



Farmers' Lived Experiences of Adopting Digital Technologies in Agriculture

Iwan Setiawan ^{1*}, Dina Yulia Wijaya ²

^{1,2}Sekolah Tinggi Ilmu Ekonomi Gema Widya Bangsa, Indonesia

¹iwansetiawangema@gmail.com *, ²dina.lauw08@gmail.com

Article Info

Article history:

Received 28-04-2026

Revised 07-06-2026

Accepted 17-06-2026

Keyword:

Farmers' Experiences; Digital Technology Adoption; Agricultural Practices; Phenomenological Approach; Technology Integration; Rural Communities

ABSTRACT

The integration of digital technologies in agriculture has gained significant attention as a means to improve productivity and resilience. However, existing research predominantly focuses on technical outcomes, overlooking the subjective experiences and perceptions of farmers. This study addresses the knowledge gap by exploring the lived experiences of farmers in adopting digital technologies in agriculture, focusing on the socio-cultural and personal factors that influence this process. We employ a phenomenological approach, specifically Interpretative Phenomenological Analysis (IPA), to gain a deeper understanding of the meanings that farmers attach to their interactions with digital tools. Through in-depth interviews with 15 farmers, we identify key themes such as the generational divide, infrastructure limitations, and the role of community influence in technology adoption. To ensure the trustworthiness of the findings, member checking, peer debriefing, and systematic coding procedures were employed throughout the analysis process. Our findings reveal that the adoption process is not purely technical but is heavily shaped by social and cultural dynamics, emphasizing the need for contextually relevant and culturally sensitive approaches to technology integration. These results contribute to a more nuanced understanding of digital technology adoption in agriculture, highlighting the importance of addressing the human aspects of technology integration in future research and policy development.



©2026 Authors. Published by PT Mukhlisina Revolution Center.. This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License. (<https://creativecommons.org/licenses/by/4.0/>)

INTRODUCTION

The adoption of digital technologies in agriculture is a rapidly growing phenomenon, fueled by advancements in information and communication technology (ICT). This shift has sparked a significant transformation in the way farming practices are conducted worldwide, promising to increase agricultural productivity and enhance resilience in the face of climate change (Dzalbe, 2025). In many rural communities, where traditional farming methods have been passed down through generations, the introduction of digital tools such as mobile apps for crop monitoring, weather forecasting, and resource management presents both opportunities and challenges. However, adoption is not merely a technical process; it is embedded in the social, cultural, and economic realities of farming communities. Therefore, understanding how farmers perceive, negotiate, and integrate these technologies is essential for explaining why digital innovation is accepted, adapted, or resisted.

The relevance of this phenomenon lies in its profound impact on the lives of farmers and their communities (Debernardini et al., 2025). Adoption of digital technologies in agriculture can influence social structures, economic stability, and access to resources, all of which are vital components of rural life. However, the experience of adopting such technologies is not uniform across all farmers. Factors such as age, education, socio-economic background, and technological literacy contribute to the diverse ways in which farmers engage with and make sense of new digital tools. Understanding how farmers perceive and interpret these technologies is crucial, as their personal experiences form the foundation of successful integration and long-term sustainability (Johansson & van Beek, 2025). This phenomenon is not just about the technical aspects of digital tools but also about how these tools are perceived, embraced, or resisted by individuals within specific cultural and social contexts.

Given the importance of subjective experiences in shaping how technologies are adopted, it is essential to explore these experiences in depth. A phenomenological approach provides the necessary framework to understand the meanings that individuals attach to their encounters with digital technologies in agriculture (Illés, 2025). This approach allows for an in-depth exploration of the lived experiences of farmers, focusing on how they interpret their interactions with new technologies and how these experiences influence their practices, beliefs, and daily lives. By exploring these subjective meanings, the study aims to contribute to a more nuanced understanding of the adoption of digital technologies, shedding light on the barriers and enablers that farmers encounter in the process. Such insights are critical for the development of policies and interventions that are not only technologically effective but also culturally and socially appropriate.

Research into the subjective experiences of individuals, particularly within the context of technological adoption, has become an increasingly important field (Shata & Hartley, 2025). Understanding how individuals perceive, interpret, and navigate the introduction of new technologies, especially in traditional sectors like agriculture, is crucial for fostering more effective and sustainable practices (Lua et al., 2025). In this context, phenomenological research plays a key role in capturing the rich, lived experiences of farmers who interact with digital tools, uncovering the meanings they assign to these technologies within their unique cultural and social settings (Mukhlis, Suradi, et al., 2023; Mukhlis, 2025b). The personal narratives and reflections of farmers provide valuable insights that quantitative methods alone cannot capture, as they offer a deeper understanding of the internal processes that guide their decisions and behaviors.

