

RETHINKING LOCAL KNOWLEDGE: DIGITIZING LOCAL KNOWLEDGE BETWEEN EXTINCTION AND SUSTAINABILITY (A CASE STUDY OF THE AMMATOA KAJANG COMMUNITY IN SOUTH SULAWESI)

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Abstract:

This study investigates the impact of digitalization on the preservation of local knowledge within the Ammatoa Kajang community in South Sulawesi. It specifically addresses the research questions: (1) What forms of local knowledge in the Ammatoa Kajang community are suitable for digitization? (2) What are the challenges and opportunities in digitizing local knowledge in this context? (3) How can participatory and ethical approaches ensure the preservation of local knowledge through digital technologies? Local knowledge, including value systems, customary law, and ecological rituals like Ma'bara, is increasingly at risk of extinction due to globalization and cultural commodification. Employing a qualitative ethnographic approach, the study reveals that digitalization can serve as an effective tool for expanding intergenerational knowledge, provided it is guided by participatory principles, community control, and strong cultural ethics. The findings suggest that without the active involvement of indigenous communities, digitalization may undermine the symbolic meaning and spirituality of this knowledge. The study also highlights key limitations, including the risk of decontextualization and cultural misrepresentation when digitalization is not community-driven. This research underscores the need for collaborative strategies, digital-based cultural protection policies, and approaches aligned with local values to safeguard traditional knowledge in the digital era.

Keywords: *Local knowledge, digitalization, Ma'bara, Ammatoa Kajang, South Sulawesi, cultural preservation.*

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INTRODUCTION

The preservation of indigenous knowledge systems has become a critical concern in the context of the digital age, urging researchers, communities, and policymakers to take immediate action. Indigenous knowledge, encompassing a wealth of cultural practices, ecological wisdom, and societal norms passed down through generations, faces substantial risks of extinction due to globalization and cultural commodification. This body of knowledge is essential not only for ecological sustainability in resource management but also for maintaining the cultural identity and moral foundation of indigenous communities. According to recent estimates, over 370 million indigenous people worldwide depend on these knowledge systems for various aspects of sustainable living, including healthcare, agriculture, and education. Alarmingly, more than 370 indigenous languages are vanishing at an unprecedented rate, with one language disappearing approximately every two weeks, which carries dire consequences for the embedded cultural and ecological practices that form the core of indigenous knowledge (Dei, 2025).

In Indonesia, home to a rich diversity of languages, the Language Development and Fostering Agency reports approximately 718 regional languages, with at least 11% classified as endangered. This statistic underscores the precarious situation of local knowledge systems, particularly in regions like South Sulawesi, where the transmission of critical cultural values such as *siri' na pacce* (honor and social morality) and ecological wisdom regarding agriculture relies heavily on oral traditions and communal rituals. However, these practices are becoming increasingly vulnerable to the adverse effects of global modernization, resulting in challenges such as cultural commodification and unequal access to technology (Khan & Gope, 2025). It has also been documented that while tools designed for enhancement and preservation can aid in knowledge transmission, they can simultaneously commodify indigenous cultures and dilute their intrinsic values (Masenya, 2022).

The relationship between digital technology and the preservation of indigenous knowledge is the subject of significant debate. Proponents highlight digitalization's potential to broaden the reach of indigenous knowledge globally, while critics emphasize the risks of decontextualizing culturally and spiritually nuanced practices. The latter can strip these practices of their original meaning and significance. Despite the fact that many indigenous communities may lack access to conventional information technology systems, they often possess basic

tools such as mobile phones and social media platforms, which can serve as effective means for capturing and disseminating indigenous knowledge spanning various domains—from agriculture and health to community rituals and environmental management (Ajani et al., 2024). Furthermore, digital technology plays a key role in aligning with sustainable development goals, demonstrating its significance in the respectful preservation and promotion of indigenous knowledge (Mhlope, 2025).

The Ammatoa Kajang community of South Sulawesi provides an exemplary case for exploring how digital tools can be used to preserve cultural heritage while safeguarding its integrity. This study is built around three pivotal research questions: (1) Which forms of local knowledge within the Ammatoa Kajang community are amenable to digitization? (2) What challenges and opportunities arise during the digitization process? (3) How can participatory and ethical methodologies ensure that the richness of local knowledge is maintained while utilizing digital technologies? By addressing these questions, this research aims not only to document indigenous knowledge but to encapsulate it within its full cultural context, resisting oversimplification and cultural appropriation (Masenya, 2023; Shanmuga et al., 2025).

