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Digital Marketing Training for Flood-Affected Women Microentrepreneurs in Tanjung Neraca Village: Implementation and Initial Outcomes

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Abstract
A major flood in late November 2025 damaged business facilities and halted the selling activities of women running home-based microenterprises in Tanjung Neraca Village, Aceh Tamiang Regency, while their use of smartphones for marketing remained limited. This community service activity aimed to improve partners' understanding of the flood's impact on their businesses, to equip them with basic digital marketing skills that do not require a physical stall, and to support the early recovery of household income through mentoring. Thirty-five women microentrepreneurs attended the socialization of a participatory approach designed in five stages: socialization, training, technology application, mentoring and evaluation, and sustainability reinforcement. The material covered promotion through WhatsApp and Facebook, product photography, writing promotional captions, and online customer communication. This article reports implementation outputs rather than measured outcomes: a field survey, coordination with the village government, socialization, training, and initial mentoring were carried out; nineteen packages of digital support media were distributed; and the activity was documented in a video and reported in online media. The implementers observed that participants were enthusiastic and had begun promoting their products on social media, but skill acquisition was not assessed with a structured instrument. Obstacles included participants' post-disaster readiness, limited digital literacy, unstable internet connections, and low confidence in selling online. Continued mentoring and sustainability reinforcement are intended but not yet evidenced, and changes in sales or income were not measured. Follow-up mentoring and sales monitoring based on transaction records are needed.

Keywords: flood, economic recovery, digital marketing, microenterprise, women entrepreneurs

Introduction

The floods and landslides that struck parts of Sumatra in late November 2025, linked to Tropical Cyclone Senyar, have been described as one of the largest disasters in the past decade (KBR, 2025). At the regional level (Aceh, North Sumatra, and West Sumatra), data from the National Disaster Management Agency (BNPB) as of December 3, 2025 recorded

753 deaths, 650 people missing, and approximately 3.3 million people affected in 50 regencies/cities (KBR, 2025). These figures are provisional.

At the Aceh Tamiang Regency level, a provisional recap up to December 6, 2025 recorded 262,087 people displaced, 57 deaths, and 22 missing (ANTARA Aceh, 2025). On December 30, 2025, the regent reported 4,839 houses lost, 8,509 severely damaged, 9,366 moderately damaged, and 15,174 slightly damaged, noting that the count was still changing (Kompas.com, 2025).

The disruption to the local economy was also major. The Aceh Tamiang Office of Cooperatives, MSMEs, Industry, and Trade stated that all MSMEs were paralyzed during the first week after the flood; around 40 thousand MSMEs were recorded as affected, and about 98% were reported to have become active again (ANTARA, 2026). At the Aceh Province level, provisional data from 18 regencies/cities recorded 108,858 affected MSMEs, nearly 99% of them micro businesses; Aceh Tamiang had the highest number (almost 50 thousand), and the data had not been disaggregated by the gender of business owners (Waspada Aceh, 2026). These figures, together with the 15,073 MSMEs registered in Aceh Tamiang in 2024 (ANTARA, 2026), come from separate reporting exercises with different scopes and are therefore not directly comparable.

At the Manyak Payed Sub-district level, the data found are sectoral: damaged fishponds covering 1,370 hectares, the largest among the sub-districts of Aceh Tamiang (Serambinews, 2026). Data on the number of affected residents or evacuees at the sub-district level were not found in the official sources searched. Specific data on the number of affected businesses/households in Tanjung Neraca Village were not found in the official sources searched. News reports only confirm that residents of this village were victims of the late November 2025 flood and received aid at the village hall (JurnalPost.com, 2026a); that information cannot be used to estimate the scale of the impact in the village. Accordingly, the regency- and sub-district-level data above serve only as macro context. Regarding timing, KBR (2025), ANTARA Aceh (2025), Kompas.com (2025), and ANTARA (2026, February 20) were published before the activity on February 21, 2026, so they reflect information available when the intervention was planned. JurnalPost.com (2026a, March 31), Serambinews (2026, April 14), JurnalPost.com (2026b, April 11), and Waspada Aceh (2026, August 14) were published after the activity; they are used only as context and to document outputs, not as planning baseline.