However, exploring these experiences presents significant methodological challenges. Traditional quantitative research methods often rely on standardized metrics, which are ill-suited for capturing the complexity of human experience. Such approaches typically fail to account for the nuanced perceptions and personal interpretations that shape the adoption of technology (Zolfaghari et al., 2025). Furthermore, they may overlook the socio-cultural factors that influence how technology is perceived and integrated into existing practices. Phenomenological research, while adept at addressing these gaps, requires meticulous data collection and analysis to identify the deeper meanings embedded in participants' experiences. The limitations of other methodologies, such as surveys or experiments, become apparent when attempting to grasp the lived realities of farmers in rural and semi-rural environments.

Given these challenges, the application of phenomenology in this study is pivotal. Traditional methods cannot fully illuminate the subjective aspects of technology adoption in agriculture, particularly when it comes to understanding the resistance, adaptation, and transformation that occur within different social contexts (Antonić et al., 2024). By using a phenomenological lens, this research aims to transcend the surface-level data typically obtained through quantitative means, offering a more comprehensive and holistic view of how digital technologies influence agricultural practices. This approach ensures that the voices of farmers are central, providing a richer, more nuanced understanding of the phenomena at hand.

While practical solutions for the integration of digital technologies in agriculture have been widely discussed, the majority of existing research on this topic relies on quantitative approaches or prescriptive models (Erişen & Bavlı, 2026). These solutions often focus on measuring the technical efficiency or the outcomes of technology adoption in terms of productivity gains or economic benefits. While these approaches are valuable for evaluating the effectiveness of digital tools in agriculture, they fall short in capturing the deeper, more nuanced experiences of farmers. Specifically, they fail to address the subjective meanings that individuals assign to their interactions with these technologies, as well as the socio-cultural contexts in which these technologies are embedded (Saputra et al., 2024). The reliance on quantitative data leaves a gap in our understanding of the emotional, psychological, and experiential aspects of technology adoption, such as resistance, adaptation, or the sense of empowerment that digital tools may bring to farmers.

This gap in knowledge calls for an alternative approach that goes beyond surface-level metrics to explore the essence of the phenomenon in question. Phenomenology, with its emphasis on understanding lived experiences, offers a solution by allowing for a deeper exploration of the subjective

meanings that farmers attach to their use of digital technologies. Rather than focusing solely on outcomes or measurable success, phenomenology enables an examination of how farmers interpret their interactions with digital tools and how these experiences shape their farming practices, identities, and perspectives on the future of agriculture. Through this approach, the study seeks to uncover the essential characteristics of the phenomenon, providing a richer, more holistic understanding of the adoption of digital technologies in agriculture (Mukhlis et al., 2024; Mukhlis, Maryam, et al., 2023). By addressing these gaps in current research, phenomenology offers a unique perspective that can help inform more culturally sensitive and contextually appropriate strategies for digital technology integration in farming communities.

Research on the adoption of digital technologies in agriculture has focused largely on the technical aspects of implementation, such as productivity, economic outcomes, and the efficiency of digital tools. Studies have explored factors influencing technology uptake, such as accessibility, cost, and education, but few have examined the deeper, subjective experiences of farmers. Previous research on the social and cultural implications of technology adoption has largely relied on quantitative methods or theoretical models, which often overlook the personal meanings and lived experiences of those involved. This gap in understanding calls for a more comprehensive exploration of how farmers experience the integration of digital technologies, particularly in rural and semi-rural contexts. Literature on phenomenology in agricultural technology adoption is limited, yet studies that employ phenomenological methods reveal a richer understanding of the nuances involved in technological shifts.

The approach proposed in this study is phenomenology, specifically interpretative phenomenological analysis (IPA), which allows for an in-depth exploration of the personal experiences and perceptions of farmers using digital tools in agriculture. By centering farmers' voices, the study contributes to the literature by explaining the subjective and contextual dimensions of agricultural digitalization that are often overlooked in technically oriented research. This method was chosen because it facilitates a deeper understanding of the meanings and interpretations that farmers attach to their use of technology. Unlike traditional quantitative methods, IPA focuses on capturing the essence of individual experiences, providing insight into how farmers make sense of their interactions with digital tools within their cultural and social contexts. The goal is to uncover the emotional, cognitive, and social factors that influence technology adoption, which will address the knowledge gap identified in previous research (Mukhlis, Arifin, Ridwan, & Zulfaidah, 2025; Mukhlis, Arifin, Ridwan, Zulfaidah, et al., 2025). By applying this approach, the study aims to explore the lived experiences of farmers and generate new insights into the integration of digital technology in agriculture.

