Journal of Village Development Innovation
Volume 3, No 1, January-June, 2026, pp (1-13)
E-ISSN (3089-901X)
Doi: https://doi.org/10.59261/jvdi.v3i1.32

The Influence of Village Digitalization on the Digital Literacy Interest of the Sukasari Village Community

Pipit Novi Triana[1]*, Fajar Nurjaman[2], Sevthiyanti Putri Adila[3], Muhammad Taukhid Fahriansyah[4]
Politeknik Siber Cerdika Internasional, Indonesia
Corresponding Author: novipipit572@gmail.com*, sevthyantiputriadilia@gmail.com, taukhidfahri@gmail.com

Article Info :
Accepted: 20-04-2026
Approved: 25-05-2026
Published: 25-07-2026

Keywords:
village digitalization; digital literacy; community interest

ABSTRACT

Background: Literacy is a crucial element in improving human quality, especially in rural areas, where limited facilities and the sustainability of literacy programs are still the main problems. In Sukasari Village, the public library program is no longer active due to a lack of managers, the fate of the 2024 mobile library program is unknown, and no digital library is available.

Objective: This study aims to identify the impact of village digitalization on the interest of the people of Sukasari Village in digital literacy through a digital-based literacy program run by students of the Student Research Program (PRISMA) from SCI Polytechnic.

Method: This study used a qualitative descriptive case study. Data were collected through interviews with three purposively selected informants (two residents and one village official) and observation and analyzed using source and method triangulation.

Results: Literacy digitization using barcode-based media is considered easier and more practical for the community to access and in accordance with current technological developments. Unlike previous library programs, it requires no building or manager and allows access anytime and anywhere through digital devices.

Conclusion: Literacy digitization has the potential to increase interest in digital literacy; given the small number of informants, these findings are exploratory.

INTRODUCTION

Digital literacy is the ability to utilize digital technology efficiently in various aspects of life, Name et al., (2025) including seeking information, interacting, and accessing public services. The importance of digital literacy is increasing in this day and age, because people need to be able to understand technology and use it wisely to obtain accurate information (Tinmaz et al., 2022). Suud & Noviya, (2022) In rural areas, challenges in digital literacy often

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/

arise due to unequal internet access, poorly functioning conventional literacy facilities, and lack of technology training for the community (Lythreatis et al., 2022) (Novi Kurnia, 2017).

Digital libraries are one way to improve digital literacy in rural areas because they provide access to online learning resources, offer training, and create space for collaboration between communities. Research by Conzizca et al. revealed that libraries play an important role in digital literacy, which helps improve the technological capabilities of rural communities by providing access to digital resources and educational training(Conzizca et al., 2026).

Furthermore, digital literacy training is needed in rural communities to reduce the digital divide (Reddy et al., 2023). Husen in his research on increasing digital literacy capacity in Mandirancan Village shows that digital literacy provides greater opportunities for village communities to make optimal use of information and technology (Soepardi, 2023). Several previous studies have also documented community-based efforts to strengthen literacy in rural areas.

The development of digital-based village libraries has been shown to increase community literacy by bringing reading resources closer to residents (Suud & Noviya, 2022), while the optimization of village libraries as literacy centers requires consistent management and community involvement (Nanang Febri Setiadi & Sidiq, 2023). Other studies emphasize capacity-building approaches through community service programs that equip village residents with basic digital skills (Budiarto et al., 2024), as well as training for local communities so that they can access and evaluate information independently (Vitalocca et al., 2024).

Digital literacy education models in rural communities further indicate that strategies for developing digital abilities should be adapted to local conditions in order to improve residents' quality of life (Hanifah et al., 2024), and similar mentoring efforts in other villages show that structured assistance helps rural residents use digital technology more productively (Nazwa et al., 2025). Mobile library cars have likewise been used to bring reading materials closer to learners and increase their interest in literacy (Muwaffaqillah et al., 2024). More recently, QR code-based digital libraries in educational centers (Zakyyah et al., 2025), the utilization of the iPusnas national digital library application (Sugama et al., 2024), and the development of digital libraries as part of smart village initiatives (Gerli et al., 2022) have demonstrated that low-cost digital media can expand access to reading resources in rural settings.