The objectives of this research are threefold: (1) to identify the types of local knowledge within the Ammatoa Kajang community that can be effectively digitized, particularly those represented in cultural practices and customary laws; (2) to critically analyze the challenges and opportunities encountered during the digitization process; and (3) to propose ethical, community-based strategies for the preservation of local knowledge through digital means that respect and uphold local cultural values and integrity. This study intends to contribute to the ongoing discussion surrounding the ethical implications of digitalization, ensuring that while aspects of indigenous knowledge are documented, they are also preserved within their authentic cultural contexts (Mthethwa, 2025; Agbese, 2025).

The structure of this paper is designed to guide the reader through a systematic exploration of the topic. First, the introduction provides the research background, problem formulation, and overarching objectives. The literature review critically examines existing studies on the digitization of indigenous knowledge, identifying gaps and offering a theoretical framework for the investigation. The methodology section outlines the qualitative ethnographic approach used in the study, providing depth to the examination of the Ammatoa Kajang community's knowledge systems. The results section presents key findings on the role of digitalization in the preservation of local knowledge, followed by a

discussion that explores the broader implications of these findings and suggests avenues for future research and policy development. Ultimately, this study contributes to the wider discourse on indigenous knowledge preservation in the digital era (Malliga, 2025; Adefila et al., 2024).

As this research unfolds, it highlights the intrinsic value of indigenous knowledge. Evidence suggests that such knowledge systems are not relics of the past but are vibrant, living expressions that can inform sustainable practices in the present. The loss of indigenous languages and their accompanying knowledge does not only affect the communities involved; it represents a significant reduction in the global knowledge base, impacting social coherence, environmental stewardship, and cultural identity. The digital era offers both opportunities and challenges for preserving indigenous knowledge, depending on the frameworks and methodologies employed in digitization initiatives. Ethical considerations are paramount in this process, where it has been argued that intellectual property rights and informed consent should be implemented to safeguard indigenous cultural assets (Aiseng, 2023; Oyelude, 2023).

Digital storytelling is emerging as a significant avenue for facilitating intergenerational knowledge transfer, helping to showcase community narratives that strengthen cultural identity amidst the challenges posed by globalization and digital commodification. This trend offers transformative opportunities for sustaining indigenous cultural identity, though it requires careful management to avoid risks related to cultural appropriation and misrepresentation (Chigwada & Ngulube, 2025; Aswani et al., 2018). Further academic and indigenous community discussions emphasize the need for integrating ethical practices that respect traditional values while also incorporating contemporary technological frameworks (Yongabi, 2023; Tariq, 2025).

To better protect indigenous knowledge in the digital landscape, policymakers and researchers must establish clear legal frameworks to prevent exploitation, ensuring that the digitalization process upholds the essence of cultural heritage. The convergence of ethical frameworks, such as the CARE and FAIR principles, provides a pathway to safeguard indigenous knowledge systems (Okenjom & Asuquo, 2023).

The intersection of digital technology and indigenous knowledge preservation underscores the urgency of addressing ethical issues and highlights the communal responsibility inherent in safeguarding the essence of cultural identity. A holistic approach, rooted in ethical considerations, is essential for honoring the past while

ensuring that indigenous knowledge continues to guide sustainable futures in an evolving global context.

LITERATURE REVIEW

Research on the digitization of indigenous knowledge has seen a significant rise in recent years, demonstrating the potential of digital technologies to preserve and disseminate cultural heritage. Yusran (2021) explores a local initiative in which *Sureq Galigo* poetry was re-recorded in podcast and animated video formats. This project increased engagement among younger generations with Bugis cultural heritage, showing that digital tools, when rooted in local narratives and participatory practices, can be an effective medium for transmitting indigenous knowledge. This supports the broader argument that digital technologies can serve as powerful tools for revitalizing traditional knowledge, especially when aligned with community-driven approaches.