The groups directly affected in this activity are women who run home-based microenterprises (referred to here as women microentrepreneurs), such as those selling home-cooked food, traditional snacks, cakes, beverages, consignment goods, and daily necessities. These businesses are generally run by selling from home, with physical facilities such as a selling table, a small display case, or a small kiosk. Based on field observations by the implementing team, these facilities were damaged or unusable, so business activities stopped suddenly; family income declined, and capital was diverted to basic needs such as home repairs, food, and health, so business recovery proceeded slowly. The participants' operating constraints after the flood therefore included damaged selling facilities and storage, household responsibilities that competed with business time (some participants still prioritized restoring their families' basic needs, as observed during the training), and limited working capital because capital was diverted to basic needs. The report does not record participant-level

inventory or access to credit, so these constraints are described at group level. This pattern is consistent with the small business disaster recovery framework, which views recovery as a dynamic process rather than merely a matter of being open or closed (Marshall & Schrank, 2014). Economic recovery is also part of the goals of post-disaster reconstruction, namely the growth and development of the economic and social activities of the community (BNPB, 2014).

Most of these women already own smartphones and have basic internet access and use WhatsApp and Facebook, but their use is still limited to personal communication, based on the implementing team's initial identification rather than a structured survey. This initial assessment therefore remains impressionistic: no observation guide, interview summary, or participant counts are available to support it, and it is reported as the team's initial identification. Knowledge of creating promotional content, product photography techniques, and managing online interactions with customers is relatively low, so there is a gap between the available technology and the ability to use it. Studies on small and micro businesses in Indonesia during the pandemic show that the adoption of digital marketing and online sales is an important driver of business resilience (Ilyas, 2025), and that social media use is related to business performance through marketing capabilities such as branding and innovation (Tajvidi & Karami, 2021). In the post-disaster context, entrepreneurial marketing, namely seeking opportunities, organizing existing resources, creating value for customers, and accepting risk, has been identified as behavior that helps small businesses recover quickly (Morrish & Jones, 2020). Social media also enables direct communication and interaction with consumers (Kotler & Keller, 2016) without depending on a physical stall.

Similar community service activities generally take the form of training and mentoring. Digital marketing education for MSMEs hit by the pandemic has been reported to contribute to increased sales, with obstacles in the form of internet access and unfamiliarity with using social media (Nurhayati, 2022); training on digital promotional content for post-earthquake MSMEs in Sumedang met its success indicators even though understanding of terminology remained limited (Fauziyah et al., 2025); and mentoring of small businesses in using the internet and smartphones through social media has been carried out to improve business management (Chaerani et al., 2023). For women, women-led community-based businesses have been studied as contributors to recovery and long-term sustainability after disasters, including in Banda Aceh (Matsumoto & Ishiwatari, 2024). Documentation of digital marketing mentoring for women microentrepreneurs in the early post-flood phase, when physical stalls were lost, appears more limited than in the pandemic context, based on the authors' limited literature search; this is consistent with a systematic review reporting that research on social media in the recovery phase of disasters is sparse (Ogie et al., 2022). At the same time, the data collection on affected MSMEs in Aceh has not disaggregated business owners by gender (Waspada Aceh, 2026), so the specific needs of women microentrepreneurs running micro businesses are less visible. The distinctive contribution of this activity is therefore its setting and design: it was delivered in the early post-flood phase, when physical stalls had been lost, and it shifted selling from physical stalls to smartphone-based selling using devices the participants already owned.

The partners' problems are formulated in two aspects: (1) business and production, namely damage to business facilities and limited capital; and (2) management and marketing,

namely low digital literacy, limited promotional skills, and dependence on physical stalls. The contribution of this activity is practical, namely an example of simple digital marketing mentoring that uses smartphones the partners already own, and academic, namely documentation of implementation, obstacles, and the limits of evidence on economic impact in the early post-flood recovery phase. Based on these conditions, this community service activity aims to (1) improve women microentrepreneurs' understanding of the impact of the flood on business continuity, (2) equip them with basic digital marketing skills without a physical stall through WhatsApp and Facebook, and (3) support the early recovery of household income through mentoring and the provision of digital promotional support equipment. Each objective is linked to a realistic short-term indicator (Table 1): understanding of the flood's impact and of recovery strategies is judged by the understanding participants demonstrate at the end of the session; basic skills are judged by completed practice tasks, such as a product photo, a promotional caption, and a first post or customer interaction; and early recovery support is judged by the delivery of promotional equipment and the start of online selling practice. Income restoration extends beyond what a single training session can demonstrate, so it is treated as a longer-term outcome that requires later evaluation with transaction records, not as a short-term indicator of this activity.

Method

This activity is community service with a participatory, applied approach based on the real needs of flood-affected communities. The activity was carried out in Tanjung Neraca Village, Manyak Payed Sub-district, Aceh Tamiang Regency, on February 21, 2026. The training lasted three hours in total. The report does not specify the timetable within the session or the hours of practical mentoring.