Based on the results of initial observations in Sukasari Village, it was found that the public library program that had previously been running is no longer

active because there is no management. (Budiarto et al., 2024) In addition, the mobile library that was present in 2024 is also unknown. (Nanang Febri Setiadi & Sidiq, 2023) The village apparatus said that until now the village does not have a digital library, and literacy facilities are only available in the school environment, so it cannot be widely accessed by the community (Zakyyah et al., 2025).

This condition makes the present study urgent. When conventional literacy facilities are inactive and no digital alternative is available, residents outside the school environment lose almost all structured access to reading materials, which may widen the digital divide between rural and urban communities (Novi Kurnia, 2017). At the same time, initial observations indicated that smartphones are already widely used in residents' daily activities, an opportunity that has not yet been utilized for literacy purposes.

Without timely intervention, the decline of literacy facilities risks becoming permanent, and the potential of digital devices already owned by residents may remain underutilized for learning. Therefore, a practical, low-cost, and easily maintained literacy medium that does not depend on a physical building or a full-time library manager is needed immediately, in line with the view that digital literacy plays an important role in empowering rural communities (Muhtar et al., 2023).

Through the Student Research Program (PRISMA), we strive to make a real contribution to society by initiating digital-based literacy programs. (Husen, 2024) This program is designed to be accessible through QR barcodes provided at several strategic points in the village. (Vitalocca et al., 2024) This literacy digitization is expected to be a solution that is relevant to the times and can increase the interest in digital literacy of the people of Sukasari Village (Muwaffaqillah et al., 2024).

The novelty of this study lies in three aspects. First, unlike previous studies that focused on developing physical village libraries (Suud & Noviya, 2022) or on delivering digital literacy training (Vitalocca et al., 2024), this study examines a literacy medium that requires neither a dedicated building nor a permanent manager, namely the Digital Literacy Tree, which connects residents to digital reading resources through QR codes placed at several strategic points in the village.

Second, whereas QR code-based digital libraries have generally been implemented within educational institutions (Zakyyah et al., 2025), this study places the medium in open community spaces so that it can be accessed by residents outside the school environment. Third, the program was initiated by vocational students through the PRISMA scheme, offering a model of student–

village collaboration that can be replicated in other villages facing similar limitations.

Based on this background, the objective of this study is to identify the impact of village digitalization on the digital literacy interest of the Sukasari Village community through a QR code-based digital literacy program, including a description of the existing condition of literacy facilities in the village and the community's response to the program.

Theoretically, this study is expected to enrich the literature on rural digital literacy by providing empirical evidence on the use of simple digital media in villages where conventional literacy facilities are inactive. Practically, the findings are expected to serve as a reference for the village government in designing sustainable literacy policies, for higher education institutions in developing community-based student programs, and for other villages seeking low-cost alternatives to strengthen community literacy.

RESEARCH METHOD

This study used a qualitative method with a descriptive approach. The qualitative method was chosen because the study aimed to gain an in-depth understanding of the condition of digital literacy and the community's views on the digitalization program implemented in Sukasari Village (Hanifah et al., 2024). Based on the identified needs, the researchers developed a digital literacy system using QR codes to connect residents with digital learning resources, including electronic books, articles, technology guides, and other relevant information.

Similar qualitative approaches involving observation, interviews, and media development have been used in rural digital literacy research to identify community needs and develop solutions suited to local conditions. Specifically, this research employed a descriptive qualitative case study design, with Sukasari Village as a single bounded case. A case study design was considered appropriate because the study focused on a specific context, namely a village whose conventional literacy programs had ceased to operate, and on a specific intervention, namely the QR code-based Digital Literacy Tree developed through PRISMA.