Similarly, Rahmawati and Taufiq (2022) examined the digitization of *Akkorongtigi*, a harvest ritual performed by farming communities in Maros Regency. Their study found that the digitization of such rituals helped document sustainable agricultural practices, a critical aspect of indigenous knowledge. However, they also emphasized the challenges that arise when tradition holders are not directly involved in the digitization process. Without their participation, digital interpretations risk becoming oversimplified or biased, stripping the rituals of their symbolic meanings. This highlights a major limitation in the digitalization of indigenous knowledge—preserving its cultural and spiritual depth while using digital tools that might unintentionally distort its significance.

In a similar vein, Lestari et al. (2023) explored the importance of collaboration between various stakeholders in the digitization of local knowledge. Their research in Tanah Toraja demonstrated that when traditional leaders, local researchers, and technology developers work together, the resulting documentation of cultural practices is richer, more accurate, and more widely accepted by the community. This finding underscores the essential role of community involvement in the digitization process, ensuring that the knowledge remains faithful to its cultural context. However, these studies also point out that the integration of digital technologies with indigenous knowledge systems is not without its challenges. Issues such as cultural commodification, unequal access to technology, and the potential for misrepresentation or simplification remain pressing concerns.

While the potential benefits of digitization are clear, these studies also reveal several gaps in the existing literature. One significant issue is the difficulty in maintaining the authenticity of indigenous knowledge in digital formats. Many studies point out that digital platforms, while offering increased accessibility, often fail to capture the complexities of cultural practices and knowledge systems. Without proper context, digital representations can dilute the deeper meanings embedded in these practices. Furthermore, there is a lack of critical examination of the long-term sustainability of digital archives. While digital tools can facilitate the preservation and dissemination of knowledge, questions remain regarding how these archives will remain relevant and engaged with future generations.

A deeper exploration of theoretical frameworks can shed light on these issues. Local knowledge, as described by Warren (1991), is not just a collection of facts but a dynamic, socially constructed system that reflects the worldview and identity of the community. According to Berger and Luckmann (1966), social reality is formed through the internalization and institutionalization of meanings passed down across generations. In the case of indigenous communities, knowledge is deeply embedded in social practices, rituals, and spiritual beliefs, making its preservation in digital form particularly challenging. The digitalization process must, therefore, account for the social and cultural context in which this knowledge is situated, rather than reducing it to mere data.

Social construction theory further elaborates on the idea that knowledge is continuously produced and reinforced through social interactions, language, and cultural practices (Burr & Dick, 2017). This perspective is particularly relevant when considering indigenous knowledge systems, such as those found in the Ammatoa Kajang community. Practices like *Ma'bara*, *pasang ri Kajang*, and the value of *kamase-masea* are not only forms of knowledge but also essential expressions of social reality that govern ecological relationships and community values. When digitized, these practices must retain their original meaning, which is often linked to their social context and spiritual significance.

Postcolonial theory, especially as articulated by Edward Said (1994), provides an important lens for understanding the potential dangers of digitizing indigenous knowledge. Said critiques the reduction of local knowledge to static "traditions" or cultural relics, viewing them through a colonial lens that fails to respect their epistemological richness. This issue is especially pertinent in the context of digital technologies, which can easily become tools of "digital imperialism" if they are controlled by external forces that shape the representation of indigenous knowledge in ways that do not align with its original cultural values. Thus, the

digitalization of indigenous knowledge must be carried out in a way that resists external appropriation and ensures that communities maintain control over their own cultural narratives.

The conceptual framework guiding this study emphasizes three key components. First, local knowledge is recognized as an epistemic system that emerges from the collective experiences of a society, deeply embedded in moral and ecological structures. It is not merely a body of information but a living system of meanings that shapes societal roles and relationships with the environment. Second, digitization is viewed as a double-edged sword—it offers opportunities for preservation and wider dissemination of knowledge but also carries the risk of decontextualization. The challenge lies in ensuring that the digitalization of indigenous knowledge respects its cultural and spiritual dimensions. Finally, community control and participatory ethics are central to this study, emphasizing that indigenous communities must be the primary agents in digitizing their knowledge. Only through their active participation can digital tools be used to preserve the authenticity and integrity of their cultural practices.

