Realities and Challenges of Digitizing Malay Manuscripts

Hasanulddin Mohd[1*], Wan Mohd Khairul Firdaus Wan Khairuldin[2], Mohamad Nurul Hafiz Bin Ab Latif[3]

[1,2]Department of Shariah, Faculty of Islamic Contemporary Studies, Universiti Sultan Zainal Abidin, Malaysia

[3]Department of Da'wah and Islamic Civilization, Faculty of Islamic Contemporary Studies, Universiti Sultan Zainal Abidin Malaysia.

*Corresponding Author

ABSTRACT

The Malay manuscript heritage, a highly valuable treasure, faces continuous destruction due to the sluggishness of digitization initiatives, affecting access and long-term preservation. This issue is compounded by infrastructure failures and a systematic lack of expertise, leaving a large portion of important materials in fragile analog formats. Previous studies often focused solely on technical aspects but less on the holistic challenges from interconnected socio-technical and governance political perspectives. This conceptual analysis, based on in-depth document analysis, delves into the root causes of this crisis. Findings reveal three main themes: a significant digital divide between institutions, vague and inconsistent national policies, and the erosion of manuscript literacy in contemporary society. This study posits that without an integrated strategy binding technology, policy, and community involvement, this heritage is destined to vanish, demanding immediate and bold policy action.

Keywords: Digitization, Malay Manuscripts, Cultural Heritage, Digital Conservation, Manuscript Literacy

INTRODUCTION

Imagine a library on fire, but slowly, each manuscript is left to be destroyed by time and neglect. This is the haunting reality of Malay manuscripts. A valuable treasure, containing wisdom from various fields; religious literature, medicine, law, general literature, now faces a real threat of extinction. Ironically, in an era where digitization technology should be the savior. This bitter reality is not merely a narrative of sadness. It reflects a profound collective failure in safeguarding our cultural heritage. The lack of sustainable infrastructure, limited technical expertise, and, most alarmingly, the lack of seriousness in national policies are often underestimated. Ad-hoc and fragmented digitization efforts are incapable of addressing the growing scale of the problem, leaving thousands of manuscripts vulnerable to physical destruction and collective oblivion.

Therefore, this study aims to delve into this critical gap, uncovering the various layers of complexity that hinder the digitization of Malay manuscripts. It will expose not only technical problems but also weaknesses at the policy, governance, and societal awareness levels, offering a new lens to understand this increasingly critical crisis.

LITERATURE REVIEW

Discussions surrounding the digitization of cultural heritage are often colored by optimism, as if technology itself is a magical solution. However, the literature review reveals a far more complex reality. Some early researchers, for instance, emphasized the technical efficiency of digitization (Smith, 2018), arguing that image resolution, file formats, and metadata are key. The importance of these aspects is undeniable. However, they often overlook the real difficulties faced by heritage institutions, especially in developing countries, which struggle with scarce resources. This narrow focus, arguably, creates an illusion of progress without addressing

the root problems. Subsequently, another group of scholars emerged, beginning to view digitization from the perspective of governance and funding. Norhayati et al. (2020) and Yahaya (2021) separately suggested that the failure to secure adequate funding and the absence of a clear policy framework are major obstacles. This argument is quite convincing. Unfortunately, they sometimes get trapped in problem analysis alone, offering fewer pragmatic solutions frameworks. Such an approach, while important, seems to place the blame solely on authorities, neglecting the role of society and universities.

Furthermore, the debate about digitization standards is also a frequent topic. Some parties insist on high international standards (UNESCO, 2015), while others (Abdullah, 2019) suggest a more flexible approach, adapted to local realities. This divergence indicates no single consensus on the "best way." It is as if each institution has to reinvent the wheel, wasting time and energy. This is a significant challenge. Ironically, when standards are too strict, they hinder many small initiatives that actually have potential. However, if too loose, the quality of digital data becomes questionable. Indeed, some argue that digitization itself can be a form of digital colonialism (Ramli, 2022), especially when technology and platforms are dominated by global players, causing local heritage data to be trapped in foreign ecosystems that benefit them. This view, while perhaps slightly extreme, forces us to rethink the issue of digital sovereignty. Undeniably, copyright and intellectual property issues also frequently become stumbling blocks. Who is the rightful owner of old manuscripts? Can they be freely published after digitization? These questions, as discussed by Hassan & Karim (2018), do not have easy answers, leading many projects to be abandoned or forced to operate in legal grey areas.