The structure of the article is organized to guide readers through the study's objectives and findings. Following this introduction, the context of the phenomenon being studied will be outlined, providing an overview of the social, economic, and technological factors influencing digital technology adoption in agriculture. The methodological approach, including data collection and analysis procedures, will be discussed, with a focus on the phenomenological framework employed in the study. The results section will present the themes identified through IPA, followed by a discussion that connects these findings to the broader context of agricultural technology adoption. Finally, the article will conclude with reflections on the implications of the study's findings and suggestions for future research and policy development.

RESEARCH METHODS

Study Design

This study adopts a phenomenological approach, which is particularly suited for exploring and understanding the lived experiences of individuals (Fife, 2020; Kawamura, 2020). Phenomenology is focused on delving into the subjective experiences and meanings that participants attach to specific phenomena, aiming to uncover the essence of these experiences from their perspective. This approach was chosen for its ability to provide deep insights into the complexities of how farmers experience and interpret the adoption of digital technologies in agriculture. By emphasizing individual perceptions and the meanings they assign to their experiences, phenomenology offers a robust framework to explore

how technology is integrated into agricultural practices and its impacts on productivity and resilience (Lutz & Knox, 2014; McNabb, 2015). The study specifically employs an interpretative phenomenological analysis (IPA) to understand how participants make sense of their encounters with digital tools in agriculture, emphasizing their personal reflections and interpretations. Prior to data collection, the study protocol was reviewed and approved by the relevant institutional ethics committee. All participants received an explanation of the study objectives, voluntary participation, confidentiality procedures, and their right to withdraw at any stage without consequence. Written informed consent was obtained from each participant before the interview began.

Participants

The participants in this study were selected through purposive sampling to ensure that those included had relevant experience with the adoption of digital technologies in agricultural practices. The inclusion criteria required participants to be adult farmers who have been involved in using digital tools, such as apps for crop management, weather forecasting, or agricultural monitoring, for at least one farming cycle. Participants were selected from diverse agricultural regions to capture a wide range of experiences. The sample consisted of 15 farmers, aged between 35 and 60 years, with a balanced gender distribution of 8 male and 7 female participants (Hillman & Radel, 2018; Migdal, 2018). These individuals were from both rural and semi-rural areas, ensuring that the sample reflected varying levels of access to digital infrastructure. Exclusion criteria were individuals with no experience using digital technologies in agriculture or those not directly involved in farm management activities. Recruitment continued until data saturation was reached, meaning that the final interviews no longer produced substantially new meanings, codes, or experiential patterns related to the adoption of digital technologies in farming. Saturation was assessed through ongoing comparison of interview notes and preliminary codes after each interview.

Data Collection

Data were collected through semi-structured in-depth interviews, conducted face-to-face with each participant. The interviews aimed to explore the participants' personal experiences with digital technology adoption, their challenges, and the perceived benefits. The interview guide was designed to allow participants to share their thoughts freely while ensuring that key topics were covered. The interviews lasted between 45 to 60 minutes and were conducted in a quiet, private setting to ensure comfort and confidentiality (Carreiras & Castro, 2012; Iosifides, 2016). Data were recorded with the consent of participants, and transcription was completed immediately following each interview. The interviews were conducted in the participants' local language to ensure that they could fully express their experiences without language barriers. Ethical considerations were taken into account to ensure that the interview process was conducted in a respectful and non-intrusive manner.

Data Analysis

The collected data were analyzed using interpretative phenomenological analysis (IPA), a technique particularly suited for understanding how participants make sense of their personal and social worlds. The analysis involved several systematic steps. First, the interview transcripts were read multiple times to gain a comprehensive understanding of the content. Key themes were then identified by coding significant statements that captured essential aspects of the participants' experiences. These themes were categorized into clusters based on their relevance to the research questions (Daly, 2007; Longhofer et al., 2012). The analysis also involved interpreting these themes in the context of the participants' personal backgrounds and the broader socio-cultural factors influencing their experiences. NVivo software was utilized to assist in organizing and managing the data, though the primary focus remained on the manual identification and interpretation of themes. The final stage involved synthesizing the themes to articulate the core meanings and experiences related to the adoption of digital technologies in agriculture.

