



# Digital Literacy as an Instrument for Youth Empowerment and Creativity in Nonformal Education

Bondan Dewabrata\*, Supriadi, Rosninda Prio Eko Rahardjo, Akis Jasuli, Annisa Syakina, Yowanda

Universitas KH Bahaudin Mudhary Madura

DOI:

<https://doi.org/10.53697/iso.v6i2.3777>

\*Correspondence: Bondan Dewabrata

Email:

[bondandewabrata@unibamadura.ac.id](mailto:bondandewabrata@unibamadura.ac.id)

Received: 22-10-2026

Accepted: 22-11-2026

Published: 22-12-2026



**Copyright:** © 2026 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

**Abstract:** This study aims to analyze the level and role of digital literacy among creative youth at the Muhammadiyah Orphanage in Sumenep within a non-formal educational context. A qualitative research design was employed, with data collected through in-depth interviews, participatory observation, and digital documentation analysis. The data were analyzed using thematic analysis to identify patterns related to digital literacy competencies and their contribution to creative practices. The findings reveal that the digital literacy level of orphanage youth is predominantly basic, with skills concentrated on technical and operational use of digital devices and social media platforms. Higher-order competencies, including critical evaluation of information, verification of digital content, and awareness of digital security, remain limited. However, ethical awareness in basic digital interactions is relatively well established. Despite these limitations, digital literacy has begun to facilitate creative expression, particularly through simple visual and audiovisual content production, which positively influences self-confidence and social engagement among the youth. These findings demonstrate that even at an elementary level, digital literacy can function as a catalyst for creativity and empowerment when aligned with youth interests. The study underscores the need for structured and context-sensitive digital literacy programs in non-formal educational institutions to strengthen critical awareness, creative capacity, and sustainable empowerment for marginalized youth in the digital era.

**Keywords:** Digital Literacy, Creative Youth, Orphanage, Non-Formal Education, Qualitative Study

## Introduction

The introduction should briefly place the study in a broad context and highlight why it is important. It should define the purpose of the work and its significance. The current state of the research field should be carefully reviewed and key publications cited. Please highlight controversial and diverging hypotheses when necessary. Finally, briefly mention the main aim of the work and highlight the principal conclusions. As far as possible, please keep the introduction comprehensible to scientists outside your particular field of research. APA style should be employed for citations and references. See the end of the document for further details on references.

The rapid development of digital technology has fundamentally reshaped social interaction, information access, and opportunities for creativity among young people worldwide. In this context, digital literacy has emerged as a vital competency that encompasses the ability to locate, evaluate, create, and share information using digital

technologies effectively, ethically, and critically (Hussain & Phulpoto, 2024) (UNESCO, 2025). Such competencies are essential not only for formal education but also for social participation and professional engagement in the digital era (Georgopoulou et al, 2025) (Priwati & Helmi, 2021)

Existing studies suggest that digital literacy plays a significant role in supporting marginalized youth to overcome challenges such as lack of critical thinking toward online information, weak ethical awareness in digital spaces, and limited capability to produce digital content (Hassoun et al, 2025) (Nurfazri et al, 2024) (Setiadi et al, 2023).

Strengthening digital literacy can enable orphanage youth to transition from passive consumers of information to active producers of creative and responsible digital content.

Community engagement initiatives also illustrate the positive effects of digital literacy training in orphanages, where young residents report enhanced understanding of positive social media use, effective content creation, and ethical digital behavior (Tabrani et al, 2025). Such programs help equip these youths with relevant digital competencies and strengthen their capacity to use technology for self-development.

Digital access disparities further reinforce the urgency of research in this area. Youth in orphanages often experience a gap in technology access and digital learning opportunities compared to youth in general communities. While orphanages tend to focus on basic needs and formal education, the development of advanced digital skills related to creativity, collaboration, and technology application remains under-emphasized. This gap highlights the need for structured strategies to advance digital literacy among orphanage youth. Beyond technical skills, digital literacy also includes critical thinking, such as evaluating the reliability of online information and identifying safe content. This competency is particularly important to help orphanage youth become selective and productive digital technology users rather than passive ones (Nurjanah et al, 2024).