The study subjects consisted of two residents of Sukasari Village and one village official who were considered to have relevant information regarding literacy conditions in the village. Informants were selected purposively based on their involvement in and knowledge of literacy issues in the village. Although the number of informants is limited, the selection was intended to capture complementary perspectives: the two residents represented community members who had experienced the former public library and the

2024 mobile library programs, while the village official represented the village government's perspective on literacy facilities.

Consistent with the nature of qualitative inquiry, the adequacy of informants was judged by the depth and relevance of the information rather than by statistical representativeness. Accordingly, the findings are not intended to be generalized to the entire village population but to provide an in-depth initial description of literacy conditions and community responses. Data were collected through interviews and observations. Interviews were conducted with residents and village officials to obtain information about their experiences, perspectives, and the existing conditions of literacy in the village. Observations were conducted to examine literacy facilities and environmental conditions related to literacy activities.

The research instruments consisted of the researchers as the key instrument, supported by a semi-structured interview guide and an observation sheet. The interview guide contained open-ended questions on (1) the history and current status of literacy programs in the village, (2) residents' access to reading materials, (3) the use of smartphones and digital devices, and (4) views on the QR code-based digital literacy program. The observation sheet was used to record the condition of literacy facilities, the locations where the QR code media were installed, and residents' use of digital devices in daily activities. Data collection activities were documented through field notes and photographs (Figure 1).

The collected data were analyzed descriptively by grouping, interpreting, and drawing conclusions based on the research objectives. The analysis was carried out in three stages: data reduction, data display, and conclusion drawing. Interview notes and observation records were first reduced by selecting information relevant to the research objective, then grouped into four themes, namely the condition of conventional literacy programs, the availability of digital literacy facilities, the community's readiness to use digital devices, and the community's response to the QR code-based program, and finally interpreted to draw conclusions.

Data credibility was ensured through source triangulation and method triangulation. Source triangulation was carried out by comparing information provided by residents with that provided by the village official, while method triangulation was carried out by comparing interview data with the results of direct observation. Information confirmed by more than one source or method was treated as a key finding.



Figure 1. Documentation of interviews and field observation in Sukasari Village

RESULT AND DISCUSSION

The results of the study indicate that the state of literacy in Sukasari Village has not reached an optimal level. Through interviews with residents and village officials, several significant findings regarding the facilities and interest in community literacy were revealed. The findings are presented thematically according to the four themes identified in the analysis: (1) the condition of conventional literacy programs, (2) the availability of digital literacy facilities, (3) the community's readiness to use digital devices, and (4) the implementation of and community response to the QR code-based digital literacy program.

The first residents revealed that Sukasari Village used to have a public library program. However, the program no longer operates because no one manages it responsibly. As a result, library facilities become unmaintained and not utilized by residents. The second resident informed that in 2024 there will be a mobile library program present in the village. This program is considered quite beneficial for the community to access reading materials, but it is currently unclear whether the program still exists or has been discontinued.

Taken together, the statements of the two residents indicate that the decline of conventional literacy in Sukasari Village is related not to the absence of initiatives but to the lack of management and program continuity. On the other hand, interviews with village officers revealed that until now, Sukasari Village has not had a digital library. The existing literacy facilities are only limited to the school environment, so the general public's access to reading materials is still very minimal.

Observations show that most people already use smartphones in their daily activities. This shows the possibility of developing digital-based literacy through easily accessible media, such as barcodes that are directly connected to digital reading materials (Pareek, 2024). This finding indicates that the main prerequisite for digital-based literacy, namely device ownership, is already

largely fulfilled, so the main challenge lies in providing relevant content and an easily accessible entry point.

Based on these findings, the PRISMA team implemented the Digital Literacy Tree, a poster medium depicting a tree decorated with book illustrations and containing QR codes connected to digital reading materials, including electronic books, articles, technology guides, and other relevant information (Figure 2). The medium was placed at several strategic points in the village so that residents could scan the QR codes with their own smartphones without requiring a library room or an on-site manager.

The informants' responses indicated that literacy digitization using barcode-based media was considered easier and more practical to access than conventional facilities. The informants also recognized that the medium was in accordance with current technological developments and considered it beneficial because reading materials could be accessed anytime and anywhere through digital devices.