RESULTS

Experiences with Technology Adoption

Farmers expressed a variety of experiences with the adoption of digital technologies, which were deeply rooted in their individual socio-economic contexts. For many, the initial encounter with digital technology was driven by the promise of increased productivity. However, the journey was often not without its struggles. One farmer, a 54-year-old in a rural community, shared:

"When I first heard about the new app for tracking crop growth, I was hesitant. But after seeing the results from my neighbor's farm, I decided to give it a try. It wasn't easy at first. I had to learn how to navigate it, but after a few weeks, I could already see the improvements in my harvest."

This quote illustrates one important pattern in the data: adoption often began with hesitation and became more acceptable when farmers observed concrete benefits in nearby farms. Rather than suggesting a uniform adoption pathway, the account shows how peer demonstration can reduce uncertainty and make digital tools appear more relevant to farmers' everyday agricultural decisions. Farmers reflected that the decision to adopt new technologies was not just about technical benefits but was also influenced by peer demonstrations and community-driven knowledge sharing.

Challenges of Digital Integration in Remote Areas

Despite the positive impacts of digital tools, several farmers highlighted significant barriers to full integration, particularly those related to infrastructure and technological literacy. These challenges were especially pronounced in more remote areas, where access to the internet and technical support was often limited. One farmer from a mountainous region stated:

"In our area, the internet connection is unreliable. Sometimes, even when we are ready to use the app, it doesn't work because there's no signal. This makes it very difficult to trust technology when it's inconsistent."

This comment reflects the struggles that many farmers face with digital integration, particularly in areas where technological infrastructure is lacking. Additionally, older generations expressed frustration with the steep learning curve associated with new technology. As one participant remarked:

"I'm used to working with my hands. All this new technology is overwhelming sometimes. But I see that the younger generation is much more comfortable with it, so I think it's just a matter of time before I get the hang of it."

This highlights a generational divide in technological adoption, with younger farmers being more adept at utilizing digital tools compared to their older counterparts.

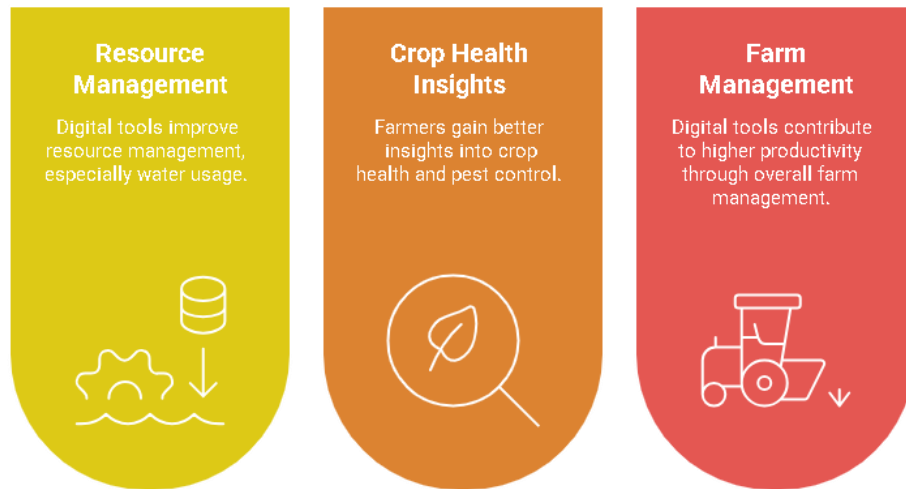
Impact of Digital Technology on Agricultural Productivity and Food Security

The adoption of digital technologies has had tangible impacts on agricultural productivity, although these effects were not always immediately visible. For some farmers, the integration of technology led to increased yields and better management of resources. One farmer, who had been using a weather forecasting app for several months, noted:

"Since I started using the weather app, I've been able to plan my irrigation better. I no longer waste water, and I can adjust my planting schedule to avoid heavy rains. My yields have definitely improved."

This statement underscores the practical benefits of digital tools in improving resource management, particularly in terms of water usage. Similarly, farmers noted that digital tools provided better insights into crop health, pest control, and overall farm management, which contributed to higher productivity.

Benefits of Digital Tools



However, the impact on food security was less uniformly perceived. While some farmers believed that digital technologies enhanced their ability to produce more, others felt that without the proper market access and infrastructure, increased yields did not automatically translate to improved food security. One participant from a more remote area shared:

"We can grow more crops now, but the challenge is getting them to market. The app helps us track growth, but when it comes to selling, we are still stuck with the same old problems—no access to transportation or proper storage."

This comment reflects the need for complementary infrastructural development in conjunction with digital adoption to ensure that increased productivity can lead to genuine improvements in food security.