This framework allows for a nuanced analysis of the relationship between the preservation of local knowledge and the potential loss of meaning during the digitization process. It advocates for a community-centered approach to knowledge preservation, where digital tools are employed to maintain, rather than diminish, the cultural richness of indigenous practices.

METHOD

This study employs a qualitative ethnographic approach, which is well-suited for exploring the intricate cultural dynamics of indigenous communities, particularly in relation to the digitization of their knowledge systems. Ethnographic research allows for an in-depth understanding of the lived experiences and cultural practices of the Ammatoa Kajang community, focusing on their knowledge transmission methods and the role of digitalization in preserving their heritage.

Data Collection

Data were collected using participant observation and in-depth interviews conducted within the Kajang community in Bulukumba Regency, South Sulawesi, between 2023 and early 2024. Participant observation involved the researcher actively participating in cultural rituals, such as the *Ma'bara* ritual, to gain firsthand insights into the community's knowledge practices and their engagement

with these traditions. This immersive approach allowed for the collection of both observable and contextual data.

In addition to observation, in-depth interviews were conducted with key members of the community, including traditional leaders, elders, and younger generations. These interviews aimed to gather perspectives on the role of digital technologies in the preservation of local knowledge, focusing on their views regarding digital tools' potential and the challenges they face. A total of 15 participants were selected for interviews, based on their involvement in the community's cultural practices and their perspectives on the intersection of tradition and technology. The selection of participants followed purposive sampling, ensuring that the individuals chosen were highly knowledgeable about the community's traditions, especially those that could be digitized, such as *Ma'bara* and *pasang ri Kajang*.

The study also utilized audiovisual recordings of the *Ma'bara* ritual and focus group discussions on *kamase-masea* (the philosophy of simplicity), which were used to document the community's practices and provide a deeper understanding of the shared meanings attached to these rituals and values. Additionally, text analysis of the Kajang *pasang ri* (customary law) was performed to identify the core principles guiding the community's cultural and legal frameworks.

Data Analysis

The collected data were analyzed thematically, employing grounded theory coding techniques. Grounded theory is particularly useful in qualitative research as it allows for the development of theories grounded in the data itself, rather than testing preconceived hypotheses. This approach is ideal for understanding the complexity of indigenous knowledge systems, as it enables the researcher to generate insights directly from the community's experiences, perspectives, and practices.

The coding process involved multiple stages. Initially, open coding was used to identify key themes and categories in the data. For example, initial codes included terms like "cultural preservation," "digitalization," and "community involvement." These codes were refined and grouped into axial codes to explore relationships between concepts, such as how digital tools could both preserve and potentially distort cultural meanings. Finally, selective coding was used to integrate these themes into a coherent narrative, allowing for the development of a grounded theory on the role of digital technology in preserving indigenous knowledge.

Throughout the analysis, a sociological framework was applied to interpret the findings, particularly drawing on social construction theory (Burr & Dick, 2017), which views knowledge as produced through social interactions and practices. This theoretical lens helped frame the data within the broader context of how knowledge is constructed, transmitted, and potentially altered when mediated by digital technologies.

RESULTS AND DISCUSSION

The Ma'bara Ritual and Its Environmental Ethics

The *Ma'bara* ritual, a central customary practice of the Ammatoa Kajang community in Bulukumba Regency, South Sulawesi, symbolizes the deep connection between humans, nature, and ancestors. This ritual takes place periodically in the sacred forest of Borong Karama, emphasizing the community's ecological values and spiritual beliefs. The ceremony begins with a purification process, where participants engage in a river bath (*tappasa'*), symbolizing both physical and spiritual cleansing before entering the sacred space. This is followed by participants wearing traditional black clothing, which represents dignity and adherence to the community's values (*kamase-masea*). The act of walking barefoot to the ritual site further signifies respect for the earth as the "mother of life," illustrating the Kajang community's reverence for nature.

At the ritual site, the community leader, *Ammatoa*, leads the ceremony with prayers in the Konjo Kajang language. Offerings are made, including agricultural produce, river water, and a black chicken, which are symbolic of blessings and the harmonious relationship between humans and the natural world. The chicken is ritually slaughtered, and its blood is sprinkled on the ground, while water is poured onto the roots of a large tree, establishing spiritual communication with the ancestors and nature's guardians. The elements of earth, air, and blood are seen as the binding forces connecting the human realm with the supernatural.