The partners are a group of flood-affected women who run or are trying to restart small home-based businesses. The number of participants at the socialization was 35, namely all the women who attended; probability sampling was not used because the activity was not intended for statistical generalization. The report does not document formal recruitment or screening criteria; participants are described, from the team's initial identification, as women affected by the flood who run or are restarting home-based businesses. The report also does not document specific measures to enable women with limited connectivity or urgent post-disaster household needs to take part; this is noted as a limitation and as a recommendation for future activities (for example, flexible timing and materials that work offline).

Data were collected through field observation and initial identification of the partners' condition, as well as a simple evaluation of participants' level of understanding, ability to practice digital marketing, and responses to the activity, recorded descriptively through the implementers' observations during the socialization, training, and mentoring; structured measurement results (for example, a pre-post test) are not available to report. Because no documented skill assessment is available, statements on improved digital literacy are tentative. The report does not document indicators or recording procedures for judging skill acquisition.

The data were analyzed descriptively and presented in narrative form and tables. The report does not document formal consent procedures for photographs, online postings, or the

use of business and customer information during the social-media exercises. The photographs in this article come from the implementing team's own documentation, and no customer information is reported. Future activities should obtain written consent for these uses.

The equipment includes participants' smartphones, the WhatsApp and Facebook applications, and digital support media packages consisting of a tripod, a mini backdrop, and simple promotional equipment used for product photography and digital marketing practice. Nineteen packages were distributed to the participants. The report does not state the allocation criteria or any shared-use arrangements. Because internet service was unstable, the training methods were adjusted (see Discussion). The specific low-bandwidth or offline alternatives used are not documented in the report.

The activity was designed in five stages. First, socialization on the impact of the disaster on businesses and family income, the aims and benefits of the activity, and an overview of digital business alternatives without a physical stall. Second, digital marketing training through short lectures, discussion, and simulation, covering the concept of simple electronic commerce, promotion through WhatsApp and Facebook, and online communication with consumers. Third, technology application, namely practice in taking product photos, composing promotional captions, uploading products, and using community WhatsApp groups. Fourth, mentoring and evaluation of digital selling practice, together with evaluation of the process and results. Fifth, strengthening sustainability by encouraging the formation of small community-based groups and communication with the village government. According to the activity report, socialization, training, and initial mentoring were carried out on February 21, 2026, whereas continued mentoring, structured evaluation, and the sustainability activities of the fourth and fifth stages are intended continuations that are not yet evidenced. The training lasted three hours in total; the report does not give the duration of each training component or the dates of the later stages. The partners played an active role, from providing business data and attending all activities to practicing the skills and discussing in groups. The team consisted of one lecturer as the leader, who coordinated the activity, and three students, who assisted with data collection and socialization mentoring, practice mentoring and recording participants' progress, and documentation. The solutions, target outputs, and achievement indicators are summarized in Table 1.

Table 1. Solutions, target outputs, and achievement indicators

No	Priority problems	Solution	Target output	Achievement indicator
1	Damaged business facilities and halted production	Socialization of post-disaster business recovery	Adaptive business understanding	≥80% of participants understand recovery strategies
2	Limited capital and business access	Digital support logistics aid	Initial promotional facilities available	At least 1 aid package per group
3	Low digital literacy	Digital selling training	Online marketing channel established	≥70% of participants actively use digital media, defined as at least one business post and at

No	Priority problems	Solution	Target output	Achievement indicator
				least one customer message answered within a fixed observation period (observation period to be fixed in the follow-up)
4	Weak promotional ability	Mentoring in product photography and content	Ready-to-use promotional materials	At least 1 promotional content item per participant
5	Dependence on physical stalls	Stall-free business strategy	Flexible business model	Participants sell without a fixed location, shown by at least one confirmed order received through WhatsApp or Facebook

Source: Final activity report (2026)

Each indicator is matched to an observable data source: understanding of recovery strategies, a short post-session understanding check or observation sheet; aid packages, the handover record and the group list; active use of digital media, a follow-up log per participant (posts, customer messages answered, and enquiries received) with screenshots; promotional content, the collected posts or content files with the participants' consent; and selling without a fixed location, an order or transaction log with chat screenshots. These instruments were not yet available when the activity was carried out (see Table 2).