Essential Conclusion

The experiences of farmers with digital technology adoption in agriculture reveal a complex interplay of positive outcomes and significant barriers. While there is a clear recognition of the benefits of digital tools in improving agricultural productivity and resource management, challenges related to infrastructure, digital literacy, and market access persist. The participant quotations suggest that digital adoption is shaped by three interrelated conditions: visible peer-based evidence of benefit, reliable technological infrastructure, and farmers' ability to connect productivity gains with market access. The narratives shared by the farmers underscore the necessity of addressing these barriers to enable a more inclusive and sustainable integration of digital technologies in agricultural practices, particularly in remote and underserved areas.

DISCUSSION

Main Findings Summary

The primary findings of this study reveal the complex and multifaceted experiences of farmers adopting digital technologies in agriculture (Tang et al., 2025). Through a phenomenological analysis, it was found that while digital tools offer the potential for increased productivity and more efficient resource management, the adoption process is deeply shaped by the individual farmer's socio-cultural context and personal perceptions of the technology. However, these findings should not be read as uniformly affirming the benefits of digital agriculture. In contrast to studies that emphasize digital tools as direct drivers of productivity and modernization, this study shows that such benefits are conditional upon rural infrastructure readiness, farmers' digital literacy, and intergenerational patterns of technology use. These findings provide essential insights into the subjective meaning behind technology

adoption and how it intersects with broader socio-economic factors, addressing the overarching research question regarding how farmers experience and interpret digital technology in agriculture.

Contribution to Research Questions

This study provides a comprehensive answer to the research question by uncovering the ways in which farmers interpret and experience the adoption of digital technologies. While previous studies have largely focused on the technical aspects and outcomes of digital tools, this research shifts the focus to the subjective experiences of the farmers themselves (Hegarty et al., 2025). The findings indicate that the adoption process is not purely driven by the perceived benefits of technology but is also heavily influenced by factors such as generational differences, infrastructure limitations, and cultural acceptance. Farmers' personal narratives suggest that the decision to adopt digital tools is a gradual process influenced by social interactions, community validation, and the perceived relevance of the technology to their specific needs. This study contributes a deeper understanding of the internal and external factors that shape the adoption process, revealing that the experience of using digital technology is not uniform but highly individual.

Relation to Previous Literature and Theory

The findings of this study resonate with existing literature on technology adoption in agriculture, particularly the emphasis on the role of socio-cultural factors in shaping technology integration (Ren et al., 2025). For instance, Rogers' Diffusion of Innovations theory highlights the importance of social influence and perceived relative advantage in the adoption of new technologies (Rogers, 2003). This study complements that theory by showing that the perceived benefits of digital tools are not solely determined by their technical capabilities but are deeply embedded in the farmers' social context and their perceptions of what is culturally acceptable. Additionally, the generational divide noted in this study aligns with previous research that has explored how younger farmers are generally more receptive to digital tools, while older farmers may face greater challenges in adapting to new technologies (Sutherland et al., 2020). However, this study extends the literature by emphasizing that even within the same generation, adoption experiences can vary significantly based on individual backgrounds and community influence. The results also challenge the assumption that increased access to technology automatically leads to improved outcomes, as infrastructure limitations and local conditions play a crucial role in the effective use of digital tools. These findings underscore the need for a more nuanced approach to studying technology adoption, one that accounts for the diverse lived experiences of individuals.

Implications of the Findings

The findings of this study have important implications for both the theoretical understanding and practical application of digital technology adoption in agriculture (Yodsurang et al., 2025). From a social and cultural perspective, the results emphasize that technology adoption is not merely a technical decision but is deeply rooted in the cultural, social, and economic fabric of farming communities. The diverse experiences reported by participants underline the need for policymakers and technology developers to consider the unique needs and contexts of farmers when designing digital tools (Mukhlis, Janwari, et al., 2023; Mukhlis & Abdullah, 2025). For instance, the generational divide in technology adoption highlights the importance of tailored training and support systems that address the specific challenges faced by older farmers, who may require more time and resources to adjust. Furthermore, the study suggests that digital tools should be adapted to fit local contexts, particularly in areas with limited infrastructure, to ensure equitable access and utility. Practically, the findings call for an integrated approach to digital technology in agriculture that combines technical innovation with a deep understanding of the social and cultural dynamics at play.

