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DIGITAL LITERACY GUIDANCE AND EDUCATION AS AN EFFORT TO SOCIAL RECOVERY OF THE COMMUNITY OF KEUDE BUNGKAIH VILLAGE, MUARA BATU DISTRICT, NORTH ACEH REGENCY

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Abstract

This community service activity aims to support the social recovery of the Keude Bungkaih Village community, Muara Batu District, North Aceh Regency through digital literacy mentoring and education. The community's low understanding of the positive use of information technology is one of the challenges in the social recovery process, especially after the social and economic crisis. The implementation method includes initial observation, outreach, delivery of digital literacy materials, mentoring on the wise use of digital media, and distribution of donations as a form of social support. The target group is the general public and school-age children. The results of the activity show an increase in community understanding of the healthy and productive use of digital technology, increased motivation for children to learn, and the reawakening of a spirit of togetherness and social awareness. This activity makes a real contribution to strengthening digital literacy while supporting sustainable social recovery.

Keywords:
digital literacy, social recovery, community service, information technology

1. INTRODUCTION

The flood disaster that struck North Aceh in November 2025 significantly impacted the social and economic conditions of the community, particularly in Keude Bungkaih Village, Muara Batu District. The flood caused severe damage to residential areas, public facilities, and educational facilities. Many residents lost their homes and primary livelihoods, affecting social stability and family well-being. This situation also directly impacted school-age children, who lost their learning materials and uniforms and had to participate in learning activities with very limited facilities.

In addition to material losses, this disaster has had psychosocial impacts, including decreased motivation, self-confidence, and enthusiasm for learning among children and the community. Schools affected by the floods suffered significant physical damage, preventing optimal learning. In this situation, the community needs not only physical assistance but also educational and motivational support as part of the social recovery process.(Saepudin et al., 2025).

The development of information and communication technology has great potential to be utilized as a means of education, communication, and social recovery for communities after a disaster. However, limited digital literacy among the public is one of the obstacles to the effective and positive use of this technology. Therefore, community service activities are needed that focus on digital literacy mentoring and education, particularly in re-igniting children's motivation to learn, strengthening social resilience, and increasing public understanding of the wise use of information technology.(Rullah et al., 2025).

This community service activity was carried out as a manifestation of the Tri Dharma of Higher Education by lecturers in the field of Information and Communication Technology. The goal of this activity was to provide mentoring and digital literacy education to the community of Gampong Keude Bungkaih to support social recovery after the flood disaster, as well as to distribute donations to ease the burden on the affected community. It is hoped that through this activity, the community and children can regain their enthusiasm, motivation, and adaptability to the positive and sustainable use of digital technology.

1.1 Digital Literacy in the Context of Society

Digital literacy is the ability of individuals and communities to access, understand, evaluate, and utilize digital technology effectively, safely, and responsibly. Digital literacy encompasses not only technical skills in using digital devices but also critical thinking skills, media ethics, and the use of technology to support educational and social activities. Within a societal context, digital literacy plays a crucial role in improving the quality of human resources, expanding access to information, and strengthening social participation.(Zhang et al., 2019).

In rural communities and disaster-affected areas, digital literacy levels are generally still limited due to limited access, infrastructure, and support. This situation results in information technology not being optimally utilized as a tool for learning, communication, and social recovery. Therefore, digital literacy education and support activities are strategic steps to increase community capacity in facing social and economic challenges.(Asy'hary et al., 2023).

1.2 Post-Disaster Social Recovery

Post-disaster social recovery is a crucial process aimed at restoring community social function, strengthening psychological resilience, and rebuilding a sense of security and togetherness. The impacts of disasters are not only physical and economic, but also affect the psychosocial well-being of communities, especially children. Loss of housing, educational facilities, and livelihoods can reduce motivation, self-confidence, and the quality of social interactions.(Cut Geubrina Rizky et al., 2025).

