasize the importance of such approaches, noting that they facilitate the long-term sustainability and interoperability of digital folklore archives. Digitization helps to democratize access to cultural materials, making them available to a wider audience that includes researchers, cultural enthusiasts, and community members who might otherwise have limited access to these resources.

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Nevertheless, the effectiveness of digitization can vary based on the cultural context and the type of folklore being preserved. For example, Yıldırım and Kaya (2024) explore how digital nomads share cultural experiences such as rituals and food through social media. They argue that while digitization can facilitate cultural exchange, it may also strip away the depth and contextual understanding necessary to fully appreciate these practices. Their study highlights the need for culturally sensitive digitization practices that capture the cultural significance of folklore elements while addressing the risk of superficial representation.

Online archives and databases play a crucial role in the preservation and academic study of folklore by providing structured repositories that house a variety of cultural expressions. These digital platforms shape both scholarly research and public engagement with folklore, influencing how it is documented, categorized, and understood. Metadata standards and the organization of digital content ensure discoverability, making it easier for researchers to compare folklore materials across regions and cultural groups. However, the way these platforms are structured can also impose specific interpretive frameworks, which may not fully accommodate the diversity of cultural narratives.

Giglitto et al. (2019) present a case study involving the Bedouin communities in Egypt, where participatory design methods were used to develop mobile applications for documenting local intangible cultural heritage (ICH). Their approach empowered the community to take ownership of the documentation process, ensuring that the recorded folklore accurately reflected local values and practices. Such community-driven methods provide a valuable model for ensuring that online archives not only serve as static storage but also as active sites of cultural production, where communities can contribute to and shape their cultural narratives.

However, the influence of digital infrastructures on folklore studies extends beyond just the availability of materials. Flinterud (2023) discusses how social media algorithms shape what content is seen and shared, thus influencing which folklore narratives gain prominence. These platforms are not neutral repositories but are governed by algorithmic processes that affect visibility and accessibility. This can potentially lead to the marginalization of certain cultural expressions, pushing some traditions into obscurity while elevating others based on their digital popularity. Consequently, scholars must critically assess the implications of using digital platforms as research tools and consider how they shape the public understanding of folklore.

Social media and interactive technologies like VR and AR have dramatically altered the ways younger audiences engage with folklore. These tools offer immersive and participatory experiences that go beyond traditional preservation methods. Ji et al. (2024) demonstrate that VR can be used to recreate traditional practices, such as the Cloisonné art experience in Beijing, allowing users to interact with cultural elements in a virtual space. This not only increases interest in cultural heritage but also serves as an educational tool, promoting a deeper understanding of traditional practices among younger generations.

Social media also plays a pivotal role in making folklore more accessible and engaging. Rachman (2024) discusses how digital platforms empower underrepresented groups, including women, to actively participate in the preservation and transmission of cultural heritage. By utilizing social media, these groups can shape cultural narratives and ensure that diverse perspectives are included. This democratization of cultural production challenges traditional notions of cultural ownership and provides new avenues for the reinterpretation and dissemination of folklore.

However, the widespread use of social media for cultural preservation comes with its own set of challenges. While digital platforms facilitate the sharing of folklore, they also contribute to its commodification. The virality of folklore on social media can sometimes oversimplify cultural expressions, reducing them to marketable content rather than preserving their full cultural significance. Thus, while social media offers unprecedented opportunities for engagement, it also raises questions about the authenticity and ethical considerations in digital cultural preservation.

Ethical issues surrounding the digitization and digital dissemination of folklore must be carefully addressed to avoid cultural misrepresentation and exploitation. Hou and Cai (2024) emphasize the importance of community engagement in digital preservation efforts, arguing that involving local communities in decision-making ensures that digital practices align with cultural values.

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Additionally, ensuring equitable access to digital resources is crucial for sustainable digital preservation, as disparities in technological infrastructure and digital literacy can limit participation in these initiatives.

This literature review underscores the transformative role of digital technologies in the preservation and dissemination of folklore. While digitization enhances accessibility, it must be carried out with cultural sensitivity to preserve the contextual richness of diverse cultural expressions. Online archives shape how folklore is understood and studied, requiring critical reflection on their influence on cultural hierarchies. Social media and interactive technologies engage younger audiences in new ways, offering both opportunities for revitalization and challenges related to authenticity.