The ritual culminates in a communal meal, where food is served on leaves with a strict emphasis on leaving no waste behind, reinforcing ecological wisdom and the respect for the cycle of life and death. A notable aspect of the *Ma'bara* ritual is the absence of electronic devices, as the community believes that technology disrupts spiritual balance, and the presence of such devices diminishes the sacredness of the ritual.

Through this ritual, the Kajang community not only seeks to ensure safety and fertility but also engages in cultural education and the intergenerational regeneration of ecological knowledge. The ritual is a living example of local epistemology that underscores the belief in nature's equal role in the cosmic order, emphasizing harmony between humans and the environment.

Digitalization and Its Impact on the Ma'bara Ritual

Digital documentation of the *Ma'bara* ritual reveals its strong ecological principles: respect for natural cycles, the interdependence of humans and nature, and the non-exploitative use of resources. These values are central to the community's way of life. However, the digital portrayal of the ritual, especially when taken out of context (such as on social media platforms), risks diminishing its spiritual significance. When shared as entertainment or spectacle, the deeply rooted ecological and cultural meanings may be obscured or misunderstood by external audiences. This represents a significant challenge in the digitization process, as it could lead to the commodification of sacred rituals, where their profound cultural significance is overshadowed by their visual appeal or entertainment value.

Ecological Meaning in *Ma'bara* and Local Knowledge

The *Ma'bara* ritual is not merely symbolic but is also filled with ecological values that are integral to the community's way of life. The sacred forest of Borong Karama is considered the center of the community's ecological balance, emphasizing the importance of preserving nature. The black chicken and water serve as symbols of sacrifice and life, reinforcing the value of resource conservation. Walking barefoot to the ritual site signifies a close connection to the land, rejecting the exploitation of nature for commercial purposes. The absence of mobile phones and cameras highlights the respect for spiritual privacy and the community's desire to avoid the commercialization of their customs. Lastly, the communal meal signifies social solidarity, with the distribution of agricultural products reflecting the importance of community and shared resources.

The Impact of Digitalization on *Kamase-masea* and *Pasang ri Kajang*

Kamase-masea, the philosophy of simplicity, promotes a lifestyle that rejects over-exploitation of resources. Digital interviews with Kajang youth indicate a growing sense of pride and awareness when their cultural values are presented in digital formats they are familiar with, such as digital stories or podcasts. These digital formats seem to resonate well with younger generations, helping them connect with their heritage in ways that are relevant to their lives. However, there

are challenges associated with digitalizing such traditions. The pressures of commodification, particularly through tourism's interest in "authentic simplicity," can distort the original intent of *kamase-masea*. When cultural practices are presented as products for consumption, their underlying ecological values may be diluted or misunderstood.

Pasang ri Kajang, the community's customary law, governs land use, morality, and settlement practices. The transcription and digitization of *pasang ri Kajang* texts into community archives has strengthened the intergenerational transmission of these legal and moral guidelines. However, the translation of these texts into academic or NGO reports has, at times, stripped them of their cultural nuances and authority. This reflects a broader issue in the digitization process—while digital tools can make local knowledge more accessible, there is a risk that these tools might oversimplify or misrepresent the cultural meanings embedded in the knowledge, especially when it is translated into formats that are not culturally specific.

The findings of this study are directly linked to the research questions. First, the types of local knowledge suitable for digitization, such as *Ma'bara* rituals, *kamase-masea* philosophy, and *pasang ri Kajang* legal principles, were identified as rich sources of knowledge. Second, the challenges and opportunities presented by the digitization process were highlighted, particularly in terms of how digital tools can both preserve and risk distorting the cultural meanings of these practices. Third, the study emphasizes the need for participatory and ethical approaches to ensure that digitalization efforts respect the spiritual and cultural integrity of the knowledge, preventing its commodification or oversimplification.

The results of this study underscore the complex relationship between the preservation of indigenous knowledge and the process of digitization. While digital tools can serve as a means of expanding the reach of indigenous knowledge and ensuring its intergenerational transmission, they also present risks, particularly in terms of decontextualization and commodification. This study highlights the importance of community control, cultural sensitivity, and ethical considerations in digital preservation efforts. The findings suggest that when digitalization is done collaboratively, with active community participation and respect for local values, it can be a valuable tool for preserving indigenous knowledge while maintaining its cultural and spiritual significance.