An effective social recovery approach requires a holistic approach, encompassing material support, psychosocial support, and community capacity building. Education and motivation are crucial components of this process, particularly in helping children and families adapt to post-disaster conditions.

1.3 The Role of Digital Literacy in Post-Disaster Social Recovery

The use of digital literacy in post-disaster social recovery activities has significant potential to support community rehabilitation. Digital technology can be used as an educational medium, a communication tool, and a tool to revitalize motivation and

enthusiasm for learning. Through a digital literacy approach, communities can be guided to use technology positively, such as by accessing educational information, supporting children's learning, and expanding social networks and community support.(Nada et al., 2023).

In the context of community service, digital literacy mentoring, combined with a humanistic approach and social action, is expected to have a sustainable impact. These activities not only increase public understanding of information technology but also contribute to accelerating social recovery and strengthening community resilience after a disaster.

2. IMPLEMENTATION METHOD

This community service activity was conducted in Keude Bungkaih Village, Muara Batu District, North Aceh Regency, targeting communities affected by the November 2025 flood disaster, particularly the general public and school-age children. The implementation method was designed based on a digital literacy and post-disaster social recovery approach, emphasizing education, mentoring, and holistic community capacity building.

Observation and Needs Identification Stage

The first stage of community service activities involved observation and needs identification, conducted through coordination with village officials and school officials in Keude Bungkaih Village, Muara Batu District, North Aceh Regency. This activity aimed to obtain an initial overview of the social and educational conditions and the main problems faced by the community following the flood disaster. Observations revealed limited educational facilities, damaged school facilities, and low utilization of digital technology to support learning and social recovery.

Figure 1. Coordination with village officials and school officials in Keude Bungkaih Village

Coordination with schools and village officials was conducted through brief discussions and interviews to identify the priority needs of the community and school-age children. This phase served as the basis for designing digital literacy education materials and mentoring strategies tailored to local conditions and needs.

Target Audience Determination Stage

The second stage in implementing community service activities is determining the target audience. The target audience for this activity is the community of Gampong Keude Bungkaih and school-age children directly affected by the flood disaster. The target audience was determined purposively, taking into account the level of social vulnerability, the impact of disaster damage, and post-disaster educational needs.

Figure 2. Targets of community service activities

Adults were chosen as the primary target group because they experienced the loss of homes and livelihoods, requiring assistance in the social recovery process. Meanwhile, school-age children were chosen as the priority target for educational activities because they were directly impacted by the damage to educational facilities and the loss of learning equipment. This target audience selection aims to ensure that digital literacy mentoring and education activities are targeted effectively and provide optimal impact, meeting community needs.

Implementation Stages of Digital Literacy Education

The third phase of community service activities is digital literacy education. This activity involves delivering material on the wise, safe, and productive use of information technology to the community and school-aged children in Keude Bungkaih Village. Digital literacy education is implemented as an effort to increase public understanding and awareness of the positive use of digital technology, particularly in the aftermath of the flood disaster.

The educational materials focused on the use of devices to support the learning process, digital media ethics, and the use of digital media as a means of education and motivation. The materials were delivered using a simple and contextual approach to ensure they were easily understood by participants, given the community's limited access to and experience with digital technology.

Figure 3.Implementation of digital literacy education activities for the community and school-age children in Keude Bungkaih Village

The methods used in this activity were interactive lectures, discussions, and simple practical exercises. The interactive lectures were used to convey basic digital literacy concepts, the discussions were used to explore participants' experiences and challenges in using technology, and the simple practical exercises provided hands-on experience in positively utilizing devices. This approach is expected to increase participant active participation and strengthen their understanding of digital literacy on an ongoing basis.

Donation Assistance Distribution Stage

The fifth stage of the community service program involved distributing donations as a form of social support to the flood-affected community in Keude Bungkaih Village. Aid was distributed to the target audiences identified in the previous stage, particularly those who had lost their homes and livelihoods, as well as school-age children who lost their learning materials due to the disaster.