Ultimately, the review reveals that digital preservation is a dynamic and evolving field that intersects with cultural practices, presenting new strategies for safeguarding cultural heritage while highlighting the need for ethical and inclusive approaches.

## METHODOLOGY

### 1. IDENTIFICATION

The method of selecting suitable papers for this study involves three primary phases in the systematic review process. The initial stage involves the identification of keywords and the exploration of associated terms through the utilization of resources such as thesauri, dictionaries, encyclopedias, and prior research. Subsequently, following the determination of relevant keywords, search strings were generated for the Scopus and SpringerLink databases, as illustrated in **Figure 1**.

During the initial stage of the systematic review procedure, a total of 174 papers were successfully retrieved from the databases used in the present research work. The initial stage of the research process entails doing a comprehensive search for scholarly resources that are pertinent to the pre-established research topic. The utilized terms encompass “avatar” and “learning.” The initial stage entailed identifying keywords and conducting a search for analogous phrases in prior scholarly investigations. Next, all pertinent terms and search queries for the Scopus and ERIC databases were formulated (refer to Fig. 1). Thus, in the initial phase of the advanced search process, this study successfully acquired a total of 75 publications from the databases.

| | |
|---|---|
| Scopus | TITLE-ABS-KEY ( digital AND preservation AND folklore ) AND ( LIMIT-TO ( DOCTYPE , "ar" ) ) AND ( LIMIT-TO ( PUBSTAGE , "final" ) ) AND ( LIMIT-TO ( LANGUAGE , "English" ) ) |
| SpringerLink | “Folklore” AND “Preservation” AND “Digital” |

**Figure 1.** Identification of keywords and the exploration of associated terms in Scopus and SpringerLink databases

### 2. SCREENING

During the initial round of screening, it is imperative to exclude duplicated papers although none were detected. In the initial stage, a total of 152 articles were excluded, followed by the subsequent phase where 68 articles were examined. The selection process for both phases involved the application of specific inclusion and exclusion criteria formulated by the researchers (refer to Fig. 2). The initial criterion for selection was literature in the form of research articles, as it serves as the primary source of practical information. Additionally, the present investigation incorporates the omission of publications including systematic reviews, reviews, meta-analyses, meta-syntheses, book series, books, chapters, and conference proceedings.

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Moreover, the analysis focused solely on scholarly articles authored in the English language. It is imperative to acknowledge that the time frame selected spans a period of five years, specifically from 2019 to 2024. A total of 68 publications made up the final selection.

| Criterrion | Inclusion | Exclusion |
|---|---|---|
| Language | English | Non-English |
| Timeline | 2019 - 2024 | <2019 |
| Literature Type | Journal (Article) | Conference, Book, Review |
| Publication Stage | Final | In Press |

**Figure 2.** The selection search criteria

## 3. CRITERIA FOR ELIGIBILITY

In the third stage, referred to as the eligibility phase, a cumulative number of 93 articles was compiled. At this step, a comprehensive evaluation was conducted on the titles and main content of all publications to ascertain their adherence to the inclusion criteria and alignment with the research objectives of the present study. Consequently, a total of 29 reports were excluded from the analysis due to incompatible inclusion criteria. The full text has been removed from this analysis due to the small sample size (n=7). Additionally, the title does not show a significant relationship (n=9) and the abstract does not align with the stated purpose of the study (n=13), as supported by empirical data. A total of 37 articles are now accessible for examination, as indicated in **Figure 3**.

