Journal of Innovation and Operational System
Vol. 3, No. 2, July-December 2026, pp. 1-1x
DOI: https:/10.59261/jiosjournal.v3i2.29

Mapping Digital Literacy of Village Apparatus in the Management of the Website of Linggarjati Village, Kuningan Regency

Muhamad Zidan Syakur*, Syahrul Anwar, Rizky Mubarok, Nurlaela
Politeknik Siber Cerdika Internasional, Indonesia
Corresponding Author: muhamadzidansyakur30@gmail.com*, nlela7178@gmail.com

Keywords:
digital literacy; village apparatus; village website; community empowerment; information management

Article Info :
Accepted: 17-08-2026
Approved: 20-09-2026
Published: 10-11-2026

ABSTRACT

Background: Digital literacy is essential for village officials to manage public information through village websites. Linggarjati Village introduced an independent website to provide a more flexible representation of local identity and information needs.
Objective: This study maps village officials' digital literacy in website management and examines community utilization and associated constraints.
Method: A qualitative case study involved purposively selected informants comprising two village officials and four residents. Data were collected through semi-structured interviews and direct website observation over two weeks and interpreted using manual thematic analysis.
Results: The study identifies limited experience among village officials in independent website management and difficulties with tasks requiring technical competence. Community awareness and utilization of the website were also limited, alongside insufficient socialization and unequal familiarity with digital information channels. The findings suggest that website availability alone does not ensure effective digital public communication.
Conclusion: Continuous training for village officials, clearer website management responsibilities, and communication strategies connecting the website with channels familiar to residents are recommended. These findings describe the specific Linggarjati case rather than a statistically generalizable measure of village digital literacy. Further evidence from coded interview extracts and documented website observations is needed to substantiate detailed competency mapping and strengthen the interpretation of reported themes.

This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International license https://creativecommons.org/licenses/by-sa/4.0/

INTRODUCTION

In today's digital era, digital literacy is one of the important competencies that must be possessed by every individual, including village officials, in order to optimize technology to support public services (Bastian, HK Rahmat, ASH Basri, DDA Rajab,

2021). Digital literacy is the main prerequisite for the transformation of technology-based public services at the village government level (Faozanudin et al., 2023; Haug et al., 2024). Village websites are one of the important instruments in realizing information transparency and community participation (Mulyani, 2016). However, not all villages have sufficient skills or knowledge to manage websites independently (Gerli et al., 2022).

In Linggarjati Village, previously there was a village website based on the government system with a uniform appearance and structure with other villages. However, the website is considered less able to represent local identity and specific needs of the village. This condition encourages village officials to initiate the creation of independent village websites with a more flexible appearance and management. This phenomenon raises the need to map the digital literacy of village apparatus, especially in the context of website management.

The lack of continuous training is the main factor in the low ability of village officials to manage website-based information systems (Sihombing & Lumbantobing, 2024). The use of village websites will be effective if accompanied by a digital communication strategy that is in accordance with the characteristics of local communities (Nugraha, 2025). Some rural communities still have limitations in accessing digital information due to low technological literacy (Damanik et al., 2025; Lythreatis et al., 2022).

The prior literature cited in this manuscript addresses complementary aspects of village digitalization. Faozanudin et al. (2023) discuss the readiness of village governments and the digital skills of village staff for digital public services, while Sihombing and Lumbantobing (2024) address the capacity of village apparatus to adopt digital technology for village administration. Nugraha (2025) emphasizes the role of digital governance and communication in local public-facing initiatives. Taken together, these studies motivate closer examination of the personnel responsible for updating and communicating website content. However, their findings cannot by themselves establish the competence of Linggarjati officials; this requires evidence from the present interviews and observations.

The research gap concerns the distinction between providing a village website and demonstrating that officials can independently maintain it and that residents can use it to obtain information. In this case, the independent website was developed through collaboration between students and village officials, making the transition from development to routine management particularly relevant. The study's contribution is therefore a contextual account of reported skills, practical obstacles, and public use in one village. It does not claim to test a causal relationship or to represent villages beyond Linggarjati. The urgency is practical: without sufficient management capacity and public awareness, an existing digital platform may remain underused.

