



Women Lead Digital: Leadership Training and Community Strengthening of Tarumanegara Village in the Age of Technology

Goklas Siahaan¹, Silvana Syah^{2*}
Universitas Siber Asia

Corresponding Author: Silvana Syah silvanasyah@lecturer.unsia.ac.id

ARTICLE INFO

Keywords: Financial Literacy, Digital Literacy, MSMEs, Community Empowerment

Received : 16, September

Revised : 18, November

Accepted: 20, January

©2026 Siahaan, Syah: This is an open-access article distributed under the terms of the [Creative Commons Atribusi 4.0 Internasional](https://creativecommons.org/licenses/by/4.0/).



ABSTRACT

Advancements in information technology, such as e-commerce platforms, social media, and digital payment systems, offer significant potential. However, the utilization of this technology cannot be optimal without being supported by strong financial literacy. This community service program (PKM) aims to introduce and provide hands-on guidance on utilizing digital technology for product marketing and efficient transactions, such as through social media and QRIS, which has been proven to enhance transaction efficiency for MSMEs in Kertanegara Village. This community service activity uses the Participatory Action Research (PAR) method. Based on the post-test results, there was an increase in the understanding of digital financial products. The program also fostered the emergence of behavioral changes and new awareness within the community, such as the adoption of digital transactions, the rise of local leaders, and the creation of a collective awareness towards social transformation

INTRODUCTION

Digital transformation is a global phenomenon that fundamentally changes the economic and social structure, offering unprecedented growth acceleration potential, especially for Micro, Small, and Medium Enterprises (MSMEs). As the backbone of the Indonesian economy, MSMEs contribute significantly to GDP and labor absorption (Tambunan, 2019), with women playing a vital role in it. Data shows that the majority of micro-enterprises are owned by women, making them crucial agents in the economic resilience of families and communities, a role that is increasingly urgent post-pandemic (United Nations, 2020). However, this potential is often hampered by a sharp digital divide (Anatan & Nur, 2023), where women in rural areas face multi-layered challenges, ranging from limited access to infrastructure to low digital and financial literacy (Dayanand et al., 2024; Sari & Purnomo, 2021).

Previous literature reviews have shown that various service programs have attempted to address this challenge through a partial approach. A number of studies focus on improving technical skills such as digital marketing through social media and e-commerce (e.g., Hendrawan et al., 2024; Kurnia & Lestari, 2021; Nursini, 2020). These programs are successful in increasing product visibility, but are often unsustainable due to the lack of management skills and strategic adaptation of business actors (Pratama & Setyanto, 2022). On the other hand, other research emphasizes the importance of digital financial literacy to improve transaction efficiency and business performance (Affandi et al., 2024; Rahardja et al., 2019). While effective in improving cash flow management, these interventions are less impactful if they are not accompanied by a sales improvement strategy. In addition, women's empowerment programs in general often focus on strengthening leadership capacity and self-confidence (Hikmah, 2024; Wahyuni, 2018), but is often separated from the context of digital technology adoption, even though potential mapping based on digital literacy and finance is very crucial for women entrepreneurs (Fauzi et al., 2021).

The scientific novelty of the "Women Lead Digital" service program lies in a *holistic integrative approach* that synthesizes three pillars of empowerment that previously ran separately: (1) *technical digital literacy*, (2) *digital financial literacy*, and (3) *leadership capacity development*. We argue that digital skills will not be optimally utilized without the confidence and leadership ability to initiate change, while leadership without technological mastery will be dull in the digital age. This approach fills gaps in previous service programs that tended to focus on only one aspect, thus failing to create a sustainable transformative impact.

Analysis of the situation at the partner location, namely Tarumanegara Village, shows a real manifestation of this gap. The women MSME actors in this village have quality local products (handicrafts, processed food), but are trapped in traditional word-of-mouth marketing methods.

Initial observations identified the main problems:

1. Low adoption of digital marketing and transaction technology.
2. The absence of systematic financial records; and most crucially
3. The vacuum of female leaders or "digital cadres" at the community level who can be the driving force and facilitator for their colleagues.

This condition makes it difficult for digital initiatives to grow and develop collectively.

Based on the analysis of these problems, the main objectives of this service program are:

1. Improving the literacy and technical skills of women MSME actors in Tarumanegara Village in the use of digital platforms for marketing and transactions.
2. Develop the leadership, communication, and confidence capacity of participants to be able to become agents of digital change in their communities.
3. Initiating the formation of the "Srikandi Digital Tarumanegara" community as a forum for collaboration, innovation, and sustainability of programs based on collective empowerment.