Then, there is the aspect of manuscript literacy and paleography. Even if manuscripts are digitized, who will read them? Many scholars, such as Hashim (2017), lament the decline in the ability to read Jawi script or old characters among the younger generation. Digitization without efforts to build the capacity to read and interpret is like building a digital library without readers. It is a futile endeavor. The literature also touches on preservation technology aspects. Microfilm, for example, was once considered the ultimate solution (Jones, 2005), but we now know that it also has a lifespan and requires specific maintenance. Thus, digitization is not a permanent solution. It requires continuous data migration, something often overlooked in initial planning. The absence of a long-term strategy for digital data preservation, as emphasized by Brown (2023), can lead to 'digital destruction' as severe as physical destruction. This is a tragic irony.

Finally, community involvement. Most digitization projects are institution-driven, with minimal involvement from local communities or the heirs of original owners. This, according to Azman (2020), leads to a lack of ownership and support from those who should be the primary beneficiaries. Without them, digitization projects will remain academic endeavors detached from their cultural roots. Overall, the literature review reveals a perplexing reality. Despite numerous efforts and debates, we have yet to weave together a holistic solution that can truly protect Malay manuscripts from the threat of extinction in the digital age.

METHODOLOGY

This study is based on a conceptual analysis methodology. This approach was carefully chosen, and indeed can be said to be the only appropriate path, given the complex issue of digitizing Malay manuscripts, which cannot be captured through conventional empirical methods in a short timeframe. It is not merely about collecting data; it involves the process of dissecting ideas, weighing conflicting arguments, and constructing a coherent framework of understanding. In other words, we do not just look at what has been said, but also what should have been said, and the existing arguments presented. Thus, this method allows us to deeply explore the complexity of the problem, excavate layers of meaning, and expose assumptions often hidden behind technical or policy debates.

The research process began with the selection of critical documents. It was not a random search; instead, a strict screening was conducted to identify journal articles, research reports, conference papers, and book publications from related disciplines such as library science, digital humanities, heritage studies, and Malay history. Works that were too prescriptive without strong theoretical support, or that merely reiterated old narratives, were rejected. The focus was on texts offering new perspectives, challenging the status quo, or highlighting neglected problems. This step involved repeated reading, examining the core arguments, methodologies, and conclusions of each source.

Data, in this context, are concepts and ideas, not numbers or interviews. Each text was divided into conceptual units; themes, arguments, examples, then reassembled to find clear patterns, contradictions, or gaps. For instance, when examining discussions about technology, not only were the types of technology used noted, but discussions about the accessibility of that technology, its cost, and the capacity of local institutions to manage it were also scrutinized. This is a time-consuming process, requiring meticulousness and intellectual acuity. The main objective of this analysis is to construct a theoretical synthesis that can comprehensively explain the complexities of digitizing Malay manuscripts, far beyond mere technical discussions. We argue that this problem is the result of a complex interaction between technological, policy, economic, and sociocultural factors.

By critically analyzing existing literature, it is hoped to identify recurring causes of failure and propose a more pragmatic framework for solutions. This approach enables the development of a richer narrative, which not only explains 'what' happened, but also 'why', and 'how' we can move forward. It requires the ability to see beyond facts and statistics, interpret nuances, and integrate various perspectives into a cohesive view. This conceptual analysis methodology, while not generating new empirical data, provides significant value in formulating a more robust theoretical framework, which can then serve as a basis for future, more focused and directed empirical studies. It is a process of enlightenment, not merely information gathering.

FINDINGS

The issue of digitizing Malay manuscripts does not merely lie in the absence of tools. It is deeply embedded within a fragile systemic framework. The first problem, clearly, is the digital divide that exists between institutions. Large libraries and archives in the capital may possess some advanced equipment; high-resolution scanners, robust data servers, but small institutions in rural areas, which often house equally important collections, have nothing at all. This is a painful injustice. They are forced to rely on outdated methods, or worse, allow manuscripts to simply perish, while the knowledge contained within them may be irreplaceable.