Previous research has focused a lot on the development of digital infrastructure in villages or the evaluation of website use in general (Muhtar et al., 2023; Susilowati et al., 2024), but there is still little research that focuses on the digital competence of

village officials specifically and how these competencies affect the effectiveness of the use of village websites. These gaps are an important basis for this study to identify the capabilities, constraints, and training needs of village officials in website management, as well as assess the extent to which websites can be used as a means of effective communication and public services.

The purpose of this study is to map the digital literacy of Linggarjati village apparatus in the management of village websites, find out the obstacles faced, and provide recommendations for improving the capabilities and utilization of the website more optimally. Thus, this study not only assesses the capabilities of village apparatus, but also highlights the role of websites as a tool for community empowerment and village information transparency.

The formulation of the problem in this study includes several questions: What is the level of digital literacy of Linggarjati village officials in managing village websites What are the obstacles faced in website management? To what extent do village communities use websites as a source of information? And what steps can be taken to improve digital literacy and the use of village websites? This research is expected to contribute both theoretically and practically.

Theoretically, this research adds to the literature on digital literacy in the village government environment and the use of websites as a medium of public communication. Practically, this research can be the basis for the village government and related parties to design digital literacy training programs, improve the skills of village officials, and maximize the function of the website as an effective and accessible means of information services that can be accessed by the community.

The novelty of this research lies in its focus which combines the mapping of digital literacy of village apparatus with direct observation of the management of the newly created village website in Linggarjati Village. This approach provides a real picture of the digital capabilities of village officials while assessing the community's response to new technologies, thus making an innovative contribution to the development of more applicable and sustainable village digitalization.

RESEARCH METHOD

This study used a qualitative approach with a case study method because its focus was to understand in depth the level of digital literacy among village officials in managing the Linggarjati Village website. The qualitative approach allowed the researchers to understand the experiences and perceptions of the research subjects in greater depth. This approach was chosen because the study emphasized individual experiences, constraints, and perspectives rather than numerical measurements, thereby allowing the researchers to capture rich and contextual information about digital literacy and website use in the village environment.

For a transparent qualitative mapping, the interview and observation topics can be organized into four descriptive dimensions: (1) basic use of digital tools for

administrative tasks; (2) independent website content management and updating; (3) recognition of website information structure and accessibility; and (4) communication of website information to residents. These are organizing categories derived from the stated research focus, not a validated numerical scale. Any assignment of an informant to a competency category must be supported by traceable interview or observation evidence; the available manuscript does not provide such individual-level records.

The research subjects included village officials and residents of Linggarjati Village. The village officials consisted of the Village Head, administrative staff, and website operators who had recently been given responsibility for managing the website. Villagers were selected as additional informants to assess the actual use of the website. The sampling technique used was purposive sampling, which involved selecting respondents based on specific criteria relevant to the research objectives, such as experience in website management, direct involvement in public services, and access to village information through the website. The sample consisted of two village officials and four villagers, for a total of six informants.

The research instrument was a semi-structured interview guide designed to obtain information about the informants' experiences with technology, constraints in website management, website utilization by the community, as well as their expectations and suggestions for improving digital literacy. The interview guide was structured based on the research objectives and was divided into several topics: an overview of website management, the digital capabilities of village officials, website utilization, and the impact of and expectations for website use.

Semi-structured interviews allowed researchers to obtain rich and flexible data because informants could explain their experiences and perspectives in greater depth. The validity of the instrument was maintained through a limited trial involving one informant who was not included in the main sample. This trial was conducted to ensure that the questions were understandable and relevant, in accordance with the principle of instrument validity.

Data collection was carried out over a period of two weeks in Linggarjati Village. The first stage involved conducting direct interviews with village officials at the village office. Their written responses were recorded, and voice recordings were also made for documentation purposes. The second stage involved interviewing villagers at different locations, using simplified questions to ensure that they were easy to understand and encouraged the informants to provide honest responses.