IMPLEMENTATION AND METHODS

This service program adopts *the Participatory Action Research (PAR)* method which is collaborative and emancipatory (Kemmis et al., 2014). This method was chosen because it is in line with the goal of empowerment, where partners (women MSME actors) are not positioned as objects, but as subjects who are actively involved in the entire activity cycle, starting from problem identification, action planning, implementation, to evaluation and reflection. The PAR approach ensures that the solutions produced are relevant to the real needs on the ground and foster a sense of *ownership* of the program, so that its sustainability is more guaranteed.

The location of this service activity is Tarumanegara Village, Cigeulis District, Pandeglang Regency, Banten. The selection of this location was based on preliminary observations that showed the strong local economic potential of the women-run MSME sector, but at the same time there was a significant digital literacy gap that hindered the development of their businesses.

The flow of service activities is systematically designed in four main stages as illustrated in Figure 1.

Flow of Implementation of the Women Lead Digital Community Service Program Using the PAR Method

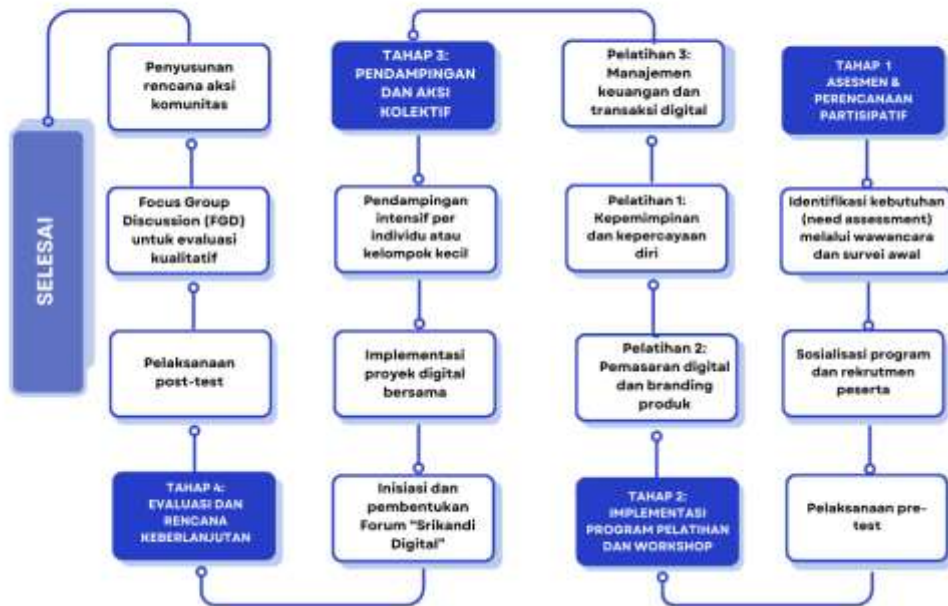


Figure 1. Flow of Implementation of the Digital Women Lead Service Program with the PAR Method

To measure the success of the program, several relevant data collection instruments and techniques were used:

1. Instruments: The instruments used included: (1) Pre-test and post-test questionnaires to measure changes in digital knowledge and skill levels, (2) Semi-structured interview guidelines to explore initial problems and aspirations of partners, (3) Participatory observation sheets to record participants' dynamics and activeness during training, and (4) Focus Group Guidelines Discussion (FGD) to evaluate the impact of the program qualitatively and formulate a follow-up plan.
2. Data Collection Techniques: Data is collected through (1) Surveys, which are carried out at the beginning and end of the program; (2) In-depth interviews with several partner representatives and community leaders; (3) Direct observation during training and mentoring activities; and (4) Focused group discussions (FGD) at the end of the service period.

The data analysis techniques used are divided into two types:

1. Quantitative Analysis: Data from pre-test and post-test questionnaires were analyzed using descriptive statistics (mean, standard deviation) and comparative paired sample t-test (or non-parametric Wilcoxon test if data are not normally distributed). This analysis aims to statistically prove the existence of an increase in participants' knowledge and skills after participating in the program.
2. Qualitative Analysis: Data derived from interviews, observations, and FGDs were analyzed using the Miles and Huberman interactive model, which included three stages: (1) Data reduction (summarizing and selecting key points), (2) Data presentation (organizing information in the form of a narrative or matrix), and (3) Drawing conclusions (verify

findings). This analysis aims to describe in depth the process of change, partner perceptions, as well as supporting and inhibiting factors for program implementation.