Research indicates that digital empowerment programs can increase confidence, learning motivation, and social engagement among orphanage residents skills that are essential for personal and professional growth (Novanana, 2022).

These outcomes suggest that digital literacy can function as a powerful medium of empowerment for creative youth in orphanage settings.

From a theoretical perspective, digital literacy is a multifaceted competency that includes technical, critical, and productive dimensions. It is increasingly important for young people to develop these skills early to adapt to rapidly evolving digital environments. Challenges such as misinformation, data misuse, unsafe online content, and low digital content creation skills underscore the need for focused academic and programmatic attention on digital literacy for orphanage youth. Therefore, this study examines the status of digital literacy among creative youth at Panti Asuhan Muhammadiyah Sumenep, focusing on their technical skills, critical evaluation of digital information, and ability to produce digital content. By doing so, it aims to offer a holistic picture of digital literacy within a population that has not been the focus of extensive empirical research.

Academically, this research seeks to contribute to the literature on community-based digital literacy, particularly in under-studied institutional environments such as

orphanages. Practically, it aspires to provide evidence-based recommendations for local stakeholders social institutions, local government, and program planners to strengthen digital competencies among orphanage youth so they can thrive as creative, adaptive, and productive digital citizens.

Within orphanage environments, such as Panti Asuhan Muhammadiyah Sumenep, digital literacy is particularly strategic for empowering youth to develop 21st-century skills. Adolescents in orphanages face distinct challenges limited resources, different learning environments, and fewer opportunities for structured digital skills training compared to their peers in traditional school or community settings. Research on digital literacy interventions in orphanage settings, such as media literacy programs at Panti Asuhan Al Maburr, highlights how structured digital education can significantly enhance youths' abilities to use social media constructively and productively.

This study aims to understand the digital literacy of creative youth at Panti Asuhan Muhammadiyah Sumenep, who live within a non-formal educational environment with limited access and resources. It examines the level of digital literacy, the factors influencing its development, and its role in supporting creative activities, self-expression, and digital collaboration. This focus is important to assess how orphanage youth utilize digital technology in a critical, ethical, and productive manner amid rapid digital transformation. The urgency of this research lies in the limited empirical studies that specifically address digital literacy among orphanage youth, despite their significant creative and socio-economic empowerment potential. The findings are expected to contribute to academic literature and inform the development of inclusive and sustainable empowerment and non-formal education programs for orphanage youth in the digital era.

## Methodology

This study employed a descriptive qualitative approach to obtain an in-depth understanding of digital literacy practices among creative youth at the Muhammadiyah Orphanage in Sumenep. The qualitative approach was chosen because it enables the exploration of subjective experiences, meaning-making processes, and social dynamics related to digital technology use within a non-formal educational setting. This approach is particularly appropriate for examining digital literacy as a contextual and lived practice shaped by social, cultural, and institutional environments (Creswell, J. W., & Poth, 2018) (Moleong, 2017).

The research site was selected purposively, focusing on the Muhammadiyah Orphanage in Sumenep as a socio-religious institution actively involved in youth development and creative activities. The participants consisted of orphanage youth, institutional managers, and creative activity facilitators. Informants were selected using purposive sampling based on the following criteria: (1) aged 16–30 years, (2) actively involved in the orphanage for at least one year, and (3) participating in the creation or dissemination of digital content. The number of participants was determined by the principle of data saturation, where data collection ceased once no new significant information emerged (Lathlean & Denicolo, 2022) (Sugiyono, 2022).

Data were collected through semi-structured in-depth interviews, participant observation, and digital documentation. Interviews were conducted to explore participants’ digital literacy experiences, including technical skills, critical understanding of digital information, and ethical media practices. Participant observation involved monitoring creative activities both offline and online, while digital documentation included social media content, visual or audiovisual works, and archives of creative programs. These multiple data sources allowed for data triangulation and strengthened the credibility of the findings (Kriyantono, 2022) (Yin, 2017).

The primary research instrument was the researcher, supported by interview guidelines and observation protocols. All interviews were audio-recorded with participants’ consent and transcribed verbatim. Data analysis was conducted using thematic analysis, following stages of data familiarization, initial coding, theme development, theme review, and analytical narrative construction. The analytical process was iterative and reflective to ensure depth and rigor in interpreting digital literacy practices among orphanage youth (Braun & Clarke, 2021) (Saldana, 2025).