According to Fadila et al. (2025), face-to-face interviews allowed researchers to obtain richer information and gain a better understanding of the social context of informants. In addition to interviews, direct observations were conducted on the independent village website developed through digital mentoring activities. The observations included an assessment of the website's content, information structure, and accessibility for the community.

The data were analyzed using thematic analysis, namely by coding the results of the interviews and observations to identify the main themes related to digital literacy,

constraints in website management, and website utilization by the community. The data were categorized, interpreted, and compared across informants to identify patterns, similarities, and differences in their experiences.

Thematic analysis allowed the researchers to systematically identify, analyze, and report patterns (themes) within the data, making it suitable for qualitative research that emphasized the experiences and perceptions of research subjects (Sitasari, 2022). The results of the thematic analysis were then compiled to address the research questions, provide practical recommendations, and highlight the novelty of the study concerning the digital literacy of village officials in the context of newly implemented website management in Linggarjati Village.

RESULT AND DISCUSSION

Interpretation of Results

The results of the study show that the level of digital literacy of village officials in Linggarjati Village is still relatively low to medium, especially in the management of village websites. These findings indicate that the existence of village websites has not been fully balanced with adequate human resource capabilities. Although before the research was conducted, Linggarjati Village already had a village website based on the government system. However, in this mentoring activity, students built an independent village website as a more flexible and representative alternative to village identity. Evidence-oriented synthesis of the reported findings:

1. Website management capacity: The manuscript reports that village officials were familiar with simple administrative technology but experienced difficulties with more technical web-based tasks.
2. Transition to an independent website: a new website was developed through collaboration with students to allow more flexible presentation of village identity.
3. Community awareness and access: the manuscript reports limited awareness and use among residents, associated with insufficient socialization and digital access constraints. These themes summarize the existing narrative and are not newly verified coded quotations. Interview excerpts, informant-level coding, and dated website observation records were not supplied in the manuscript and therefore cannot be reproduced or independently checked.

The results should consequently be interpreted as exploratory, contextual observations rather than as a measured distribution of digital literacy levels. The expression “low to medium” is not tied to a specified scoring rule or individual evidence and should not be treated as a validated category. The comparison with Kadja and Zega (2026) concerns challenges in village website-based services, whereas Isabella et al. (2024) provides a related context on digital literacy challenges in digital governance. Neither comparison substitutes for primary evidence from Linggarjati. A future

substantiated revision should present anonymized verbatim excerpts, a code-to-theme audit trail, and the specific website pages and functions observed.

These findings are in line with previous research that states that village digitalization in Indonesia often faces constraints on the competency aspect of village apparatus, not on the availability of technological infrastructure (Agustinus Kadja & Zega, 2026; Aneta et al., 2023). Village officials in Linggarjati tend to be able to use technology for simple administrative needs, but still experience difficulties in managing web-based systems that require further technical skills. From the community's side, the results of the study show that the level of awareness and utilization of village websites is still low. Most residents do not know the existence of village websites or are not used to accessing information through digital platforms.

This shows that the digital literacy of village communities is also still a challenge, as found in other studies that emphasize that village digitalization has often not been followed by digital education to the community (Isabella et al., 2024). Thus, the results of this study strengthen the view that digital literacy is a key factor in the success of village digitalization, and village websites will not have a significant impact without increasing the capacity of village apparatus and continuous socialization to the community.

Research Limitations

This study has several limitations that need to be considered. First, the number of informants is relatively limited, namely two village officials and four villagers, so the results of the study cannot be generalized to all villages or other regions. Second, the data collection techniques used are in the form of simple interviews and observations, so they rely heavily on the honesty and understanding of the respondents to the questions asked. Third, this study has not used qualitative software analysis tools such as NVivo or ATLAS.ti, so the thematic coding process is carried out manually. In addition, this study has not evaluated the technical quality of village websites in terms of security, system performance, or user experience in depth.

Research Implications

The findings of this study have practical and theoretical implications. Practically, the results of the research can be the basis for village governments and policy makers to design programs to improve digital literacy for village officials, such as training in website management and the use of information technology. The integration of village websites with social media can also be considered as a more effective communication strategy to reach the community (Atnan et al., 2024).