DISCUSSION

The results of this study highlight that the digitization of local knowledge is a complex process, embedded in social, political, and cultural dynamics. As noted in previous research, digitalization is not merely a technological tool but an epistemological shift that significantly alters how knowledge is produced, disseminated, and interpreted. In the context of the Ammatoa Kajang community, the process of digitizing knowledge, such as *Ma'bara* rituals and *Pasang Ri Kajang*, expands the potential for broader international engagement. However, this digitization also poses risks of symbolic degeneration, especially when these knowledge forms are detached from their original ritual and spiritual contexts. The findings resonate with Rahmawati and Taufiq's (2022) study on the digitization of traditional agricultural rituals, which similarly found that digital formats could help preserve knowledge but also risk diluting its meaning without proper contextualization.

A significant theme emerging from this study is the critical role of local community involvement in ensuring the authenticity of digitized knowledge. In Kajang, it has been demonstrated that digital initiatives that include participation from traditional leaders, youth, and cultural actors are more widely accepted and valued because they maintain the confidentiality and cultural integrity of the community's narratives. This aligns with Yusran's (2021) research, which found that involving local communities in the digitization process of *Sureq Galigo* poetry helped maintain engagement while safeguarding cultural authenticity. Conversely, when digital projects are led by external parties, without adequate consultation with the community, the process risks creating a form of knowledge colonialism, where indigenous knowledge is extracted, commodified, or misrepresented. This is a critical issue that Rahmawati and Taufiq (2022) also raised, stressing that the absence of tradition holders in the digitization process can lead to simplified or biased interpretations of culturally rich practices.

The application of Berger and Luckmann's (1966) theory is insightful in understanding the impact of digitalization on indigenous knowledge. In their work, Berger and Luckmann discuss how knowledge is socially constructed through lived experiences and interactions within a community. The shift to digital media, where knowledge that was once transmitted through personal, direct relationships is now accessed through mediated digital tools, alters the process of internalizing and interpreting meaning. Values such as *kamase-masea* (simplicity and ecological awareness), which were once deeply embedded in daily life, are now often presented as visual narratives. While these narratives may engage younger

audiences, they sometimes become more performative than reflective, focusing on presentation over deeper engagement. This shift, observed in the digital storytelling efforts of Kajang youth, is a double-edged sword. As Yusran (2021) found, while digital formats like podcasts can increase engagement, they also risk simplifying complex cultural values for broader consumption, potentially reducing the depth of cultural meanings.

A postcolonial critique adds further depth to the discussion, particularly in understanding the risks of digital imperialism. Edward Said's (1994) analysis of colonial knowledge frameworks can be applied here to argue that, just as Western narratives have historically reduced indigenous knowledge to static "traditions," digital platforms can similarly commodify or misinterpret these knowledge systems. In this study, the risk of digital imperialism is evident in the potential for global platforms to shape indigenous knowledge according to external perspectives, often ignoring or oversimplifying its cultural significance. The concept of data sovereignty, as emphasized by UNESCO (2023), underscores the importance of indigenous communities maintaining control over their own digital narratives. By building and managing their own digital archives, indigenous communities not only preserve their knowledge but also assert their role as epistemological actors—those who determine how their knowledge is represented, shared, and consumed.

This study confirms that the digitization of local knowledge is inherently a social practice, shaped by political and ethical considerations. The success of digital preservation depends on the ability of communities and stakeholders to develop inclusive, ethical, and culturally sensitive approaches. This aligns with Lestari et al. (2023), who argue that collaboration between traditional leaders, local researchers, and technology developers is essential for the success of digitization projects. When these projects are community-driven and grounded in local values, digital tools can help preserve knowledge and strengthen cultural continuity. However, when digitization efforts are driven by external or commercial interests, the risk is the erasure of knowledge systems—a phenomenon described as epistemicide, where indigenous knowledge is oversimplified or extracted, stripping it of its original meaning and context.