Study Limitations

While this study provides valuable insights into the subjective experiences of farmers, there are several limitations that should be considered when interpreting the findings (Rosyadi et al., 2022). First, the sample size was relatively small, consisting of 15 farmers from specific regions, which may not fully represent the diversity of experiences across broader agricultural populations. Additionally, the study was conducted in specific rural and semi-rural settings, which limits the generalizability of the

findings to other regions or countries with different agricultural practices and levels of technology adoption. The focus on individual experiences, while rich in depth, also means that the findings may not capture the broader trends that could emerge in a more extensive, quantitative study. Moreover, because rural infrastructure and digital ecosystems differ substantially across regions, the barriers identified in this study should be interpreted as context-specific rather than universally applicable. The study also did not systematically compare adoption experiences across age cohorts, which limits its ability to make definitive claims about generational technology gaps. Future research could expand the sample size and geographical scope to provide a more comprehensive understanding of digital technology adoption in agriculture. Despite these limitations, the study offers a valuable contribution to the field by exploring the lived experiences of farmers in a nuanced and culturally sensitive way.

Prospective Research Directions

Building on the findings of this study, future research could explore how digital technology adoption in agriculture intersects with other socio-economic factors, such as access to education, land ownership, and community networks. Expanding the sample to include a wider variety of participants from different regions and cultural backgrounds would allow for a more comparative analysis of how farmers' experiences with technology adoption vary across different contexts. Additionally, research could investigate the long-term effects of digital technology on farm productivity and resilience, examining how the initial experiences with technology evolve over time. Furthermore, there is potential for future studies to explore the role of digital technology in fostering community collaboration and knowledge-sharing among farmers, which could enhance both individual and collective resilience in the face of challenges such as climate change and market fluctuations (Mukhlis, 2025a; Mukhlis & Saidah, 2025). Overall, this study sets the stage for further exploration into the complex relationship between technology, culture, and rural development.

CONCLUSION

This study focused on understanding the subjective experiences of farmers in adopting digital technologies in agriculture, addressing the gap in current research by exploring the social, cultural, and personal meanings behind technology integration. The findings reveal that while digital tools offer significant potential for improving productivity, their adoption is influenced by various socio-cultural factors, including generational differences and infrastructure limitations. The study highlights the importance of tailored support for farmers, especially older generations, and emphasizes the need for technology that is contextually adapted to local conditions. These insights contribute to a deeper understanding of the adoption process, which has often been overlooked in previous research focused on technical outcomes. From a policy perspective, the findings suggest that agricultural development programs should move beyond technology provision and incorporate inclusive digital transformation strategies that address socio-cultural barriers among farmers. Governments and agricultural agencies should integrate digital literacy initiatives into extension services and provide targeted incentives to encourage technology adoption among smallholder farmers. In terms of farmer training, differentiated capacity-building programs are needed to accommodate varying levels of digital competence, particularly among older farmers who often face greater challenges in adopting new technologies. Training approaches should emphasize hands-on learning, peer mentoring, and continuous technical support to enhance farmers' confidence and long-term engagement with digital tools. Furthermore, the study highlights the critical role of rural digital infrastructure, indicating the need for investments in reliable internet connectivity, affordable access to digital devices, and localized digital platforms that reflect the specific needs of farming communities. Future studies could expand this research by examining the long-term effects of technology adoption across diverse farming communities and exploring how community collaboration can enhance resilience in agriculture. Ultimately, this research lays the groundwork for more comprehensive and culturally sensitive strategies for integrating digital technologies into farming practices.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this article.