Primary interview transcripts, verbatim quotations, coded matrices, and dated website observation evidence were not included in the supplied manuscript. The revised synthesis cannot supply these missing data without fabrication. Theoretically, this study contributes to the study of digital literacy and village digitalization by showing that the success of digital transformation at the village level is highly dependent on the readiness of human resources, not solely on the availability of

technology. This research strengthens the qualitative approach in examining digital literacy by emphasizing the experiences and perceptions of technology users at the local level.

This study explored the digital literacy of Linggarjati Village officials in managing an independent village website and considered its use by residents. The reported findings indicate limited experience in independent website management, particularly for tasks requiring technical skills. Community awareness and use of the website were also described as limited, suggesting that the availability of digital infrastructure does not automatically ensure effective public communication.

The findings support practical recommendations for continuous training, clearer management responsibilities, and more active communication with residents through accessible channels. As a qualitative case study involving two officials and four residents, the research provides contextual insights rather than generalizable estimates. Further reporting of interview quotations, thematic coding, and documented website observations is necessary to substantiate the proposed digital literacy mapping and strengthen the study's empirical credibility.

In addition, further research can explore the effectiveness of digital literacy training on increasing the use of village websites, considering that training is one of the important factors in improving people's digital competence (Lopes et al., 2023). The research can also analyze the role of social media as a complement to village websites in the faster and interactive dissemination of public information (Umma & Ahmad, 2025). Longitudinal studies are also recommended to assess changes in the level of digital literacy of village and community devices within a certain period of time after digital interventions are carried out, so that long-term impacts can be measured more accurately (Lee et al., 2022).

CONCLUSION

This study aims to map the digital literacy of village apparatus in the management of the Linggarjati Village Website and assess its use as a means of information for the community. Based on the results of the research and discussion, it can be concluded that the digital literacy of village apparatus in Linggarjati Village is still in the low to medium category, especially in independent website management. The level of utilization of village websites by the community is also still low due to a lack of socialization and limited access to technology. These findings confirm that the success of village digitalization is not only determined by the availability of technology but also depends on human resource readiness. Continuous training and active socialization are needed to improve website management and community participation.

ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to the Linggarjati Village Government, Kuningan Regency, for their support and cooperation throughout this

research. Special appreciation is extended to the village officials and community members who participated as informants and provided valuable information. The authors also thank Politeknik Siber Cerdika Internasional for its academic support in conducting this study.

REFERENCES

Agustinus Kadja, & Zega, Y. K. (2026). Tinjauan Literatur Sistem Informasi Pelayanan Publik Berbasis Website di Desa: Peluang, Tantangan, dan Rekomendasi. *Jurnal Ilmiah Multidisiplin*, *3*(1), 1–14. https://doi.org/10.62282/juilmu.v3i1.1-14

Aneta, Y., Prahara, S., Aneta, A., & Ahmad, J. (2023). Optimizing Village Bureaucracy Transformation: Gorontalo, Indonesia. *Policy & Governance Review*, *7*(3), 211–236. https://doi.org/10.30589/pgr.v7i3.775

Atnan, N., Prajarto, N., & Kurnia, N. (2024). Social Media Management in Local Government: A Case Study of Bandung City Government's Instagram and Twitter (X), Indonesia. *Jurnal Komunikasi: Malaysian Journal of Communication*, *40*(2), 465–481. https://doi.org/10.17576/JKMJC-2024-4002-27

Bastian, HK Rahmat, ASH Basri, DDA Rajab, N. N. (2021). Urgensi literasi digital dalam menangkal radikalisme pada generasi millenial di era revolusi industri 4.0. *Jurnal Dinamika Sosial Budaya*. https://journals.usm.ac.id/index.php/jdsb/article/view/3082

Damanik, J. R., Jamrizal, J., & Yunus, A. (2025). Efektivitas Sistem Pembelajaran Jarak Jauh dalam Meningkatkan Literasi Teknologi Pendidikan Islam di Daerah Rural (Studi di Sarolangun). *AKADEMIK: Jurnal Mahasiswa Humanis*, *5*(3), 1308–1320. https://doi.org/10.37481/jmh.v5i3.1535

Fadila, F., Safriani, S., Eliana, E., & Khaddafi, M. (2025). Pengumpulan Data dalam Penelitian Kualitatif: Wawancara. *Jurnal Intelek Insan Cendikia*, *2*(7), 13446–13449.