Research trustworthiness was ensured through source and method triangulation, member checking, and the maintenance of an audit trail to document all research stages. Ethical approval was obtained from the Research Ethics Committee of Universitas KH. Bahauddin Mudhary (UNIBA) Madura, and all participants provided written informed consent prior to data collection. Overall, this methodological design was intended to produce credible, contextualized, and replicable insights into digital literacy and youth empowerment within non-formal educational institutions (Miles & Huberman, 2019).

## Result and Discussion

The research findings were derived from in-depth interviews with creative youth residing at the Muhammadiyah Orphanage in Sumenep, along with orphanage administrators and facilitators of creative activities. These data were strengthened through participant observation and digital document analysis, including social media content and creative activity archives. Using thematic analysis, the data were organized into several key themes that reflect the digital literacy practices of orphanage youth in a comprehensive and contextual manner.

**Table 1.** Summary of Themes and Interview Excerpts

Main Theme	Description of Findings	Interview Excerpt
Basic Digital Literacy	Orphanage youth are familiar with basic digital devices and social media, primarily for communication and entertainment purposes.	“Using a smartphone and social media is already part of our daily routine.” (I.1)
Critical Thinking Skills	The habit of verifying digital information remains limited and is not yet routinely practiced.	“Usually, when information appears on social media, we just believe it.” (I.3)
Digital Ethics	Awareness of ethical online	“We do not really

Main Theme	Description of Findings	Interview Excerpt
and Security	behavior is relatively adequate, while understanding of personal data protection is still low.	understand much about passwords or personal data security." (I.5)
Digital Literacy in Creative Activities	Digital media are used for simple content production, but activities lack direction and structure.	"Sometimes we make videos or designs and learn by ourselves from YouTube." (I.2)
Supporting Factors	Internal motivation and moral support from orphanage management encourage digital literacy practices.	"We try to give the children space to explore digital learning despite limited facilities." (I.7)
Inhibiting Factors	Limited infrastructure and the absence of structured digital literacy training hinder skill development.	"If there were specific training programs, we would understand more." (I.4)
Impact of Digital Literacy	Digital literacy contributes to increased self-confidence and self-expression among youth.	"Being able to create our own content makes us feel more confident." (I.6)

The findings indicate that creative youth at the Muhammadiyah Orphanage in Sumenep generally demonstrate basic-level digital literacy, particularly in operating digital devices and using social media platforms. Digital activities are predominantly oriented toward communication and entertainment, while the use of digital tools for learning and creative development remains limited.

In terms of critical thinking, most participants do not routinely verify the accuracy or credibility of digital information they encounter. Content obtained through social media is often accepted without evaluation, indicating a low level of awareness regarding misinformation risks in digital environments.

Regarding digital ethics, orphanage youth show an adequate understanding of basic norms in online interactions, such as maintaining politeness and avoiding conflict. However, their knowledge of digital security especially personal data protection and password management is still insufficient, exposing them to potential digital vulnerabilities.

Digital literacy has begun to support creative activities, including the production of simple visual and audiovisual content for internal purposes. Nevertheless, these activities are largely self-taught and lack structured guidance, limiting their effectiveness in fostering sustained creative skill development.

Key supporting factors include strong internal motivation among youth and moral encouragement from orphanage management that allows positive digital exploration. Conversely, limited facilities, unstable internet access, and the absence of systematic digital literacy programs remain major barriers to competency development.

Despite these constraints, the study reveals that digital literacy positively influences youth self-confidence and self-expression. Even at a basic level, digital skills enable orphanage youth to express creativity and engage more actively within broader digital social spaces.

## Discussion

The findings indicate that the level of digital literacy among creative youth at the Muhammadiyah Orphanage in Sumenep remains at a basic to intermediate level. Most participants are familiar with everyday digital tools, particularly smartphones and social media, which are mainly used for communication and entertainment. However, their capacity to critically assess information, manage digital content responsibly, and employ digital platforms for productive purposes is still limited. This condition supports the view that digital exposure does not automatically translate into digital competence, especially in nonformal educational settings (Creswell, J. W., & Poth, 2018) (Maisuroh et al, 2024) (Nurjuman & Priana, 2025) (Ratri & Aviyanti, 2025).