REFERENCES

- Antonić, J. J., Srok, A., & Vretenar, N. (2024). Blended Learning in the Spotlight of Educational Management-A Scientometric Analysis. *Journal of Information and Organizational Sciences*, 48(2), 279–294. Scopus. <https://doi.org/10.31341/jios.48.2.3>
- Carreiras, H., & Castro, C. (2012). *Qualitative methods in military studies: Research experiences and challenges* (p. 194). Taylor and Francis. Scopus. <https://doi.org/10.4324/9780203099223>
- Daly, K. J. (2007). *Qualitative methods for family studies & human development* (p. 293). SAGE Publications Inc. Scopus. <https://doi.org/10.4135/9781452224800>
- Debernardini, M., Candel, J., & Schulte, R. P. O. (2025). From the ground up: Exploring European carbon farming through social practice theory. *Journal of Rural Studies*, 120. Scopus. <https://doi.org/10.1016/j.jrurstud.2025.103850>
- Dzalbe, S. (2025). Disrupted spaces: The impact of economic crisis on everyday life. *Emotion, Space and Society*, 57. Scopus. <https://doi.org/10.1016/j.emospa.2025.101121>
- Erişen, Y., & Bavlı, B. (2026). Can we really teach the Generation Z? Opportunities and challenges at secondary level. *Qualitative Research Journal*, 26(1), 55–71. Scopus. <https://doi.org/10.1108/QRJ-03-2024-0060>
- Fife, W. (2020). *Counting as a Qualitative Method: Grappling with the Reliability Issue in Ethnographic Research* (p. 140). Springer International Publishing. Scopus. <https://doi.org/10.1007/978-3-030-34803-8>
- Hegarty, B., Jops, P., Gare, J., Greig, J., Aeno, H., Nosi, S., Holmes, A., Hezeri, P., Kabiu, D., Melepie, P. U., Majumdar, S. S., Kal, M., Du Cros, P., & Kelly-Hanku, A. (2025). Gendered knowledge practices and human-animal-ecological health in Papua New Guinea: A qualitative study during a zoonotic tuberculosis investigation. *Social Science and Medicine*, 380. Scopus. <https://doi.org/10.1016/j.socscimed.2025.118151>
- Hillman, W., & Radel, K. (2018). *Qualitative methods in tourism research: Theory and practice* (p. 294). Channel View Publications. Scopus. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85050434848&partnerID=40&md5=7ea1e3f0b2027993b53f6a795804ee51>
- Illés, Z. S. (2025). Tacit knowledge of place: Sensory and artistic approaches for capturing and communicating tacit ecological knowledge. *Art, Design and Communication in Higher Education*, 24(1), 105–115. Scopus. https://doi.org/10.1386/adch_00111_1
- Iosifides, T. (2016). *Qualitative Methods in Migration Studies: A Critical Realist Perspective* (p. 266). Taylor and Francis. Scopus. <https://doi.org/10.4324/9781315603124>
- Johansson, E., & van Beek, L. (2025). How crop models and government visions foreclose imaginaries of agroecological futures. *Futures*, 174. Scopus. <https://doi.org/10.1016/j.futures.2025.103701>
- Kawamura, Y. (2020). *DOING RESEARCH IN FASHION AND DRESS: An Introduction to Qualitative Methods*, 2nd edition (p. 166). Bloomsbury Publishing Plc. Scopus. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85188589040&partnerID=40&md5=b3db406659cd1ea5b20e05664bec39a3>
- Longhofer, J., Floersch, J., & Hoy, J. (2012). *Qualitative Methods for Practice Research* (p. 224). Oxford University Press. Scopus. <https://doi.org/10.1093/acprof:oso/9780195398472.001.0001>
- Lua, Z. Z., Seow, C. K., Chan, R. C. B., Cai, Y., & Cao, Q. (2025). Automated Bitcoin Trading dApp Using Price Prediction from a Deep Learning Model. *Risks*, 13(1). Scopus. <https://doi.org/10.3390/risks13010017>