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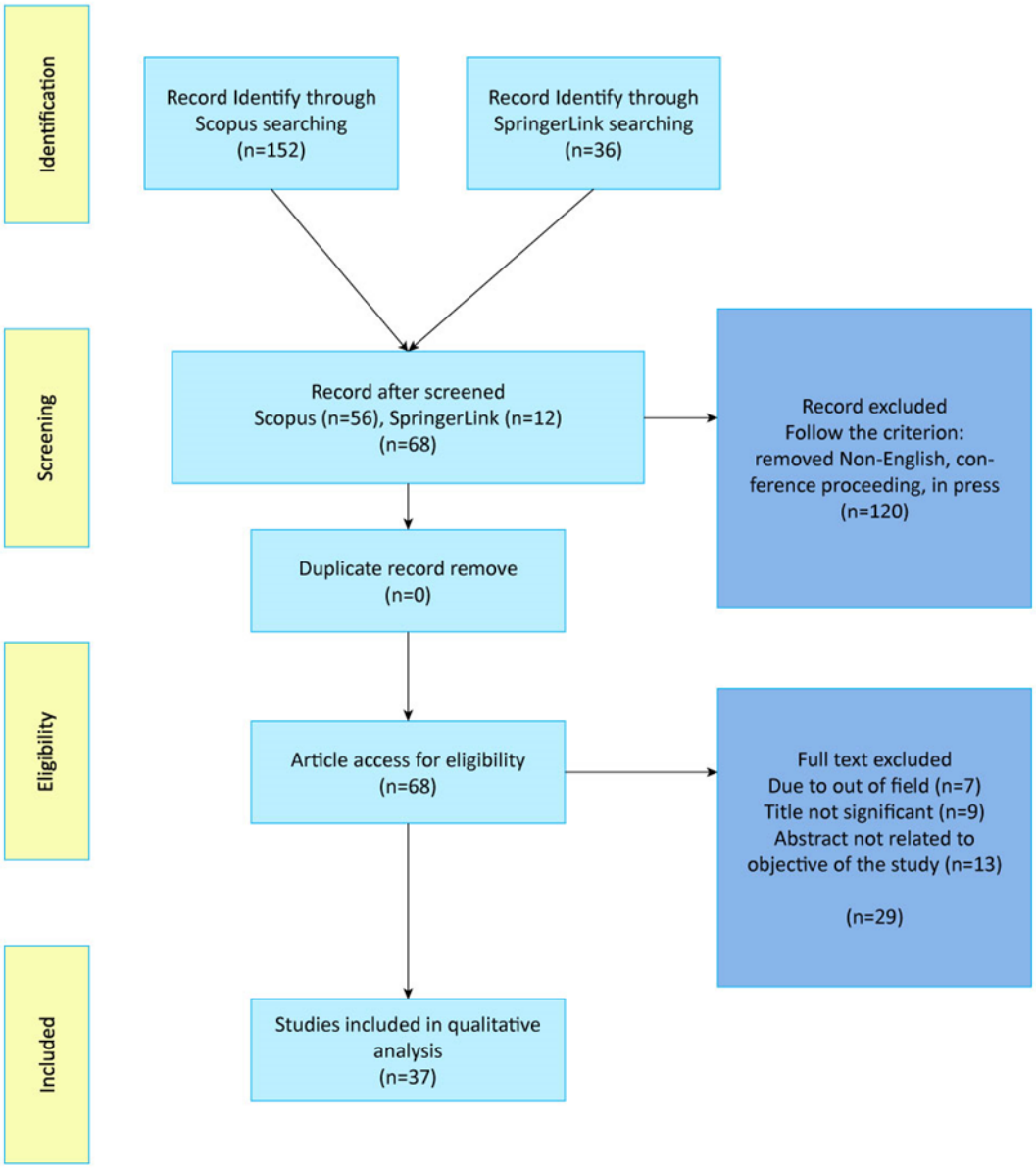


**Figure 3.** Flow diagram of the proposed searching study

## 4. THE CONCEPT OF DATA ABSTRACTION AND ANALYSIS

The study utilized the integrative analytic assessment approach to examine and combine several research designs, including quantitative, qualitative, and mixed methods. The objective of the competence research was to identify and analyze noteworthy themes and subtopics. The initial phase in the development of the topic involved the acquisition of data. **Figure 2** illustrates the systematic approach employed by the researchers in analyzing a corpus of 174 articles to identify claim or content that is pertinent to the present study's research questions. The authors subsequently conducted a comprehensive analysis of the latest influential scholarly articles pertaining to avatar, learning, and technology focusing on engagement. The methodologies utilized in all inquiries, along with the research outcomes, are currently under scrutiny. Subsequently, the author collaborated with other co-authors, namely Suraya binti Md Nasir, experts in design technology to establish thematic categories derived from the data in the field of design thinking and creative technology. The objective of this collaborative effort was to identify and rectify any concerns related to the credibility and accuracy of the research findings. The expert review phase is tasked with evaluating the coherence, importance, and suitability of each subtheme by specifying its scope.