RESULTS AND DISCUSSION

The implementation of the "Women Lead Digital" service program in Tarumanegara Village showed significant results, both in terms of individual capacity building and social transformation at the community level. A service process designed with a participatory method successfully facilitates changes that are not only technical, but also substantial in terms of partner behavior and mindset.

The service process begins with a series of intensive training activities that include three main modules: leadership, digital marketing, and digital financial management. The dynamics during the training showed the high enthusiasm of the 25 participants who were MSME actors. The hands-on practice sessions, which accounted for 80% of the total activities, proved to be very effective. Participants actively learn to photograph products using smartphones, design simple promotional content using the Canva application, write *attractive captions*, and create and manage business social media accounts (Instagram and Facebook) and *marketplaces* (Shopee). To measure the effectiveness of knowledge transfer, *pre-tests* and *post-tests* are carried out. The results of quantitative data analysis showed a significant increase in understanding in all aspects trained. **Table 1.** Comparison of Average Knowledge Scores of Participants Before and After the Program

Table 1. Comparison of Participants' Knowledge Levels Before and After Training

Knowledge Indicators	Pre-Test Average Score	Post-Test Average Score	Improvement (%)
Basic Financial Management Understanding	42,5	85,0	100%
Understanding Digital Financial Products (QRIS, M-Banking)	35,0	88,5	152%
Digital Risk Awareness (Illegal Loans, Fraud)	48,0	90,0	87,5%
Overall Average	41,8	87,8	110%

(Source: Primary Data Processed by the PKM Team, 2025)

The data in Table 1 shows the highest improvement in the digital financial management aspect, indicating that topics such as digital recording and non-cash transactions (QRIS) are completely new to most participants. Significant improvements in digital marketing indicate that the technical training provided is on target and easy to apply by partners. *Behavior Change and Collective Action Towards Digital Transformation* The most tangible result of this program is a change in participants' behavior in managing and marketing their businesses. Before the program, 100% of participants relied on conventional marketing. After mentoring, more than 90% of participants (23 out of 25 people) already owned and actively used at least one digital platform for promotion. They independently began producing digital content to introduce their products, as seen in Figure 1. This action directly expanded their market reach, as evidenced by the emergence of several orders from outside the village through social media.



Figure 2. Collage of Digital Content of MSME Products Published on Social Media.

(Source: PKM Team Documentation, 2025)

This content shows participants' new abilities in product photography and simple graphic design.

The Emergence of New Institutions and Local Leadership The most prominent scientific finding of this service is the formation of new social institutions as a manifestation of collective consciousness. The mentoring process not only creates individual digital entrepreneurs, but also triggers the birth of the "*Srikandi Digital Tarumanegara*" Forum. The forum was initiated independently by the participants as a forum for sharing knowledge, overcoming technical difficulties together, and planning collective marketing strategies. The formation of this forum is a crucial social change, changing the competitive mindset to be collaborative. From this forum, new local leaders also emerged. Some of the participants who were faster to adopt technology, such as Ibu Rina (a cassava chip producer) and Ibu Wati (a bamboo weaving craftsman), naturally took on the role of mentors for their colleagues. They become a point of reference in the community when other members experience technical difficulties. The emergence of these organic leaders is an indicator of the program's success in instilling sustainable leadership capacity, beyond just technical skills transfer. Thus, this program is

not only successful in the technical aspect (increasing digital literacy), but also successfully facilitates social transformation which is characterized by the emergence of a new awareness of the importance of collaboration, the formation of supporting social institutions (forums), and the birth of cadres of female digital leaders at the grassroots level.

