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Empowerment of Non-Digital MSMEs Towards Digital Marketing

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ABSTRACT

Background: Digital marketing increasingly determines the competitiveness of Micro, Small, and Medium Enterprises (MSMEs), yet many rural MSMEs in Indonesia, including those in Teja Village, Rajagaluh District, still rely on conventional marketing.

Objective: This study aims to analyze the needs of non-digital MSMEs and to formulate contextual empowerment strategies that support their transition toward digital marketing.

Method: A descriptive qualitative design was applied within the student-led PRISMA empowerment program. Data were collected through field observation, semi-structured interviews, and documentation involving three non-digital MSMEs (an agrotourism site, a leather-cracker producer, and a plant nursery), village officials, and community leaders, and were analyzed using an interactive model with source and technique triangulation.

Results: Most MSME actors already owned smartphones and had internet access. The main barriers were low digital literacy, limited understanding of the benefits of digital marketing, and the perception that it is unsuitable for small businesses, compounded by unstable signals in some areas. Student-led mentoring increased awareness of digital marketing among MSME actors and produced two business logos and one packaging redesign.

Conclusion: The barrier to digital marketing adoption among rural MSMEs is primarily literacy rather than access; empowerment should therefore combine basic digital literacy training, continuous community-based mentoring, and multi-stakeholder collaboration.

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INTRODUCTION

The development of digital technology has brought fundamental changes in the global economic system, especially in the way business actors produce, market, and

distribute goods and services. Digital transformation is not only a necessity for large companies, but also a determining factor for the sustainability of Micro, Small, and Medium Enterprises (MSMEs). Digital marketing allows businesses to reach consumers more widely, increase the efficiency of promotional costs, and strengthen business competitiveness in the midst of increasingly fierce market competition (Chaffey & Ellis-Chadwick, 2019; Kotler et al., 2021).

In Indonesia, MSMEs have a strategic role in the national economy. MSMEs contribute greatly to the Gross Domestic Product (GDP), labor absorption, and strengthening the local economy (Anatan & Nur, 2023; Widyastuti et al., 2023). However, this contribution has not been fully balanced with the optimal level of digital technology utilization. Data and various research results show that there is still a significant digital gap between MSMEs that have adopted digital marketing and MSMEs that still rely on conventional marketing methods (Rahayu & Day, 2017; Trinugroho et al., 2022). This condition shows that the digital transformation of MSMEs has not run evenly.

Official figures illustrate the magnitude of this role: Indonesian MSMEs comprise more than 64 million business units, contribute approximately 61% of the national Gross Domestic Product, and absorb around 97% of the domestic workforce (Anatan & Nur, 2023). At the same time, Trinugroho et al. (2022) report that the productivity of Indonesian micro and small enterprises remains far below that of large firms, partly because of their limited use of technology, while Priyadharma (2024) emphasizes that the benefits of the digital economy have not been evenly distributed between urban and rural areas. These figures indicate that the digital gap among MSMEs is not merely a business problem, but also a matter of inclusive regional economic development.

Conventional marketing, which is still widely used by non-digital MSMEs, such as direct sales, word-of-mouth marketing, and reliance on the local market, has limitations in reaching a wider range of consumers. Dependence on these methods makes it difficult for MSMEs to develop, especially in the face of changes in consumer behavior that increasingly rely on digital technology and online platforms in making purchase decisions (Bruce et al., 2023; Febriyantoro et al., 2018). Therefore, digital marketing is an opportunity as well as a challenge for MSMEs, especially those in rural areas.

This condition also occurs for MSMEs in Teja Village, Rajagaluh District. Teja Village has a variety of MSMEs engaged in the culinary, small trade, and household business sectors. Despite having considerable economic potential, most MSMEs in this village have not utilized digital marketing optimally. Low digital literacy, limited access to technological devices, and lack of mentoring and training are the main factors that hinder the adoption of digital marketing (Nugroho et al., 2025; Tiwasing et al., 2022). In addition, some MSME actors still have the perception that digital marketing is difficult to implement and not in accordance with the scale of their business.