Results

Partner characteristics and initial conditions

There were 35 partners at the socialization, women of productive age who run small home-based businesses as an additional source of family income, with business types including home-cooked food, traditional snacks, cakes, beverages, and small-scale daily necessities. Most are said to come from lower-middle-income families with informal businesses and limited capital (these characteristics come from the implementing team's initial identification and the activity report; data disaggregated by participant are not reported). The initial identification showed that most partners own smartphones and have basic internet access, but social media had not been directed toward business. The chain of post-flood economic impacts on the partners' businesses is illustrated in Figure 1. The report does not provide a participant-level profile by business type, digital experience, or flood-related disruption, so this description is general.

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Figure 1. Chain of post-flood economic impacts in Tanjung Neraca Village. Source: Final activity report (2026)

Implementation of the activity

A field survey and coordination with the village government were carried out to identify business conditions, the partners' main needs, and the potential of digital media as a marketing alternative; the results became the basis for preparing the socialization and training materials. Socialization on the impact of the flood on business continuity and post-disaster adaptation strategies was delivered directly to the group of women microentrepreneurs. The implementers observed high enthusiasm and a growing understanding of the importance of business innovation without depending on a physical stall. The training covered the use of WhatsApp and Facebook as promotional tools, product photography techniques, and the preparation of simple promotional content; participants began practicing digital marketing, and initial mentoring on applying digital selling was carried out. According to the implementers' assessment, the activity improved participants' digital literacy, opened up stall-free business opportunities, and fostered the motivation to gradually restore family income; this assessment has not been supported by formal measurement and is reported as an observation of the implementers, not as a measured outcome. Examples of participants' actual posts or promotional materials were not available for this article, so the initial practice is described only narratively. Because participant-level evidence is not available, Table 2 does not report achievement percentages; it presents implementation progress and the evidence still needed for each indicator. Documentation of the activity is presented in Figure 2.

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Figure 2. Documentation of the activity with participating women microentrepreneurs in Tanjung Neraca Village. Source: Documentation by the community service team (2026)

Table 2. Achievement status against the indicators in Table 1 (35 participants at the socialization)

No	Indicator	Status based on available data
1	≥80% of participants understand recovery strategies	Cannot yet be assessed: structured test results or observation sheets are not available
2	At least 1 aid package per group	19 packages distributed; the number of groups is not specified in the report, so fulfillment of the indicator cannot yet be assessed
3	≥70% of participants actively use digital media	Participants are reported to have begun practicing promotion on social media; the number of active participants out of the participants is not specified in the report, so the 70% threshold cannot yet be assessed
4	At least 1 promotional content item per participant	The number of content items/posts is not specified in the report, so the indicator cannot yet be assessed
5	Participants are able to sell without a fixed location	Reported descriptively; the number of participants who successfully sold and the number of transactions are not specified in the report, so the indicator cannot yet be assessed

Source: Final activity report (2026), processed by the authors

To make early adoption visible, a simple follow-up log is proposed that records, for each participant within a fixed observation period, whether she posted, answered customer messages, and received enquiries. No log results are available yet.

Activity outputs

Table 3. Outputs achieved

No	Type of output	Achievement	Remarks
1	Distribution of digital support media	19 packages distributed	Contains a tripod, a mini backdrop, and simple promotional equipment for product photography and digital marketing practice
2	Documentation of implementation (activity video)	Published	https://youtu.be/Hv6UPprMQfo
3	News publication in online media	Published	JurnalPost.com (2026b), April 11, 2026

Source: Final activity report (2026)

These items are administrative deliverables and implementation outputs. Videos, publicity, and equipment distribution do not by themselves establish marketing effectiveness or outcomes for the participants' businesses.

Discussion

Sequence of activities as a recovery process

The activity began with socialization before training because the partners' businesses rely on simple physical facilities; when those facilities were damaged, the businesses stopped all at once. The small business recovery framework views recovery as a dynamic process moving from survival to recovery, not a dichotomous condition (Marshall & Schrank, 2014), so an initial step that fosters the understanding that a business can run in another way is reasonable. Read through the lens of post-disaster entrepreneurial marketing (Morrish & Jones, 2020), socialization can be understood as an effort to open up the view of opportunities, the use of smartphones already owned as the organization of existing resources, and product photos and promotional captions as efforts to create value for customers. This reading is the authors' interpretation of the activity, not a tested result.