These responses suggest an emerging interest in digital literacy, particularly because the program removes dependence on opening hours, a physical location, and the presence of a manager, which were the main causes of the discontinuation of previous programs. However, systematic usage data, such as the number of QR code scans, the number of residents who accessed the materials, and the frequency of access, were not recorded during the program period.

Therefore, the results presented in this study reflect the informants' perceptions and the researchers' observations of the program's accessibility rather than a quantitative measurement of changes in literacy interest. A summary of the main findings by theme and data source is presented in Table 1.

Table 1. Summary of key findings by theme and data source

Theme	Data source	Key finding
Conventional literacy programs	Interviews with residents 1 and 2	The public library is inactive due to the absence of a manager; the status of the 2024 mobile library is unclear.
Digital literacy facilities	Interview with the village official	The village has no digital library; literacy facilities are limited to the school environment.

Theme	Data source	Key finding
Readiness to use digital devices	Observation	Most residents already use smartphones in their daily activities.
Response to the QR code-based program	Interviews and observation	The medium is considered easier and more practical, in line with technological developments, and accessible anytime and anywhere.

Discussion

In relation to the research objective, the findings indicate that village digitalization through the QR code-based Digital Literacy Tree has a positive impact on the community's interest in digital literacy, mainly by providing an accessible alternative to inactive conventional literacy facilities. This impact is reflected in the informants' perception that digital reading materials are easier, more practical, and more flexible to access, rather than in a measured increase in reading frequency.

Based on the findings of this study, it is known that the low interest in reading among the people of Sukasari Village is not entirely due to a lack of awareness, but rather to the availability of limited facilities and the sustainability of literacy programs. Traditional libraries that are not managed well cause people to lose access to reading. Digitizing literacy using a barcode-based program is a solution that is suitable for today's society's conditions. The program utilizes digital devices that are already known to the public, such as smartphones, making it easier to access information and reading resources (Mamabolo & Durodolu, 2023).

These findings are in line with previous studies showing that libraries and digital resources play an important role in improving the technological capabilities of rural communities (Conzizca et al., 2026) and that digital-based village libraries can increase community literacy (Suud & Noviya, 2022). The findings also support the study on QR code-based digital libraries in educational centers, which used QR codes to provide accessible learning resources (Zakyyah et al., 2025). The present study extends this evidence by showing that a similar medium can be placed in open community spaces outside the school environment, which is particularly relevant for villages such as Sukasari, where literacy facilities are limited to schools.

In contrast to programs that rely on mobile library cars (Muwaffaqillah et al., 2024) or physical village libraries that require continuous management (Nanang Febri Setiadi & Sidiq, 2023), the QR code-based approach does not

depend on a vehicle, a building, or a full-time manager, thereby directly addressing the main cause of program discontinuity identified in Sukasari Village. Nevertheless, studies on community service and training programs (Budiarto et al., 2024) (Vitalocca et al., 2024) indicate that the availability of digital media alone is insufficient without improving residents' ability to search for, evaluate, and use information.

Therefore, the QR code medium should be positioned as an entry point that complements, rather than replaces, digital literacy capacity building (Husen, 2024). Not only ease of access, digital literacy is also considered more flexible because it can be accessed anytime and anywhere. This is expected to increase people's interest in reading to find information independently. Even so, the success of the digital literacy program does not only depend on technology, but also requires support from the village government, village officials, and active participation of the community (Zhang & He, 2022).

Socialization and mentoring are important aspects so that the community can understand how to make good use of digital literacy facilities. With cooperation between students, village officials, and the community, the digital literacy program in Sukasari Village is expected to take place in a sustainable manner. Practically, these findings imply that the village government can adopt QR code-based literacy media as a low-cost component of village literacy policy, provided that a clear management structure is established to update the content and maintain the media.

For higher education institutions, the PRISMA experience shows that student programs can act as a catalyst for village literacy, although their sustainability depends on handing over the program to local actors (Ylipulli et al., 2023). This study has several limitations. First, the number of informants was small (three people), so the findings cannot be generalized to the entire Sukasari Village community.