Preliminary identification carried out at the beginning of the PRISMA Program showed that the three MSMEs selected as the focus of assistance, namely Situ Ciranca Agrotourism, Krupuk Kulit Jaya Abadi, and UD Tunas Mekar Nursery, still relied on direct sales and word-of-mouth promotion, did not operate business accounts on digital platforms, and did not yet have a consistent visual brand identity such as a logo or informative packaging.

This situation is urgent because consumer purchasing decisions increasingly begin with online search and social media exposure (Kotler et al., 2021). If the digital gap persists, non-digital rural MSMEs risk losing customers to digitally active competitors, remaining dependent on narrow local markets, and being excluded from MSME development programs that increasingly assume basic digital capability (Febriyantoro et al., 2018; Trinugroho et al., 2022). For a village whose economy relies on culinary, small trade, household, and agrotourism businesses, such exclusion would directly limit household income and local economic growth.

Empowering non-digital MSMEs is an important approach in answering these problems. Empowerment does not only focus on technology introduction, but also on increasing the capacity, knowledge, and confidence of MSME actors to be able to adapt to changes in the business environment (Díaz-Arancibia et al., 2024). Through proper empowerment, non-digital MSMEs are expected to understand the benefits of digital marketing and gradually integrate it into their business activities, so as to be able to increase business competitiveness and sustainability (Aramburuzabala et al., 2024; Faiz et al., 2024).

Theoretically, the transition of MSMEs from conventional to digital marketing can be understood through the diffusion of innovations theory (Faiz et al., 2024). According to this theory, potential adopters move through the stages of knowledge, persuasion, decision, implementation, and confirmation, and the speed of adoption is shaped by five perceived attributes of an innovation: relative advantage, compatibility, complexity, trialability, and observability. This framework is relevant to non-digital MSMEs because their reluctance to adopt digital marketing is often rooted not in the absence of technology, but in the perception that it is complicated, costly, or incompatible with the scale of their business (Ainin et al., 2015).

Several previous studies have examined this issue from different angles. Rahayu and Day (2017), in a survey of Indonesian SMEs, found that e-commerce adoption was driven mainly by perceived benefits, technological readiness, owner innovativeness, and the owner's information technology ability and experience, although their sample consisted of enterprises that had already been exposed to digital technology. Ainin et al. (2015), studying SMEs in Malaysia, showed that compatibility, cost-effectiveness, and interactivity influenced the use of social media, which in turn improved financial and non-financial performance; however, the study focused on firms that had already adopted social media.

Meanwhile, Sakti et al. (2025) and Akbar and Kusnandar (2026) highlighted that the ownership of digital devices in rural areas is not automatically followed by the ability to use technology productively, but these studies addressed MSMEs or rural communities in general rather than MSMEs at the pre-adoption stage.

Studies on community-based assistance also indicate that students and universities can play a bridging role in MSME digitalization (Aramburuzabala et al., 2024; Duffett & Cromhout, 2022), yet they rarely link the assistance process to a theoretical explanation of adoption barriers. While previous studies have examined the determinants of digital adoption among MSMEs that already use technology and the digital literacy of rural communities in general, few have examined non-digital rural MSMEs at the pre-adoption stage through direct field mentoring, and fewer still have explicitly distinguished access barriers from literacy barriers.

The novelty of this study therefore lies in three aspects: (1) it focuses on rural MSMEs that have no digital marketing practice at all; (2) it combines a needs analysis with student-led mentoring that produced concrete digital branding assets; and (3) it interprets the transition toward digital marketing through the stages and attributes of the diffusion of innovations theory.

Based on this background, this research is focused on empowering non-digital MSMEs towards digital marketing by focusing on the analysis of needs and strategies that are in accordance with the characteristics of rural MSMEs. This research is important to provide an empirical picture of the condition of non-digital MSMEs in Teja Village, Rajagaluh District, as well as formulate an empowerment strategy that is contextual, applicative, and sustainable (Sugiyono, 2013; Widyastuti et al., 2023).