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## RESULTS AND DISCUSSION

Following a synthesis and analysis of selected research, the role of technology in the preservation and dissemination of folklore. The following three themes come to light:

### 1. IMPACT OF DIGITIZATION ON THE PRESERVATION AND ACCESSIBILITY OF TRADITIONAL FOLKLORE ACROSS CULTURES

The digitization of folklore materials has emerged as a powerful tool in the preservation and dissemination of intangible cultural heritage (ICH), particularly in the context of traditional narratives. Across the globe, folklore forms an integral part of cultural identity and continuity, offering insight into the values, beliefs, and practices of diverse societies. However, the preservation of such intangible heritage has faced significant challenges, particularly due to the transitory nature of oral traditions and limited access to physical archives. This systematic review synthesizes research to explore how digitization has impacted both the preservation and accessibility of traditional narratives across diverse cultures.

Digital preservation strategies have increasingly been employed to safeguard traditional narratives by transforming them into digital formats, enabling broader access while ensuring their longevity. As Velhinho and Almeida (2023) highlight, digitization not only assists memory institutions such as museums and archives in preserving cultural heritage but also extends access to the public through open-access policies and participatory methodologies. These approaches, particularly in the Portuguese context, illustrate how digitized folklore can be made more available both within and beyond institutional settings, thus ensuring its continued relevance.

Furthermore, the digital preservation of ICH extends beyond the mere documentation of folklore to include innovative digital applications that capture intricate details of cultural practices. For instance, Zhao and Duan (2022) discuss the "Weinan Two Rivers and One Mountain Cultural Digital Memory Project," which integrates various forms of Chinese cultural resources, including folk tales, into cohesive digital environments. This approach showcases how digital technologies can systematically integrate and present folklore materials in ways that enhance both their preservation and accessibility.

Similarly, Qi and Zhou (2024) emphasize the role of advanced digital tools, such as deep learning and computer-aided design (CAD), in preserving traditional costumes associated with folklore. By digitally capturing and segmenting images of ICH clothing, their study demonstrates how digitization allows for the meticulous documentation of cultural artifacts. These digital reproductions can serve as virtual displays and facilitate dynamic demonstrations, ensuring the long-term survival of traditional designs and associated narratives.

Beyond preservation, digitization significantly improves the accessibility of folklore, making traditional narratives available to a wider audience. Wang (2023) underscores the importance of digitization in enhancing public cognition of ICH through improved digital evaluation methods. His study reveals that Internet-based channels provide a significantly higher rate of engagement (0.6) compared to traditional mediums, and user satisfaction with digitized ICH materials increased notably (from 2.48 to 4.43). This highlights how digitization has the potential to transform public interaction with cultural heritage, particularly by increasing awareness and appreciation of folklore materials.

Digital platforms not only make traditional narratives more accessible but also foster active community participation in cultural preservation. As Velhinho and Almeida (2023) point out, participatory methodologies encourage local communities to take an active role in documenting and safeguarding their intangible heritage. This co-creative process bridges the gap between traditional knowledge holders and modern technology, allowing for a collaborative approach to preserving and promoting folklore.

The integration of artificial intelligence and digital tools into the design and curation of folklore-related products represents another important dimension of digital preservation. Wu and Han (2023) illustrate how AI-based design systems can incorporate traditional bamboo weaving patterns into modern fashion products, thus blending heritage with contemporary aesthetics. This fusion not only preserves traditional narratives but also recontextualizes them for modern audiences, ensuring their relevance in contemporary culture.

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In a similar vein, Wang (2023) utilizes AI-driven methods to digitize folk dance movements, effectively capturing and preserving the visual and gestural aspects of traditional dance forms. The application of algorithms to model and map these dances serves as a means of safeguarding this intangible heritage while simultaneously enhancing its accessibility through digital platforms.

Digitization also plays a critical role in cultural diplomacy, enabling nations to project their cultural narratives globally. Kyriakidis, AlDulaimi, and Molaeb (2024) examine the role of digital cultural diplomacy in promoting cultural heritage on an international scale. By leveraging digital platforms, countries can share their folklore and cultural traditions with a global audience, fostering cross-cultural understanding and enhancing their soft power. Digital cultural diplomacy, particularly in the context of the United Arab Emirates (UAE), has demonstrated the ability to strengthen international relations and build alliances through the global dissemination of cultural narratives.