- Lutz, W., & Knox, S. (2014). *Quantitative and qualitative methods in psychotherapy research* (p. 448). Taylor and Francis. Scopus. <https://doi.org/10.4324/9780203386071>
- McNabb, D. E. (2015). *Research methods for political science: Quantitative and qualitative methods: Second edition* (p. 426). Taylor and Francis. Scopus. <https://doi.org/10.4324/9781315701141>
- Migdal, A. B. (2018). *Qualitative Methods in Quantum Theory* (p. 460). CRC Press. Scopus. <https://doi.org/10.1201/9780429497940>
- Mukhlis, L. (2025a). A Phenomenological Study of Personal Spiritual Experiences in Navigating Religious Pluralism within Interfaith Communities. *Irfana: Journal of Religious Studies*, 1(6), 212–220.
- Mukhlis, L. (2025b). Spiritual Grounds for Economic Growth: A Qualitative Exploration of Rural Indonesian Women's Transformative Journeys Through Mosque-Led Empowerment Programs. *Servina: Jurnal Pengabdian Kepada Masyarakat*, 1(8), 289–298.
- Mukhlis, L., & Abdullah, M. N. (2025). *Hukum Keluarga Islam di Indonesia* (1st ed.). Mukhlisina Revolution Center.
- Mukhlis, L., Arifin, T., Ridwan, A. H., & Zulbaidah. (2024). Integrating Artificial Intelligence and Maqāṣid al-Syarī'ah: Revolutionizing Indonesia's Sharia Online Trading System. *Computer Fraud and Security*, 2024(11), 301–309. <https://doi.org/10.52710/cfs.238>
- Mukhlis, L., Arifin, T., Ridwan, A. H., & Zulbaidah. (2025). Reorientation of Sharia Stock Regulations: Integrating Taṣarrufāt al-Rasūl and Maqāṣid al-Sharī'ah for Justice and Sustainability. *Journal of Information Systems Engineering and Management*, 10(10s), 58–66. <https://doi.org/10.52783/jisem.v10i10s.1341>
- Mukhlis, L., Arifin, T., Ridwan, A. H., Zulbaidah, Rosadi, A., & Solehudin, E. (2025). Reformulation of Islamic Stock Law: The Application of Taṣarrufāt al-Rasūl and Maqāṣid al-Syarī'ah to Develop a Dynamic and Sustainable Islamic Capital Market in Indonesia. *Journal of Posthumanism*, 5(3), 1–13. <https://doi.org/10.63332/joph.v5i3.913>
- Mukhlis, L., Janwari, Y., & Syafe'i, R. (2023). INDONESIA STOCK EXCHANGE: THEORETICAL AND PHILOSOPHICAL ANALYSIS OF MUDHARABAH AND MUSYARAKAH CONTRACTS. *Yurisprudencia: Jurnal Hukum Ekonomi*, 9(2), 243–264. <https://doi.org/10.24952/yurisprudencia.v9i2.8466>
- Mukhlis, L., Maryam, S., & Sormin, S. A. (2023). Model Pembelajaran Living History Berbasis PjBL Untuk Meningkatkan Keterampilan Histografi Mahasiswa. *Jurnal Educatio FKIP UNMA*, 9(4), 1800–1809. <https://doi.org/10.31949/educatio.v9i4.5595>
- Mukhlis, L., & Saidah, Y. (2025). Dynamics of Nature-Based learning in Developing Children's Motoric Skills: Teacher and Parent Perspectives. *HUMANISMA: Journal of Gender Studies*, 9(1), 64–79. <http://dx.doi.org/10.30983/humanisme.v4i2.9366>
- Mukhlis, L., Suradi, Janwari, Y., & Syafe'i, R. (2023). Sosialisasi Saham Syariah sebagai Instrumen Pengembangan Ekonomi Masyarakat di Badan Kontak Majelis Taklim (BKMT) Kabupaten Mandailing Natal. *Jurnal Pengabdian Multidisiplin*, 3(2), 2–9. <https://doi.org/10.51214/japamul.v3i2.604>
- Ren, W., Liu, R., Li, Y., Tang, X., Han, R., Jin, F., Huan, L., & Pollard, M. (2025). High tin or high lead: Distinctive alloying practices of the pastoral Yuhuangmiao culture in Northeast China during the first millennium BCE. *Archaeometry*, 67(4), 1040–1056. Scopus. <https://doi.org/10.1111/arcm.13068>
- Rosyadi, I., Athief, F. H. N., & Rizki, D. (2022). Islamic Solution on the Agricultural Land Leasing Problem: Case of Excessive Time Dispute. *Jurnal Ilmiah Al-Syir'ah*, 20(2), 139–156. Scopus. <https://doi.org/10.30984/jis.v20i2.1679>
- Saputra, N., Putera, R. E., Zetra, A., Valentina, T. R., & Mulia, R. A. (2024). Capacity building for organizational performance: A systematic review, conceptual framework, and future research

- directions. *Cogent Business and Management*, 11(1). Scopus. <https://doi.org/10.1080/23311975.2024.2434966>
- Shata, A., & Hartley, K. (2025). Artificial intelligence and communication technologies in academia: Faculty perceptions and the adoption of generative AI. *International Journal of Educational Technology in Higher Education*, 22(1). Scopus. <https://doi.org/10.1186/s41239-025-00511-7>
- Tang, H., Liang, J., Liu, J., Shen, M., & Liu, X. (2025). From Visibility to Trust: The Impact of Agricultural Product Packaging Images in Livestreaming on Consumer Perception and Repurchase Intention. *Journal of Theoretical and Applied Electronic Commerce Research*, 20(3). Scopus. <https://doi.org/10.3390/jtaer20030248>
- Yodsurang, P., Insisiengmay, S., Tansukanan, P., Uekita, Y., Daungthima, W., Nakamura, M., Sihalarth, P., & Shimizu, I. (2025). Intangible heritage and rituals of spirit purification embedded in the cultural landscape of riverfront communities in Southern Laos. *International Journal of Intangible Heritage*, 20, 82–96. Scopus. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-105009266717&partnerID=40&md5=e799e8560e81926ad42d2d7c5466ece4>
- Zolfaghari, A., Somogyi, S., Thomas-Francois, K., & Fesharaki, M. H. (2025). Beyond technology: Multidimensional consumption values in phygital retailing; a mixed method approach. *Electronic Markets*, 35(1). Scopus. <https://doi.org/10.1007/s12525-025-00776-w>