Faozanudin, M., Rosyadi, S., & Sulistiani, L. S. (2023). The Preparedness of Village Governments for the Digital Transformation of Public Services in Banyumas Regency, Indonesia. *Public Policy and Administration*, *22*(4), 448–462. https://doi.org/10.13165/VPA-23-22-4-05

Gerli, P., Navio Marco, J., & Whalley, J. (2022). What makes a smart village smart? A review of the literature. *Transforming Government: People, Process and Policy*, *16*(3), 292–304. https://doi.org/10.1108/TG-07-2021-0126

Haug, N., Dan, S., & Mergel, I. (2024). Digitally-induced change in the public sector: a systematic review and research agenda. *Public Management Review*, *26*(7), 1963–1987. https://doi.org/10.1080/14719037.2023.2234917

Isabella, Alfitri, Saptawan, A., Nengyanti, & Baharuddin, T. (2024). Empowering Digital Citizenship in Indonesia: Navigating Urgent Digital Literacy Challenges for Effective Digital Governance. *Journal of Governance and Public Policy*, *11*(2), 142–155. https://doi.org/10.18196/jgpp.v11i2.19258

Lee, H., Lim, J.-A., & Nam, H.-K. (2022). Effect of a Digital Literacy Program on Older

Adults' Digital Social Behavior: A Quasi-Experimental Study. *International Journal of Environmental Research and Public Health*, *19*(19), 12404. https://doi.org/10.3390/ijerph191912404

Lopes, A. S., Sargento, A., & Farto, J. (2023). Training in Digital Skills—The Perspective of Workers in Public Sector. *Sustainability*, *15*(13), 10577. https://doi.org/10.3390/su151310577

Lythreatis, S., Singh, S. K., & El-Kassar, A.-N. (2022). The digital divide: A review and future research agenda. *Technological Forecasting and Social Change*, *175*, 121359. https://doi.org/10.1016/j.techfore.2021.121359

Muhtar, E. A., Abdillah, A., Widianingsih, I., & Adikancana, Q. M. (2023). Smart villages, rural development and community vulnerability in Indonesia: A bibliometric analysis. *Cogent Social Sciences*, *9*(1), 2219118. https://doi.org/10.1080/23311886.2023.2219118

Mulyani, N. (2016). *Super Asyik Permainan Tradisional Anak Indonesia*. Diva Press.

Nugraha, D. S. (2025). Peran Digital Governance dalam Peningkatan Daya Saing dan Branding Pariwisata Sumedang. *Perspektif*, *14*(4), 834–852.

Sihombing, T., & Lumbantobing, R. D. H. (2024). Digital technology adoption for village public administration—Evidence from Indonesia. *Journal of Infrastructure, Policy and Development*, *8*(4), 3444. https://doi.org/10.24294/jipd.v8i4.3444

Sitasari, N. W. (2022). Mengenal Analisa Konten dan Analisa Tematik dalam Penelitian Kualitatif. *Forum Ilmiah*, *19*(1), 77–84.

Susilowati, A. P. E., Rachmawati, R., & Rijanta, R. (2024). Does the digital divide matter? Comparison between Java and the rest of Indonesia in developing smart villages. *Human Geographies – Journal of Studies and Research in Human Geography*, *18*(2). https://doi.org/10.5719/hgeo.2024.182.6

Umma, W. P., & Ahmad, N. (2025). Peran Media Sosial sebagai Medium untuk MemaksimalkanKeterbukaan Informasi Publik di KPU Kabupaten Jombang. *Jurnal Komunikasi Nusantara*, *7*(1), 122–135. https://10.0.130.86/jkn.v%25vi%25i.2403