Despite the numerous benefits of digitizing folklore, challenges and ethical considerations remain. Stefano and Fenn (2023) emphasize the importance of inclusivity and ethical representation in the digitization process. Their research at the American Folklife Center underscores the need for equitable recognition of diverse voices, particularly those from marginalized communities. Digitization, while expanding access, must ensure that it aligns with the principles of ethical representation and community control, particularly when documenting folklore from underrepresented groups.

The digitization of folklore materials has had a profound impact on both the preservation and accessibility of traditional narratives across diverse cultures. Through digital preservation techniques, advanced technologies such as AI, and participatory methodologies, folklore is not only safeguarded for future generations but also made accessible to a global audience. However, as the field of digital folklore preservation continues to evolve, it must remain attentive to issues of inclusivity, representation, and ethical responsibility. By addressing these challenges, digitization can continue to play a transformative role in preserving and promoting the rich tapestry of traditional narratives that define cultural heritage worldwide.

## 2. THE ROLE OF ONLINE ARCHIVES AND DATABASES PLAY IN SHAPING THE ACADEMIC AND PUBLIC UNDERSTANDING OF FOLKLORE

Online archives and databases have become essential tools in shaping the academic and public understanding of folklore, profoundly influencing research methodologies in the field. These platforms not only provide greater access to folklore materials but also ensure the preservation and dissemination of fragile and otherwise inaccessible cultural artifacts. By analyzing the roles these digital tools play, we can observe significant changes in both the scope and approaches of folklore research.

First, online archives have democratized access to folklore materials by overcoming physical and geographical barriers. Researchers and the public can now access rare documents, recordings, and other cultural artifacts that were previously housed in specific locations, such as libraries, museums, or private collections. For instance, Rachman (2024) highlights how digital spaces have allowed local communities to actively engage in preserving their cultural heritage through online platforms, enabling younger generations to contribute to safeguarding efforts via social media and websites. This inclusivity fosters broader participation in cultural preservation efforts, allowing for the continuation and evolution of traditional knowledge in the digital age.

Similarly, Kaluvilla (2024) and Arif et al. (2024) underscore the transformative impact of digital libraries and online repositories in facilitating the preservation and access to historically significant documents. The UAE’s National Archives and libraries have employed cutting-edge technologies like AI and machine learning to digitize and store cultural documents, ensuring their global accessibility (Kaluvilla, 2024). This broadens research horizons, enabling the study of a country's folklore and cultural traditions from afar while safeguarding the original documents. The cost-effective digitization process, as seen in Quaid-I-Azam University’s digital repository of theses and dissertations, further exemplifies how digital preservation makes vast archives accessible to a global audience (Arif et al., 2024).

Online archives also offer valuable opportunities for collaborative research, a key advantage when studying folklore, as it often involves diverse cultural contexts. Kalarikkal et al. (2024) emphasize how the digitization of missionary archives allows scholars to collaborate across regions, fostering comparative studies and increasing the reach of localized cultural knowledge.

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In this way, digital databases facilitate interdisciplinary research, allowing folklore scholars to engage with other fields such as history, anthropology, and cultural studies.

Moreover, the digitization of folklore materials has changed research methodologies. Previously, researchers relied heavily on fieldwork or limited physical archives. Now, they can conduct in-depth studies remotely, analyzing a vast range of digital documents, images, and videos. As noted by Sun and Su (2023), digital museums, such as the Silk Road Online Museum, are using AI and deep learning technologies to classify and analyze cultural relics, which not only enhances understanding but also accelerates the study of ancient traditions like textile patterns. This digital approach is particularly crucial for folklore studies, where the preservation of visual and material culture plays a vital role in understanding traditions.

However, the challenges of digital archives also require attention. Issues like digital preservation standards, copyright, and access control are paramount. Gorini (2024) notes that despite the widespread production of digital documents, many citizens lack access to reliable resources on how to manage their personal digital archives, which poses risks to preserving folklore and cultural memory. This highlights the need for institutional support in providing digital preservation resources to ensure that valuable cultural materials are not lost.

Lastly, the advent of digital databases has spurred innovative ways to present and engage with folklore. Yu (2023) discusses how interactive technologies such as virtual reality are now being used to create simulations of traditional techniques like the Wu Leno weaving method. Such technologies allow users to experience folklore in novel, immersive ways, fostering deeper connections with cultural traditions and opening new avenues for the transmission and teaching of intangible cultural heritage.