Digital marketing and business resilience

Stall-free digital marketing addresses two obstacles at once, namely the loss of a place to sell and limited capital, because it uses devices the partners already own. Empirical evidence from the pandemic context shows that the adoption of digital marketing and online sales is related to the resilience of small businesses in Indonesia (Ilyas, 2025). However, social media use is related to performance mainly through marketing capabilities, such as branding and innovation (Tajvidi & Karami, 2021; that study was conducted on hotels in the United Kingdom, so the context differs). The implication is that the skills taught should be understood not merely as the technical use of applications, but as a basis for building relationships with customers around the partners, namely communicating the value of the product to the target market (Kotler & Keller, 2016; Tjiptono & Chandra, 2017). Posting activity of small businesses on Facebook has also been used to follow their recovery after natural hazard events (Eyre et al., 2020), which is one reason a follow-up log of posting activity is proposed here.

Comparison with previous community service

The obstacles found in this activity are consistent with Nurhayati (2022), who reported internet access barriers and unfamiliarity with using social media among business actors trying digital marketing, and with Fauziyah et al. (2025), who found limited understanding of digital terms among post-earthquake MSMEs even though the activity indicators were achieved. The approach of mentoring through social media using smartphones is also similar to Chaerani et al. (2023) and to the brief Instagram training for two fish-processing groups reported by Putra et al. (2026), which recorded higher understanding and skills, two business accounts, and 18 promotional posts, although sales had not yet been measured. The difference is that Nurhayati (2022) and Fauziyah et al. (2025) reported measured achievements, whereas this activity can so far report only implementation and initial practice. Differences in context should also be noted: those studies were conducted during the pandemic, after an earthquake, or with fish-processing groups, not in the early post-flood phase with the loss of physical stalls. Lessons from pandemic-era training and from other disaster settings may therefore transfer only imperfectly to flood recovery, where internet connectivity was interrupted and business assets were depleted.

Women, community, and sustainability

The encouragement to form small community-based groups in the fifth stage is consistent with studies of women-led community-based businesses as contributors to recovery and long-term sustainability after disasters, including in Banda Aceh (Matsumoto & Ishiwatari, 2024). Social media marketing actions have also been examined in relation to the social performance of women-led microenterprises (Aracil-Jordá et al., 2023). Evidence from women-managed micro businesses in Indonesia also reminds us that increased digital capacity does not automatically raise business performance; its effect is mediated by self-development motivation and digital marketing, and constrained by structural factors such as double roles in the household (Pranitasari et al., 2026). The same study found that limited knowledge and lack of confidence were the main reasons technology was not used optimally even though infrastructure was available, consistent with the participants' low confidence in selling online. Therefore, the shift from stall-based business to digital marketing does not happen instantly and requires continuous monitoring; tools such as tripods and mini backdrops are only useful if accompanied by the ability and habit of using them.

Obstacles and implications

Some participants still prioritized restoring their families' basic needs, so their readiness to join the training was not optimal; limited digital literacy meant the training required more time; unstable internet connections forced the methods to be adjusted; and some participants lacked confidence in promoting online because they were accustomed to conventional selling. The implication is that activities in post-disaster areas need to prepare gradual materials, more intensive mentoring to build confidence, and practice that takes network limitations into account.

Limitations

Achievements in understanding and skills are reported descriptively by the implementers, and this has several consequences. First, observer bias is possible, because the people who delivered the activity also judged its results. Second, no baseline measure of participants' digital skills was taken, so improvement cannot be separated from what participants could already do. Third, no sales were tracked after the intervention, and no measured data on changes in income or online sales results are available, so the economic impact cannot yet be concluded. The regency data also need to be read carefully: local authorities reported that around 98% of MSMEs had become active again (ANTARA, 2026), whereas the partners' business status at the time of the activity is not specified in the report, so the added value of digital marketing for the partners, whether for restarting or for expanding the market, cannot yet be determined. Follow-up evaluation should include a baseline skill assessment and record income before and after mentoring, the number of posts, orders, and new customers, using transaction records.

Conclusion

The community service activity in Tanjung Neraca Village carried out a survey and coordination, socialization, training, and initial mentoring in digital marketing for flood-affected women microentrepreneurs, with 35 women attending the socialization. These are confirmed implementation activities; their effectiveness in building skills was not measured. The immediate outputs are nineteen packages of digital support media distributed to participants, an activity video, and a news report in online media. The implementers observed that participants were enthusiastic and began practicing product promotion through social media, but this observation is not evidence of acquired skills. Simple digital marketing without a physical stall may be a post-disaster business alternative for the partners, but any claim about restored sales or household income is reserved for a subsequent evaluation with transaction records, so the objective of supporting the recovery of family income cannot yet be declared achieved. Suggested follow-up actions are further mentoring to build the consistency of digital businesses, a follow-up log and monitoring of online sales results, a baseline and follow-up skill assessment, evaluation of the impact on household income, strengthening marketing networks among participants, and developing a community-level sustainability model.

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