This complexity is further compounded by the failure of national policies that are cosmetic and inconsistent. Various agencies and ministries may have their own digitization initiatives, but they are not well-coordinated, sometimes even competing for the same resources, an inefficient situation. No strong master policy—one that binds all efforts, provides uniform standards, and guarantees continuous funding—exists, causing digitization efforts to become a collection of small, directionless projects. This leads to resource wastage and continuous confusion.

More alarmingly, the problem of manuscript literacy is becoming increasingly acute. What is the use of digitizing thousands of manuscripts if no one is capable of reading and interpreting their content? The younger generation is increasingly alienated from Jawi script, Rencong script, and traditional writing methods. This is not just a technical problem; it is a serious cultural problem. We digitize materials, but we do not digitize the ability to understand them, like building a bridge without an access road.

Furthermore, technical challenges persist, not at the initial stage, but at the long-term preservation stage. Digital data, unlike physical manuscripts, needs to be constantly migrated and updated. Old file formats become obsolete, storage hardware fails, and technology continues to change at a dizzying pace. There is no clear strategy to ensure that this digital data can be accessed in one hundred or two hundred years, a clear planning failure.

Copyright issues also add an endless layer of complexity. Who owns the copyright to manuscripts written hundreds of years ago? Can they be freely published online? This legal ambiguity hinders many initiatives, as institutions fear legal implications. This creates a dilemma: preserving heritage with legal risks, or letting it perish to avoid legal problems. Not to mention, there is also the reluctance of the community to be actively involved.

Digitization projects are often seen as 'academic affairs' or 'government affairs,' not as important collective endeavors. Without community involvement, which can contribute local knowledge, oral histories, or even personal manuscripts, digitization projects will remain isolated efforts, not rooted in the society they are supposed to serve. This reality, indeed, proves that the digitization of Malay manuscripts is far more complex than merely scanning paper; it requires a comprehensive paradigm shift.

DISCUSSION

So, what does all this mean for the future of our heritage? In reality, the findings regarding the digital divide and policy failures are not merely a reiteration of existing problems; they demonstrate how deep and entrenched these complexities are.

We are talking about a national treasure that cannot be saved, not because of a lack of technology, but because of systemic barriers and an inability to think in an integrated manner. This explains why digitization initiatives often get stalled or fail, they are surface manifestations of more severe underlying policy and administrative problems. It is entirely reasonable to assume that without a clear national policy, one that binds all authorities, academic institutions, and civil society, any digitization effort will remain temporary, wasting time and resources. Theorists like Foucault might argue that knowledge itself is power (Foucault, 1972), and the failure to effectively digitize these manuscripts is a loss of power over the historical narrative and identity of the nation itself.

Collective memory is left to an uncertain fate. This leads to a fundamental question of who is responsible. Should small institutions with limited budgets be expected to tackle this national-scale issue? That is unfair. The seemingly fragmented governance structure often leads to overlapping jurisdictions and a lack of clear accountability. This is not just an issue of efficiency; it is a matter of integrity and commitment to heritage. The existing approach, which relies too heavily on isolated initiatives, seems to validate the view that cultural heritage is merely a side project, not a cornerstone of nation-building. We should aggressively question this view. The finding about the decline in manuscript literacy, furthermore, signals a greater danger.

Digitization without readers is a futility. This is not just about technicalities; it highlights the failure of our education system to foster paleographic skills and understanding of old scripts. Imagine having all the world's information online, but no one is capable of understanding it—it is a terrifying post-literacy scenario. It might suggest that universities and higher education institutions need to seriously overhaul their curricula to include these elements, not as peripheral subjects, but as core components of cultural identity building. It is reasonable to speculate that if this situation persists, we will witness a generation literally unable to connect with their intellectual roots, becoming blind to the richness of written heritage. This also indicates that existing theories of digital accessibility (e.g., Heim, 1993) may need to be expanded to include "intellectual accessibility," i.e., the ability to understand content, not just access its format.

Furthermore, the issue of long-term digital preservation has not yet received due attention. Many people assume digitization is a 'one-time' solution, whereas in reality, it is a continuous process requiring significant resources and expertise. This is a black hole in our planning. If we do not invest in sustainable digital preservation infrastructure, we are only postponing destruction, not eliminating it. Digital data can also be corrupted, lost, or become completely inaccessible, perhaps even faster than physical manuscripts if not managed correctly. There is a poignant irony here: we worry about physical manuscripts decaying, but we worry less about digital data that can be lost with a single mouse click.