In conclusion, online archives and databases are reshaping folklore research by providing greater access, facilitating global collaboration, and enhancing the methodological tools available to scholars. While challenges such as copyright and preservation remain, the benefits of digital archives in fostering public engagement and ensuring the survival of cultural heritage are undeniable.

## 3. THE ROLE OF SOCIAL MEDIA AND INTERACTIVE TECHNOLOGIES IN THE ENGAGEMENT AND DISSEMINATION OF FOLKLORE

In recent years, social media and interactive technologies such as Virtual Reality (VR) and Augmented Reality (AR) have significantly transformed the ways in which folklore is engaged with and disseminated among younger audiences. These innovations not only increase access to cultural heritage but also foster new forms of engagement that have substantial implications for the preservation of intangible cultural heritage (ICH).

Social media platforms offer a powerful means for disseminating cultural heritage, as demonstrated by digital nomads who share their experiences of local rituals and food cultures online. Yıldırım and Kaya (2024) highlight that digital nomads act as intermediaries in promoting cultural heritage, using social media to bridge cultural divides and foster global dialogue. This aligns with findings from Ramazanova et al. (2024), who emphasize that platforms like YouTube, TikTok, and Facebook have become essential tools for safeguarding and popularizing cultural traditions such as gastronomy, an area particularly susceptible to the effects of globalization. Both studies underscore that social media not only preserves but also reinterprets cultural heritage, making it more accessible and dynamic in the global digital space.

The application of VR and AR technologies offers an immersive way to engage with folklore, which is particularly appealing to younger, tech-savvy generations. Zhang et al. (2023) explored a VR system designed for learning traditional bamboo weaving, finding that users were more engaged and learned faster through immersive virtual environments compared to traditional methods. Similarly, Cai and Liu (2023) demonstrated that VR's immersive qualities made folk dance education more interactive and enjoyable, capturing the interest of younger audiences. These studies suggest that VR technology can significantly enhance cultural transmission, offering experiential learning that can help sustain cultural practices among younger generations.

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AR also plays a crucial role in making folklore more engaging and accessible. According to Sun and Wang (2023), AR's ability to superimpose historical stories onto real-world environments offers an immersive cultural tourism experience, effectively blending past and present. This interactive and sensory-rich approach makes folklore more compelling for younger audiences, who are accustomed to highly visual and interactive digital environments. Similarly, Peter et al. (2023) highlight AR's potential to rejuvenate museum experiences for school-aged children, making cultural history more engaging and relevant.

The metaverse, as explored by Innocente et al. (2024), takes these interactive experiences further by creating shared virtual spaces where users can experience cultural heritage collectively. This fusion of AR, VR, and XR (extended reality) technologies creates an interactive platform for folklore preservation and education that transcends geographical limitations, making cultural practices accessible to a global audience in an engaging and immersive way.

However, these technological transformations are not without challenges. Wardhana et al. (2024) examined how traditional Betawi performers adapted to the COVID-19 pandemic using digital platforms to continue their cultural practices. They found that while digital platforms allow for greater accessibility and promotion of ICH, they also introduce the risk of commodifying cultural practices, potentially stripping them of their original context and meaning. Thus, while technology provides opportunities for cultural preservation, it is crucial to balance innovation with respect for the integrity of the traditions being preserved.

Overall, social media and interactive technologies such as VR and AR have revolutionized the way folklore is engaged with by younger audiences. These platforms offer innovative ways to disseminate, reinterpret, and preserve cultural heritage, making it more accessible and engaging. However, as these technologies continue to evolve, it is essential to ensure that they are used thoughtfully to maintain the authenticity and integrity of the cultural traditions they aim to preserve.

## CONCLUSIONS

This systematic literature review has highlighted the transformative role that technology plays in the preservation, accessibility, and dissemination of folklore, particularly in relation to intangible cultural heritage (ICH). As societies strive to safeguard their traditional narratives and practices, digitization has emerged as a crucial tool, enabling the documentation, storage, and distribution of folklore across the globe. The shift from physical archives to digital repositories has provided an unprecedented opportunity to protect fragile oral traditions and cultural artifacts from the risks of loss, deterioration, and inaccessibility. By converting these materials into digital formats, technologies such as artificial intelligence (AI), machine learning, and computer-aided design (CAD) have enhanced both their longevity and reach, ensuring they are preserved for future generations.