Accordingly, this study has two objectives: (1) to analyze the needs and barriers faced by non-digital MSMEs in Teja Village, Rajagaluh District, in adopting digital marketing; and (2) to formulate empowerment strategies that are appropriate to the characteristics of rural MSMEs. Theoretically, this study is expected to enrich the literature on MSME digital marketing adoption by positioning digital literacy as a prerequisite that precedes the adoption decision. Practically, the findings are expected to benefit MSME actors, the village government, universities, and other stakeholders as a reference for designing contextual, gradual, and sustainable digital empowerment programs for rural MSMEs.

RESEARCH METHOD

This study employed a descriptive qualitative approach with a field research design. The qualitative approach was chosen because the research aimed to develop an in-depth understanding of the conditions, needs, perceptions, and obstacles experienced by non-digital MSMEs in adopting digital marketing, particularly in rural contexts. This approach enabled the researchers to explore social phenomena holistically and contextually, in accordance with the realities experienced by the research subjects (Creswell & Poth, 2018).

The descriptive design was used to provide a systematic overview of the characteristics of non-digital MSMEs, the marketing patterns they employed, as well as their needs and relevant empowerment strategies for encouraging the transition to digital marketing (Sugiyono, 2013).

Specifically, this study can be characterized as a qualitative descriptive case study embedded in a participatory, student-led community empowerment program, namely the PRISMA Program. The program provided field access and the mentoring intervention, while the research component systematically documented the needs, barriers, and responses of MSME actors. Accordingly, the terms “service activity” and “mentoring” in this article refer to the intervention, whereas “data”, “informants”, and “findings” refer to the research process.

The empowerment program within which the data were collected was implemented in three sequential stages: (1) a preparation stage, comprising licensing, coordination with the village government, and identification of non-digital MSMEs (Figures 1 and 2); (2) an implementation stage, comprising semi-structured interviews and direct digital marketing mentoring (Figures 3–5); and (3) an evaluation stage, comprising a review of the business and marketing conditions of each MSME and the preparation of practical recommendations and digital branding assets, which are presented in the Results section. Each stage is described in the following paragraphs.



Figure 1. Group Photo of Village Officials and MSME Actors of the Teja Village Community

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Figure 2. Socialization about Escorting the Journey of Service



Figure 3. Student Interview With As the Manager of Situ Ciranca Agro Tourism



Figure 4. Student Interview With As the Manager of Krupuk Kulit MSMEs



Figure 5. Student/wi Interview with the UD Tunas Mekar Nursery Manager

MSME assistance activities carried out by students participating in the PRISMA Program in Teja Village, Rajagaluh District, were conducted through systematic and sustainable stages. The activity began with a licensing process and coordination with the Teja Village government as a form of administrative and institutional engagement. Students communicated officially with village officials to convey the objectives, scope, and plans for the MSME assistance activities. This licensing process aimed to obtain formal approval while establishing cooperation among the students, village

government, and MSME actors so that the program could be implemented effectively and in accordance with the needs of the local community.

After obtaining permission from the village government, students identified and collected data on MSMEs in Teja Village. Data collection was conducted through field visits and direct interactions with MSME actors to obtain an initial overview of the types of businesses, production scales, and marketing patterns employed. Through this process, students identified MSMEs that were still operating without digital marketing and had not utilized digital technology in their marketing activities. These MSMEs were subsequently identified as the primary targets of assistance under the PRISMA Program.

The next stage involved conducting in-depth interviews with selected MSME actors. The interviews were conducted using a semi-structured approach to explore information regarding business profiles, business establishment histories, production processes, marketing systems, and various challenges encountered in running the businesses. In addition, the interviews sought to determine the perceptions of MSME actors toward digital marketing, their level of digital literacy, and their readiness to adopt digital technology as a promotional tool. Through this activity, students gained a comprehensive understanding of the actual conditions and needs of MSMEs in Teja Village.

Based on the results of the interviews and field observations, students then provided initial assistance and education related to digital marketing. The mentoring was conducted directly using a persuasive and communicative approach, with the materials adjusted to the abilities and needs of each MSME actor. Students explained the benefits of digital marketing in simple terms, introduced the use of social media as a promotional tool, and provided examples of digital marketing practices that could be easily implemented by small-scale MSMEs. This approach aimed to increase the understanding and confidence of MSME actors while reducing the perception that digital marketing was difficult to implement or unsuitable for the characteristics of their businesses.