Access to digital devices alone was found to be insufficient in fostering comprehensive digital literacy. Although several participants have regular access to smartphones and internet connectivity, the absence of structured guidance restricts their ability to develop higher-order digital skills. This finding aligns with the multidimensional concept of digital literacy, which emphasizes not only technical proficiency but also cognitive and reflective abilities (Law et al, 2018) (Ng, 2012). Without systematic learning support, digital engagement tends to remain surface-level and uncritical.

The institutional environment of the orphanage plays a crucial role in shaping digital literacy outcomes. Support from caregivers, peer interaction, and exposure to positive learning experiences influence how youth interact with digital media. Participants who received encouragement from mentors demonstrated greater confidence in experimenting with digital tools creatively. This result reinforces previous studies highlighting the importance of social context and institutional support in strengthening digital learning processes within nonformal education (Helsper, 2021) (Miles & Huberman, 2019).

Creative activities emerged as an effective entry point for enhancing digital literacy among orphanage youth. Engagement in photography, video editing, graphic design, and digital storytelling increased participants' motivation to explore digital platforms beyond passive consumption. This finding supports prior research suggesting that creativity-based learning can stimulate digital skill development while fostering self-expression and agency, particularly among marginalized youth populations (Braun & Clarke, 2021) (Jenkins et al, 2015).

The ethical dimension of digital literacy remains uneven among participants. While most youth are active social media users, awareness of digital ethics such as data privacy, responsible content sharing, and online safety is relatively low. This pattern is consistent with studies indicating that digital ethics is often underemphasized in nonformal learning

environments, despite being a core component of digital citizenship (UNESCO, 2015). Strengthening ethical awareness is therefore essential to mitigate digital risks.

Digital literacy also contributes to expanding collaboration and participation opportunities. Participants with higher digital competence were more likely to engage in online communities, collaborate on creative projects, and access learning resources independently. This finding aligns with research emphasizing digital literacy as a facilitator of participatory culture and collaborative learning, enabling youth to transcend physical and institutional limitations (Helsper, 2021) (Jenkins et al, 2015).

From an empowerment perspective, digital literacy holds potential as a pathway toward socio-economic independence for orphanage youth. Several participants expressed aspirations to monetize their creative skills through digital platforms, although practical knowledge of digital entrepreneurship remains limited. This gap reflects broader findings that highlight the need to bridge digital creativity with economic literacy and entrepreneurial skills to achieve sustainable empowerment (Belshaw et al, 2014) (Law et al, 2018).

Overall, this discussion demonstrates that digital literacy among creative youth at the Muhammadiyah Orphanage in Sumenep is shaped by the interaction of access, guidance, creativity, and institutional support. Enhancing digital literacy requires more than technological provision (it necessitates structured, creative, and ethically grounded educational interventions within nonformal learning contexts. These findings are consistent with existing theoretical and empirical studies while offering contextual insights for the development of inclusive and sustainable digital empowerment programs for orphanage youth (Creswell & Poth, 2018) (Ng, 2012).

## Conclusion

The results of this study demonstrate that digital literacy among creative youth at the Muhammadiyah Orphanage in Sumenep is still predominantly situated at an elementary level, with a strong emphasis on operational skills rather than critical and reflective digital practices. Although the youth show enthusiasm and creativity in utilizing digital media for self-expression, their limited capacity to evaluate information critically and protect personal data indicates significant gaps in comprehensive digital literacy. Social support from orphanage management and internal motivation serve as important enabling factors, while inadequate facilities and the absence of structured training programs remain major constraints. Despite these limitations, digital literacy has contributed positively to the development of self-confidence, creative identity, and initial social networking among the youth. Therefore, this study underscores the need for inclusive and sustainable non-formal education policies that integrate technical, critical, and ethical dimensions of digital literacy to support the long-term empowerment of orphanage youth in the context of rapid digital transformation.