One of the most significant impacts of digitization has been the democratization of access to folklore materials. Digital archives and online databases have removed geographical barriers, allowing scholars, communities, and the general public to engage with previously inaccessible cultural resources. This enhanced accessibility has expanded research methodologies and fostered global collaboration, as scholars from different disciplines and regions can now share and analyze folklore materials remotely. Furthermore, participatory methodologies, where local communities contribute to the digitization and documentation process, have empowered knowledge holders to take an active role in preserving their cultural heritage. This co-creation of digital archives ensures that diverse voices are represented and that the preservation process aligns with the values of the communities involved.

In addition to enhancing access, technology has also revolutionized how folklore is presented and experienced, particularly through the use of interactive technologies such as virtual reality (VR) and augmented reality (AR). These immersive platforms have proven particularly effective in engaging younger generations, allowing them to experience folklore in new and meaningful ways. VR and AR offer users opportunities to virtually participate in traditional practices such as folk dances, storytelling, and craft-making activities. By providing sensory-rich and interactive experiences, these technologies help bridge the gap between traditional heritage and modern digital environments, ensuring that cultural practices remain relevant and engaging in contemporary society.

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Social media platforms have also emerged as powerful tools for the dissemination and reinterpretation of folklore. Platforms such as YouTube, TikTok, and Facebook enable cultural narratives and traditions to reach global audiences, creating new opportunities for the transmission of ICH. Social media encourages user participation and community engagement, contributing to the ongoing evolution and visibility of cultural practices. However, the widespread circulation of folklore through digital platforms may also result in challenges such as the commodification, simplification, or misrepresentation of cultural traditions. These concerns highlight the importance of balancing accessibility with the preservation of cultural context, authenticity, and community ownership.

Overall, the findings of this review demonstrate several key advantages of technological integration in folklore preservation, including improved documentation and storage, wider accessibility, enhanced educational opportunities, greater community participation, and innovative methods of cultural engagement. These technologies have practical applications in digital archiving, cultural tourism, heritage education, museum exhibitions, academic research, and community-based preservation initiatives. By leveraging these tools, stakeholders can promote greater awareness and appreciation of folklore while ensuring its continued transmission across generations.

Despite these benefits, several limitations remain. The reviewed literature highlights challenges related to unequal access to digital technologies, limitations in technological infrastructure, concerns regarding data ownership and intellectual property rights, and the risk of cultural misrepresentation during digitization processes. Furthermore, the successful implementation of advanced technologies such as AI, VR, and AR often requires substantial financial resources, technical expertise, and long-term maintenance, which may not be readily available in all communities or cultural institutions.

Future research should focus on developing culturally sensitive and ethically responsible frameworks for folklore digitization and preservation. Further studies are needed to evaluate the long-term effectiveness of emerging technologies in sustaining community engagement and preserving cultural authenticity. Researchers should also explore strategies for improving technological accessibility in underrepresented and resource-constrained communities, as well as investigate how AI-driven tools can support folklore preservation while respecting cultural ownership and traditional knowledge systems. Additionally, more comparative and empirical studies are needed to assess the impact of different technological approaches across diverse cultural contexts. By addressing these challenges and opportunities, future initiatives can further strengthen the role of technology in safeguarding folklore and ensuring that the rich diversity of human cultural heritage remains accessible, meaningful, and sustainable for future generations.AI was used in the writing of the manuscript.

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## CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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## AUTHORS CONTRIBUTION

All authors contributed to the design of the research and the preparation of the study. The data cleaning and tabulation were undertaken by Universiti Pendidikan Sultan Idris. All authors have read and approved the final manuscript.

CRediT author statement: **Aizat Rushdan.**: Writing, Visualization, Conceptualization and Methodology, **Dr Suraya Md Nasir.**: Corresponding Author, Supervision and Reviewing

## AVAILABILITY OF DATA AND MATERIALS

The data on which the research results of this article are based have been listed in the article. Should further information be required, the corresponding author is available to provide it upon reasonable request.

## DECLARATION OF GENERATIVE AI

During the process of writing this manuscript, the author utilised AI Discovery formerly Scopus AI (Scopus) to assist with the data collection. After the article was completed, QuillBot and ChatGPT were used to check grammar and language clarity. The final interpretation, structure, and writing were all handled by the author alone, and they are fully responsible for the content and its originality.

## ETHIC STATEMENTS

Not applicable

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