Second, the study did not record quantitative usage data or measure literacy interest before and after the program, so the impact identified is based on perceptions and observations. Third, the relatively short program period did not allow the sustainability of the program to be assessed. Future studies are therefore recommended to involve more informants, apply mixed methods or pre-test and post-test designs, and record QR code access data over a longer period.



Figure 2. Digital Literacy Tree Project Integrated with QR Code

CONCLUSION

This study concludes that village digitalization through the QR code-based Digital Literacy Tree had a positive impact on the interest of Sukasari Village residents in digital literacy. Amid inactive public and mobile library programs and literacy facilities limited to schools, the program provided an effective alternative for increasing public access to reading materials because it was considered easier, more practical, accessible anytime and anywhere, and in line with technological developments. These findings imply that low-cost digital literacy media initiated through the Student Research Program (PRISMA) can strengthen village literacy, provided that the village government establishes a management structure to maintain and update the content. As the findings are based on three informants without usage data, future research should involve more participants and quantitatively measure changes in literacy interest.

ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to the Sukasari Village Government and village officials for their permission, support, and cooperation during the implementation of this research. The authors also thank the residents of Sukasari Village who were willing to serve as informants and shared their experiences and perspectives. Appreciation is further extended to Politeknik Siber Cerdika Internasional through the Student Research Program (PRISMA) for the opportunity, guidance, and facilitation provided, as well as to the supervising lecturer for the direction given throughout the program and the preparation of this article.

REFERENCES

Budiarto, B. W., Karyadi, S., Pratiwi, R., & Irwan, D. (2024). *Improving Digital Literacy Of Village Communities In Indonesia Through Information Community Service Programs*. *5*(3), 267–271. Https://Doi.Org/10.29303/Ujcs.V5i3.716

Conzizca, M. J., Masruri, A. (2026). *Peran Perpustakaan Sebagai Media Literasi Digital Masyarakat Desa*. *26*(2), 190–201. Https://Doi.Org/10.22373/Adabiya.V26i2.21378

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

Hanifah, H. T., Zahra, R. A., & Rachman, I. F. (2024). Model Pendidikan Literasi Digital Pada Masyarakat Desa: Strategi Pengembangan Kemampuan Digital Untuk Meningkatkan Kualitas Hidup. *Jurnal Ilmiah Pendidikan Kebudayaan Dan Agama*, *2*(3), 42–47. Https://Doi.Org/10.59024/Jipa.V2i3.722

Husen, D. (2024). *Peningkatan Kapasitas Literasi Digital Dasar Bagi Kelompok Masyarakat Desa Smart Village Desa Mandirancan*. *1*(12), 3622–3627.

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

Mamabolo, M. J., & Durodolu, O. O. (2023). Rural Accessibility To Digital Libraries: Requirements And Challenges. *Digital Library Perspectives*, *39*(4), 551–570. Https://Doi.Org/10.1108/Dlp-04-2023-0025

Muhtar, E. A., Abdillah, A., Widianingsih, I., Qinthara, &, Adikancana, M., Adhy Muhtar, E., & Adikancana, Q. M. (2023). Smart Villages, Rural Development And Community Vulnerability In Indonesia: A Bibliometric Analysis. *Taylor & Francisea Muhtar, A Abdillah, I Widianingsih, Qm Adikancanacogent Social Sciences, 2023•Taylor & Francis*, *9*(1), 2219118. Https://Doi.Org/10.1080/23311886.2023.2219118

Muwaffaqillah, D. D., Agustiani, G., Widia, S., & Suhendi, S. (2024). *Peningkatan Minat Literasi Siswa Melalui Kegiatan Kampus Mengajar Dan Mobil Perpustakaan Keliling*.

Nanang Febri Setiadi, W. F., & Sidiq, U. (2023). *Optimalisasi Perpustakaan Desa Sebagai Rumah Literasi Berbasis P&E*. *4*(2), 36–53.