Finally, the failure to involve the community is also a strategic weakness. Heritage does not belong only to institutions; it belongs to the people. Without their involvement, the legitimacy and long-term support of digitization projects will always be questioned. We need to rethink how we can empower local communities to be part of this process, not just as recipients, but as active contributors. Perhaps we need to create communitybased digitization models, where technology and expertise are brought to them, not the other way around. This approach might be somewhat radical, but it is the only way to build a true sense of ownership. Without these changes, the digitization of Malay manuscripts will remain a beautiful d6/3*ream difficult to realize.

CONCLUSION

The journey to protect Malay manuscripts through digitization is more than just a technical endeavor; it is a battle against apathy, policy fragmentation, and continuous cultural erosion. We have seen how the digital divide, fragmented policy failures, and the decline of manuscript literacy collectively threaten this invaluable treasure. Ironically, in an era where information access is becoming easier, our most important heritage remains confined in fragile collections, or trapped in unsustainable digital initiatives. This indicates that we need to radically

rethink how we approach heritage preservation. We can no longer accept piecemeal approaches. Instead, a holistic approach that integrates technological, legal, educational, and community involvement aspects is the only way forward. It demands high political commitment and deep collective awareness.

A comprehensive national policy framework, supported by consistent financial resources and managed by a single coordinating body, appears to be the only way to overcome these oppressive challenges. This is not an easy task. This study argues that immediate action is needed to prevent irreversible loss. It is as if we stand on the edge of a chasm, and before us is the last chance to save a part of ourselves, our memory. Failure to act now does not only mean the loss of manuscripts; it means the loss of a part of our identity, history, and the soul of the nation.

Future research should examine the direct impact of implementing centralized digitization policies on the rate of grassroots community involvement, especially in rural contexts, to assess the effectiveness of top-down versus bottom-up models. If we continue to ignore the silent cries of this heritage, we will not only lose old documents; we will lose our collective memory, and perhaps, a part of who we are as a nation.

ACKNOWLEDGEMENTS

REFERENCES

1. Abdullah, A. (2019). Digitalisasi Manuskrip Melayu: Cabaran dan Peluang di Institusi Kecil. Jurnal Warisan Melayu, 12(1), 45-60.
2. Azman, S. (2020). Beyond the Scan: Community Engagement in Digital Heritage Projects in Southeast Asia. International Journal of Heritage Studies, 26(3), 299-315.
3. Brown, S. (2023). The Fragility of Digital Preservation: Lessons from Archives and Libraries. Digital Library Perspectives, 39(1), 1-15.
4. Foucault, M. (1972). The Archaeology of Knowledge and the Discourse on Language. Pantheon Books.
5. Hassan, R., & Karim, M. A. (2018). Isu Hak Cipta dalam Pendigitalan Naskhah Klasik Melayu: Satu Perbincangan. Jurnal Filologi Melayu, 26, 1-17.
6. Hashim, N. (2017). Kemerosotan Kemahiran Paleografi di Kalangan Generasi Muda: Impak Terhadap Warisan Bertulis. GEMA Online Journal of Language Studies, 17(3), 1-16.
7. Heim, M. (1993). The Metaphysics of Virtual Reality. Oxford University Press.
8. Jones, A. (2005). Microfilm and Digital Imaging: A Hybrid Approach to Preservation. Library Resources & Technical Services, 49(1), 18-29.
9. Norhayati, I., Ramlah, A. M., & Nor Azan, B. (2020). Pengurusan Koleksi Manuskrip Melayu di Perpustakaan Universiti: Cabaran dan Solusi. Jurnal Pengurusan dan Pustakawan, 18(2), 23-40.
10. Ramli, S. (2022). Decolonizing Digital Heritage: A Critique of Western-Centric Digital Preservation Models. Journal of Archival Science, 22(4), 450-468.
11. Smith, P. (2018). Technical Considerations in Digitizing Historical Documents. Journal of Digital Humanities, 7(2), 112-128.
12. UNESCO. (2015). Guidelines for the Preservation of Digital Heritage. UNESCO.
13. Yahaya, K. (2021). Dana dan Dasar: Halangan Utama Projek Pendigitalan Warisan di Malaysia. Malaysian Journal of Information Science and Technology, 6(1), 55-70.