## Revised Recommendations and Future Research

Based on the findings, future initiatives should prioritize the development of structured and context-sensitive digital literacy programs in non-formal educational institutions, particularly orphanages, by integrating technical skills with critical thinking, ethical awareness, and digital safety competencies. Orphanage management and relevant stakeholders are encouraged to collaborate with educational institutions, digital practitioners, and community organizations to provide sustainable training, mentoring, and access to appropriate digital infrastructure that aligns with youth interests and creative potential. Practically, project-based learning approaches involving visual and audiovisual content creation may be adopted to enhance both creativity and critical digital engagement. For future research, longitudinal and comparative studies across different non-formal education settings are recommended to examine the long-term impact of digital literacy interventions on youth empowerment, social inclusion, and digital resilience. Additionally, incorporating mixed-method approaches and broader participant demographics would provide deeper insights into how digital literacy practices evolve among marginalized youth within diverse socio-cultural contexts.

## References

- Belshaw, D., Lead, W. L., Foundation, M., Education, H., & Badges, O. (2014). *The essential elements of digital literacies*. Self-published. Self-published. <chrome-extension://efaidnbnmnibpcajpcglclefindmkaj/https://dougbelshaw.com/essential-elements-book.pdf>
- Braun, V., & Clarke, V. (2021). *Thematic Analysis: A Practical Guide*. SAGE Publications, Inc. <https://uk.sagepub.com/en-gb/eur/thematic-analysis/book248481>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage Publications.
- Georgopoulou, M. S., Troussas, C., Krouska, A., & Sgouropoulou, C. (2025). Digital Literacy in Higher Education: Examining University Students' Competence in Online Information Practices. *Computers*, 14(528). <https://doi.org/https://doi.org/10.3390/computers14120528>
- Hassoun, A., Beacock, I., Carmody, T., Kelley, P. G., Goldberg, B., Kumar, D., Murray, L., Park, R. S., Sarmadi, B., & Consolvo, S. (2025). Beyond Digital Literacy: Building Youth Digital Resilience Through Existing "Information Sensibility" Practices. *Social Sciences*, 14(230), 1–43. <https://doi.org/https://doi.org/10.3390/socsci14040230>
- Helsper, E. (2021). *The Digital Disconnect: The Social Causes and Consequences of Digital Inequalities*. SAGE Publications Ltd. <https://doi.org/https://doi.org/10.4135/9781526492982>
- Hussain, N., & Phulpoto, S. (2024). Digital Literacy: Empowering Individuals in the Digital Age. *Assyfa Learning Journal*, 02(July), 70–83. <https://journal.assyfa.com/index.php/alj/article/view/231/264>