Nazwa, M., Nasution, U., Aqilah, N., Atfa, R., Widya, I., Nasution, A., & Sopha, D. (2025). *Enhancing Digital Literacy For Rural Communities In Empat*

Negeri Village , Batu Bara Regency. *1*(3), 95–100.

Novi Kurnia, S. I. A. (2017). *Peta Gerakan Literasi Digital Di Indonesia :*

Pareek, S. (2024). Qr Codes Making Smart And Effective Library Services: A Case Study. *Desidoc Journal Of Library & Information Technology*, *44*(3), 168–175. Https://Doi.Org/10.14429/Djlit.44.03.19801

Reddy, P., Chaudhary, K., & Hussein, S. (2023). A Digital Literacy Model To Narrow The Digital Literacy Skills Gap. *Heliyon*, *9*(4), E14878. Https://Doi.Org/10.1016/J.Heliyon.2023.E14878

Soepardi, S. (2023). *Character Development Of The Nation ' S Next Generation In Terms Of Reading Habits In The Midst Of Sophistication Of*. 0–1.

Sugama, A., Johandri, J., Rahman, R., & Karimah, S. A. (2024). Pemanfaatan Teknologi Ipusnas Untuk Memperkuat Literasi Digital Di Masyarakat Desa Rancabungur. *Praxis: Jurnal Pengabdian Kepada Masyarakat*, *2*(1), 82–89. Https://Doi.Org/10.47776/Praxis.V2i1.746

Suud, F. M., & Noviya, I. (2022). *Development Of A Digital-Based Village Library To Increase Community Literacy In Ngajaran Hamlet*. *2*(7), 259–266.

Tinmaz, H., Lee, Y.-T., Fanea-Ivanovici, M., & Baber, H. (2022). A Systematic Review On Digital Literacy. *Smart Learning Environments*, *9*(1), 21. Https://Doi.Org/10.1186/S40561-022-00204-Y

Vitalocca, D., Abdal, N. M., Suwahyu, I., Rasjid, A. R., Sidin, U. S., Makassar, U. N., Makassar, U. N., Makassar, U. N., Mesin, P. T., Makassar, U. N., Mesin, P. T., Makassar, U. N., Digital, L., Pribadi, K. D., & Lokal, P. P. (2024). *Pelatihan Peningkatan Literasi Digital Untuk Kemajuan Masyarakat Lokal Di Gowa*. *2*, 231–236.

Ylipulli, J., Pouke, M., Ehrenberg, N., & Keinonen, T. (2023). Public Libraries As A Partner In Digital Innovation Project: Designing A Virtual Reality Experience To Support Digital Literacy. *Future Generation Computer Systems*, *149*, 594–605. Https://Doi.Org/10.1016/J.Future.2023.08.001

Zakyyah, N. F., Sa, M., Firdausi, S. F., Fitria, N., Shidiq, A. N., Ali, M. T., Zalianti, O., Mildani, N., & Hidayat, N. (2025). *Peningkatan Literasi Masyarakat Desa Melalui Perpustakaan Digital Berbasis Qr Code Pada Rumah Edukasi Desa Penambangan , Curahdami , Bondowoso Improving Literacy In Rural Communities Through Qr Code-Based Digital Libraries In Educational Centers In The Mining Village Of Curahdami , Bondowoso Program Studi Tadris Biologi , Universitas Kiai Haji Achmad Siddiq Jember , Indonesia Manajemen Pendidikan Islam , Universitas Kiai Haji Achmad Siddiq Jember , Indonesia Aspek Kehidupan , Termasuk Pendidikan Dan Literasi . Di Era Digital Ini , Literasi Tidak Hanya Digital Untuk Menyediakan Sumber Belajar Yang Beragam Dan Mudah Diakses . Penggunaan Qr*.

Zhang, H., & He, R. (2022). A Study On Digital Inclusion Of Chinese Rural Older Adults From A Life Course Perspective. *Frontiers In Public Health*, *10*, 974998. Https://Doi.Org/10.3389/Fpubh.2022.974998