CONCLUSIONS AND RECOMMENDATIONS

The "Women Lead Digital" service program has succeeded in achieving its goal of empowering women MSME actors in Tarumanegara Village through an integrative approach that combines increasing digital literacy with strengthening leadership capacity. The results obtained showed a significant increase in technical knowledge of digital marketing and financial management, as evidenced by an increase in post-test scores of up to 258.2%. More than that, the program has succeeded in facilitating real behavioral transformation, where more than 90% of participants are now actively utilizing digital platforms for business promotion. The main advantage of the program lies in the use of a holistic Participatory Action Research (PAR) method, which not only transfers skills, but also fosters collective awareness and a sense of belonging. This has proven to be the key to the birth of a new social institution, namely the "Srikandi Digital Tarumanegara" Forum, as well as the emergence of organic local leaders who are the driving force for the sustainability of programs at the community level. However, this program has shortcomings, especially related to the limited short duration of implementation, so the long-term impact on income increase cannot be comprehensively measured. In addition, challenges related to the stability of digital infrastructure in rural areas are still external obstacles that need to be anticipated. For further development, it is recommended that there be a follow-up program that focuses on institutional strengthening the "Srikandi Digital" Forum so that it becomes an independent and sustainable entity. Program development can also be directed at aspects of product quality improvement, standardization, and collective branding to increase competitiveness in the broader market. This integrative empowerment model that has proven to be successful also has great potential to be replicated and adapted in other villages with similar characteristics to accelerate the realization of an inclusive digital transformation from the grassroots level.

REFERENCES

- Affandi, Y., Ridhwan, M. M., Trinugroho, I., & Hermawan Adiwibowo, D. (2024). Digital adoption, business performance, and financial literacy in ultra-micro, micro, and small enterprises in Indonesia. *Research in International Business and Finance*, 70(PB). <https://doi.org/10.1016/j.ribaf.2024.102376>.
- Anatan, L., & Nur. (2023). Micro, Small, and Medium Enterprises' Readiness for Digital Transformation in Indonesia. *Economies*, 11(6), 156. <https://doi.org/10.3390/economies11060156>.

- Dayanand, R., Khan, Z., Kalwar, M., & Kumar, A. (2024). Digital literacy for rural women's empowerment and socioeconomic participation: A comprehensive study. [Preprint]. SSRN. <https://ssrn.com/abstract=5093591>.
- Fauzi, F., Antoni, D., & Suwarni, E. (2021). Mapping potential sectors based on financial and digital literacy of women entrepreneurs: A study of the developing economy. *Journal of Governance & Regulation*, 10(2), 318–327. <https://doi.org/10.22495/jgrv10i2siart12>.
- Hendrawan, S. A., Chatra, A., & Iman, N. (2024). Digital transformation in MSMEs: Challenges and opportunities in technology management. *Journal of Technology Management and Innovation*, 19(1), 45-54.
- Hikmah, N. N. (2024). Revitalizing women's success: The power of leadership, training, and innovation for entrepreneurs in Indonesia. *GATR Journals*. [https://doi.org/10.35609/gjbsr.2024.12.1\(3\)](https://doi.org/10.35609/gjbsr.2024.12.1(3)).
- Kemmis, S., McTaggart, R., & Nixon, R. (2014). *The action research planner: Doing critical participatory action research*. Springer.
- Kurnia, N., & Lestari, P. (2021). Pemberdayaan perempuan melalui program literasi digital untuk mendukung usaha mikro di era pandemi. *Jurnal Aspikom*, 6(2), 321–337. <https://doi.org/10.24329/aspikom.v6i2.873>.
- Nursini, N. (2020). Peningkatan kapasitas pemasaran digital bagi pelaku UMKM perempuan di era Revolusi Industri 4.0. *Jurnal Pemberdayaan Masyarakat Madani (JPMM)*, 4(2), 210-225.
- Pratama, A. R., & Setyanto, E. (2022). Strategi transformasi digital untuk meningkatkan daya saing UMKM di Indonesia. *Jurnal Manajemen dan Kewirausahaan*, 24(2), 115-123.
- Rahardja, U., Lutfiani, N., & Setiani, M. Y. (2019). Pemanfaatan teknologi finansial (Fintech) untuk meningkatkan literasi keuangan pada UMKM di Tangerang. *Jurnal ABDIMAS*, 2(1), 89-98.
- Sari, D. P., & Purnomo, A. (2021). Peran literasi digital dalam pemberdayaan ekonomi perempuan di wilayah perdesaan. *Jurnal Studi Komunikasi dan Media*, 25(1), 89-104.
- Tambunan, T. (2019). *The development of micro, small and medium enterprises in a developing country: The Indonesian case*. World Scientific Publishing.
- United Nations. (2020). *Policy Brief: The impact of COVID-19 on women*. UN Women.
- Wahyuni, D. (2018). Peran kepemimpinan perempuan dalam pembangunan desa: Studi kasus di desa maju. *Jurnal Sosiologi Pedesaan*, 6(1), 45-59.