- Jenkins, H., Ito, M., & Boyd, D. (2015). *Participatory Culture in a Networked Era: A Conversation on Youth, Learning, Commerce, and Politics*. John Wiley & Sons. [https://books.google.co.id/books/about/Participatory Culture in a Networked Era.html?hl=id&id=3V1XCQAAQBAJ&redir\\_esc=y](https://books.google.co.id/books/about/Participatory_Culture_in_a_Networked_Era.html?hl=id&id=3V1XCQAAQBAJ&redir_esc=y)
- Judith Lathlean, & Denicolo, P. (2022). *Collecting, Analyzing, and Interpreting Qualitative Data*. SAGE Publications, Inc. <https://doi.org/https://doi.org/10.4135/9781071885628>
- Kriyantono, R. (2022). *Teknik praktis riset komunikasi kuantitatif dan kualitatif* (2nd ed.). Prenada Media. [https://books.google.co.id/books/about/Teknik Praktis Riset Komunikasi Kuantita.html?id=yrkFEQAAQBAJ&redir\\_esc=y](https://books.google.co.id/books/about/Teknik_Praktis_Riset_Komunikasi_Kuantita.html?id=yrkFEQAAQBAJ&redir_esc=y)
- Law, N., Woo, D., Torre, J. de la, & Wong, G. (2018). *A global framework of reference on digital literacy skills for indicator 4.4.2*. <https://unesdoc.unesco.org/ark:/48223/pf0000265403>
- Maisuroh, S., Jamil, M., & Manshur, U. (2024). The Role of Social Media in Enhancing Digital Literacy Among Generation Z: A Social and Psychological Perspective. *Journal of Social Studies and Education*, 02(01), 41–53.
- Matthew B. Miles, A. Michael Huberman, J. S. (2019). *Qualitative Data Analysis: A Methods Sourcebook* (3rd ed.). Sage Publications.
- Moleong, L. J. (2017). *Metode Penelitian Kualitatif*. PT. Remaja Rosdakarya.
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065–1078. <https://doi.org/https://doi.org/10.1016/j.compedu.2012.04.016>
- Novanana, S. (2022). Empowering Digital Literacy for Underprivileged Youth in Jakarta. *Asian Journal of Community Services (AJCS)*, 1(2), 65–76. <https://journal.formosapublisher.org/index.php/ajcs/article/view/1036/5859>
- Nurfazri, M., Ferli Septi Irwansyah, Fahmy Lukman., Ruhullah, M. E., & Marinda, S. M. (2024). Digital Literacy in Education: An Analysis of Critical Thinking Culture for Preventing the Hoaxes. *Jurnal Perspektif*, 8(1), 1–22. <https://doi.org/https://doi.org/10.15575/jp.v8i1.268>
- Nurjanah, N., Abdulkarim, A., Komalasari, K., Bestar, P., & Suwandi, M. A. (2024). Critical literacy of young citizens in the digital era. *Jurnal Civics: Media Kajian Kewarganegaraan*, 21(2), 342–351. <https://jurnal.uny.ac.id/index.php/civics/article/view/70232/pdf>
- Nurjuman, H., & Priana, R. Y. S. (2025). Digital Literacy and Social Media Awareness among Adolescents: A Case Study on Adolescents in Serang City. *Jurnal Penelitian Ilmu Pendidikan Indonesia*, 4(3), 1353–1361. <https://jpion.org/index.php/jpi/article/view/583/373>
- Priwati, A. R., & Helmi, A. F. (2021). The manifestations of digital literacy in social media among Indonesian youth. *Humanitas Indonesian Psychological Journal*, 18(February), 14–23. [https://journal.uad.ac.id/index.php/HUMANITAS/article/view/17337/pdf\\_50](https://journal.uad.ac.id/index.php/HUMANITAS/article/view/17337/pdf_50)
- Ratri, S. Y., & Aviyanti, L. (2025). Unlocking Digital Literacy in Indonesia : Insights from the Use of Social Media Platforms. *Jurnal Prima Edukasia*, 13(1), 191–200. [http://journal.uny.ac.id/index.php/jpe/article/view/83433/pdf\\_1](http://journal.uny.ac.id/index.php/jpe/article/view/83433/pdf_1)

- 
- Saldana, J. (2025). *The Coding Manual for Qualitative Researchers* (Fifth Edit). SAGE Publications Ltd. <https://uk.sagepub.com/en-gb/eur/the-coding-manual-for-qualitative-researchers/book287917>
- Setiadi, D., Nurhayati, S., Ansori, Zubaidi, M., & Amir, R. (2023). Youth ' s Digital Literacy in the Context of Community Empowerment in an Emerging Society 5 . 0. *Society*, 11(1), 1–12. <https://doi.org/10.33019/society.v11i1.491>
- Sugiyono. (2022). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Tabrani, M., Prasetyo, F., & Sinnun, A. (2025). Edukasi Digital di Panti Asuhan Al Mabruur: Strategi Pemanfaatan Media Sosial secara Positif dan Produktif. *PRAWARA Jurnal ABDIMAS*, 4(1), 21–26. <https://doi.org/https://doi.org/10.63297/abdimas.v4i1.153>
- UNESCO. (2015). *Global citizenship education: topics and learning objectives*. <https://doi.org/https://doi.org/10.54675/DRHC3544>
- UNESCO. (2025). *What you need to know about literacy*. UNESCO. <https://www.unesco.org/en/literacy/>
- Yin, R. K. (2017). *Case Study Research and Applications Design and Methods* (Sixth Edit). SAGE Publications, Inc. <https://us.sagepub.com/en-us/nam/case-study-research-and-applications/book250150>