The findings of this study resonate with the work of Rahmawati and Taufiq (2022), who also explored the tension between the potential benefits and risks of digitizing indigenous knowledge. Both studies highlight the importance of local community involvement in the digitalization process to ensure that the knowledge retains its authenticity and does not fall victim to commodification. The insights

from Berger and Luckmann (1966) further support the idea that digitalization alters not only the format but also the very process of knowledge construction, making it crucial to carefully manage how knowledge is shared in digital spaces.

The digitization of local knowledge presents both opportunities and risks. While digital tools can help preserve and disseminate indigenous knowledge, they also pose significant challenges, particularly regarding the authenticity and contextualization of this knowledge. The findings of this study emphasize the need for ethical, community-led digitalization efforts that respect the cultural and spiritual integrity of indigenous knowledge systems. Further research is needed to explore how these digitalization processes can be more effectively managed to prevent the risks of cultural commodification and to ensure that indigenous communities remain the primary agents in preserving and representing their cultural heritage.

CONCLUSION

This research emphasizes that digitizing local knowledge is a crucial step in preserving cultural heritage in the information technology era. Through the study of the Ammatoa Kajang community, it becomes clear that local knowledge is not just a collection of traditional information but also a deeply embedded system of values and meanings connected to the community's social, ecological, and spiritual practices. When digitalization is approached ethically, with active community involvement, it has the potential to strengthen the intergenerational transmission of knowledge and protect the sovereignty of cultural narratives. However, without cultural sensitivity and community control, digitalization risks reducing the richness of meaning, marginalizing indigenous voices, and even leading to epistemicide—the erasure of knowledge through oversimplification or external appropriation.

The study underscores that local knowledge cannot be divorced from the identity, spirituality, and life aspirations of indigenous communities. Practices like *Ma'bara*, *Pasang ri Kajang*, and the values of *kamase-masea* in the Ammatoa Kajang community are prime examples of a holistic relationship between humans, nature, and ancestors, framed within a local epistemology. While digitalization opens up opportunities to preserve this knowledge, it must be carried out with caution. It is essential that this process be driven by active participation from the community, an awareness of cultural sensitivity, and a clear understanding of the risks of decontextualization. Without these safeguards, digital tools could commodify or oversimplify indigenous knowledge, stripping it of its profound cultural and spiritual meanings.

The findings from this study suggest that preserving local knowledge through digital means must be approached with a strong emphasis on ethical, community-led strategies. Digital tools can be used to protect and sustain knowledge, but only if they are part of a framework that prioritizes cultural integrity, local control, and participatory ethics. By fostering a community-centered approach to digitalization, local knowledge can continue to thrive and contribute meaningfully to the broader global community, without losing its unique cultural context.

One of the key implications of this study is that regional governments should play a crucial role in developing policies that protect local knowledge through digital means. These policies must ensure that indigenous communities are the rightful custodians of their knowledge, with control over how it is documented, shared, and represented in digital formats. In addition, the establishment of a digital cultural documentation center at the local level, in collaboration with indigenous communities, academics, and technology developers, would facilitate the preservation of local knowledge while ensuring that it remains culturally relevant and ethically managed.

Furthermore, there needs to be a concerted effort to strengthen intellectual property rights for indigenous communities, preventing the exploitation of their cultural heritage. As part of a broader national agenda, the Ministry of Education and Culture should consider integrating local digital knowledge into the school curriculum, helping younger generations understand and appreciate the value of cultural heritage and its role in shaping sustainable communities.

Collaboration between indigenous communities, universities, and NGOs is essential to ensure that digitization projects are ethically grounded and culturally respectful. Providing local communities with the necessary training and mentoring in technology will empower them to manage and disseminate their knowledge. This not only secures their ownership of cultural narratives but also protects against the risks of misrepresentation or cultural appropriation. Moreover, each digitization project must adhere to the principle of Free, Prior, and Informed Consent (FPIC), ensuring that the knowledge holders give explicit consent for the use of their cultural practices in digital formats.

In conclusion, digitizing local knowledge in South Sulawesi and similar communities must be carried out with cultural humility and a deep respect for indigenous values. This process should not be reduced to mere data collection but viewed as a dynamic, ongoing practice that aligns with the worldview and social values of the communities involved. By ensuring that digitization efforts are driven by local communities and grounded in cultural context, the preservation of

indigenous knowledge can contribute to the global cultural landscape while also safeguarding the rights and sovereignty of indigenous peoples.

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