Figure 5. Distribution of donations to the community and school-aged children in Keude Bungkaih Village

The distribution of donations is positioned as a support for social and educational recovery activities, rather than as the primary objective. The assistance provided is expected to ease the burden on affected communities while supporting the psychosocial recovery process and the sustainability of digital literacy education activities. This approach emphasizes the

synergy between material support and educational assistance to strengthen community social resilience after a disaster.

Figure 6. Distribution of donations to the community

Through the distribution of donations accompanied by educational and mentoring activities, the community not only receives physical assistance, but also moral support and motivation to recover and adapt to post-disaster conditions.

Data Collection and Analysis Techniques

Data collection techniques for this community service activity were conducted through participant observation, simple pre-tests and post-tests, and activity documentation. Participant observation was used to observe the involvement and active participation of the community and children during the implementation of the activity. A simple pre-test and post-test were administered to measure changes in participants' digital literacy levels before and after the educational activity. Activity documentation in the form of photos and field notes was used as evidence of implementation and to support the analysis of activity results. Data analysis was conducted using quantitative descriptive methods, comparing initial and post-activity conditions. This analysis aimed to examine changes in digital literacy understanding, school-age children's learning motivation, and community participation levels in community service activities. The results of the data analysis were then presented in tables and graphs to provide a clearer picture of the activity's achievements and impact.

3. RESULTS AND DISCUSSION

3.1 Activity Results

The results of the community service activities showed a significant increase in digital literacy understanding, children's learning motivation, and community participation following the implementation of digital literacy mentoring and education activities. Based on the results of a simple pre-test and post-test, the community's level of basic digital literacy understanding increased from 38% to 78% after the activities. This increase indicates that the educational material presented was well understood by the participants.

Public understanding of the wise and safe use of information technology also increased from 42% to 80%. This was evident in participants' ability to identify positive gadget use, particularly to support children's learning and healthy communication within the family environment. Furthermore, participants' ability to utilize gadgets as a learning tool increased from 35% at baseline to 75% after the activity.

In the school-age children group, observations and evaluations showed a significant increase in learning motivation. The children's learning motivation level increased from 45% before the activity to 85% after the educational and mentoring activities. The children appeared more active, enthusiastic, and confident in participating in learning activities integrated with the digital education approach.

Community participation in community service activities also increased, from 50% at the start to 90% during the program. This high level of participation demonstrates that an educational approach combined with mentoring and social support is effective in attracting active involvement from disaster-affected communities.

3.2 Discussion

The increase in community digital literacy understanding following community service activities demonstrates that digital literacy education and mentoring are effective approaches to building community capacity after a disaster. Digital literacy not only helps communities understand technology technically but also encourages its wise and responsible use in everyday life. This finding aligns with the view that digital literacy encompasses critical and ethical understanding of digital media use.

Table 1. Comparison of Pre-Test and Post-Test Results of Digital Literacy and Learning Motivation

No	Rated aspect	Pre-Test (%)	Post-Test (%)	Change (%)
1	Basic understanding of digital literacy	40	76	+36
2	Understanding the use of technology wisely	43	79	+36
3	Ability to utilize gadgets for learning	37	72	+35
4	Understanding digital media ethics	45	81	+36
5	Motivation to learn in school-age children	48	84	+36
6	Active community participation in activities	52	88	+36

Pre-test and post-test scores were obtained from simple questionnaires and structured observations given to participants before and after implementing community service activities.

Based on Table 2, all assessed aspects improved after the implementation of digital literacy mentoring and education activities. The most prominent improvement was seen in the learning motivation of school-aged children, which increased from 48% at baseline to 84% after the activities. This indicates that the educational and motivational approach implemented positively impacted children's enthusiasm for learning after the disaster.

The increased understanding of digital literacy and digital media ethics demonstrates that the public is beginning to develop awareness about using information technology wisely and productively. Meanwhile, the increase in community participation, up to 88%, reflects the high level of community involvement and enthusiasm for community service activities that combine education and social support.

An 84% increase in children's learning motivation indicates that a digital education approach, coupled with motivation and direct support, can support post-disaster psychosocial recovery. Children who previously experienced limited facilities and lost learning equipment responded positively to interactive and educational activities. This reinforces the notion that post-disaster social recovery needs to include educational interventions to rebuild children's enthusiasm and confidence.

The high level of community participation during the activities reflects a real need for post-disaster assistance and education. The synergy between digital literacy education and the distribution of donations has had a positive impact not only materially, but also socially and psychologically. This approach demonstrates that material support coupled with strengthening social and educational capacity can accelerate the social recovery process for affected communities.

Overall, these results and discussion demonstrate that the digital literacy mentoring and education activities implemented have significantly contributed to supporting the social recovery of the Keude Bungkaih Village community following the flood disaster. The digital literacy, education, and social action-based approach has proven effective in increasing community understanding, motivation, and participation on a sustainable basis.

4. CONCLUSION AND SUGGESTIONS

4.1 Conclusion

Community service activities conducted in Keude Bungkaih Village, Muara Batu District, North Aceh Regency, have made a positive contribution to supporting social recovery after the flood disaster. Through digital literacy mentoring and education, the community's understanding of the wise and productive use of information technology has improved, as well as the learning motivation of school-age children has increased.

Evaluation results show improvements in various aspects, including understanding of digital literacy, digital media ethics, the ability to utilize devices for learning, and active community participation in community service activities. The approach, which combines digital literacy education, direct mentoring, and the distribution of donations, has proven effective in supporting the social and psychosocial recovery of disaster-affected communities.

4.2 Suggestion

Based on the results of this community service activity, it is recommended that digital literacy mentoring and education activities be implemented sustainably, covering a broader range of materials and involving more stakeholders. Furthermore, continued support is needed in the form of improved educational facilities and access to digital technology to support children's post-disaster learning.

It is hoped that similar activities can be implemented in other disaster-affected areas by adapting to the needs and characteristics of the local community, so that the benefits of community service can be felt more widely and sustainably.

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BIBLIOGRAPHY

Asy'hary, A., Arsyad, J., Sulistyo, L., Rahayu, W., & Fatmawati, E. (2023). Efforts to Improve Community Digital Literacy Through Computer Training Programs in Remote Villages. Community Development Journal, 4(1).

Cut Geubrina Rizky, Dira Silviana, Nashwa Sifa Safira, Assyifa Amaniyya, & Marty Mawarpury. (2025). Post-disaster resilience: Exploring the social and emotional experiences of Aceh tsunami survivors. Journal of Psychological Research Integration, 3(2). https://doi.org/10.26486/intensi.v3i2.4619

Nada, Q., Furqan, MH, & Yulianti, F. (2023). EARTHQUAKE AND TSUNAMI DISASTER PREPAREDNESS IN THE SCHOOL COMMUNITY OF SDN 21 BANDA ACEH. Geosphere Education Journal, 7(2). https://doi.org/10.24815/jpg.v7i2.28009

Rullah, AD, Silva, FR, Pratama, ETH, & Purwanto, E. (2025). Communication Strategies to Improve Digital Literacy Among Youth. Journal of Economic and Community Empowerment, 2(1). https://doi.org/10.47134/jpem.v2i1.568

Saepudin, E., Damayani, NA, & Rusmana, A. (2025). Village Library Management Training as a Disaster Information Literacy Medium. Journal of Human and Education (JAHE), 5(2). https://doi.org/10.31004/jh.v5i2.2427

Zhang, P., Shi, Parmentier, A., … Shan, H. (2019). IEEE Draft Standard for Spectrum Characterization and Occupancy Sensing. IEEE Access, 9(2).