In the final stage, students evaluated the MSMEs that had been visited by reviewing their business conditions and existing marketing systems. The evaluation focused on identifying the strengths and weaknesses of each business, opportunities for digital marketing development, and potential challenges in the digitalization process. Based on the evaluation results, students provided practical and realistic recommendations, including the importance of improving basic digital literacy, utilizing easily accessible social media platforms, and obtaining continuous assistance from the village government and relevant stakeholders. These evaluations and recommendations were expected to serve as considerations for MSME actors in gradually developing their businesses toward more effective and sustainable digital marketing practices.

This community service activity was carried out in Teja Village, Rajagaluh District, a rural area with diverse MSME potential, particularly in the culinary, small-scale trade, and household business sectors. The selection of the service location was based on the empirical condition that most MSMEs in Teja Village still relied on conventional marketing practices and had not optimally utilized digital technology for business development. In addition, Teja Village was selected because it was the location of the PRISMA Program, which focused on the role of students in supporting community empowerment and MSME development based on local needs.

The subjects of this service activity included non-digital MSME actors, village officials, and community leaders who were directly involved in or familiar with economic activities and MSME development in Teja Village. The subjects were selected purposively, taking into consideration the active involvement of informants in business activities, their understanding of the conditions of local MSMEs, and their willingness to participate in the mentoring and interview processes. Through the involvement of these various stakeholders, the service activity was expected to provide a comprehensive picture of the conditions of non-digital MSMEs while strengthening synergy among students, the village government, and the local community.

The main informants were the owners or managers of three non-digital MSMEs representing different business types, namely Situ Ciranca Agrotourism (tourism services, coded M1), Krupuk Kulit Jaya Abadi (food processing, coded M2), and UD Tunas Mekar Nursery (plant trading, coded M3), while village officials (coded V) and community leaders (coded C) served as supporting informants. The inclusion criteria for the MSMEs were that (a) the business was active and locally owned, (b) it had not used digital media for marketing, and (c) the owner was willing to participate in the interviews and mentoring.

Data collection in this service activity employed a qualitative approach through field observations, semi-structured interviews, and documentation. Field observations were conducted directly by students to examine the actual conditions of MSMEs in Teja Village, including the types of businesses, production processes, marketing systems, and use of digital technology in daily business activities. The observations also included the business environment and interactions between MSME actors and consumers.

Semi-structured interviews were conducted with non-digital MSME actors as the main informants, as well as village officials and community leaders as supporting informants. The interviews aimed to obtain information about business profiles and histories, existing marketing practices, levels of digital marketing literacy, and the obstacles and needs encountered in the process of adopting digital technology. The semi-structured approach allowed students to develop and adjust questions flexibly according to the dynamics of each interview, enabling them to obtain more in-depth and contextual data.

The research instruments consisted of an interview guide and an observation checklist developed by the research team on the basis of the research objectives and the diffusion of innovations framework (Faiz et al., 2024). The interview guide covered

five domains: (1) business profile and history; (2) current marketing practices; (3) ownership and use of digital devices and internet access; (4) knowledge and perceptions of digital marketing; and (5) perceived barriers and needs for assistance. The observation checklist recorded the type of business, production process, marketing channels, product presentation (logo and packaging), and the use of digital technology in daily business operations.

In addition to observations and interviews, documentation was used as supporting data to strengthen the service findings. The documentation included photographs of mentoring activities, records of interview results, MSME profile documents, and archives of PRISMA Program activities in Teja Village. These documentary data provided empirical evidence of student involvement in assisting MSMEs and contributed to the validity of the service findings.

The data obtained from the service activities were analyzed using descriptive qualitative data analysis techniques. The analysis process was conducted continuously from the data collection stage through the conclusion-drawing stage. The analysis began with data reduction, which involved selecting and focusing on data relevant to the objectives of the service activity, particularly data concerning the conditions of non-digital MSMEs, barriers to digital marketing adoption, and the need for mentoring and empowerment.

The reduced data were then presented in the form of descriptive and thematic narratives to facilitate the identification of patterns and trends emerging from the field data. The data presentation focused on the marketing conditions of MSMEs, the level of digital literacy among business actors, perceptions of digital marketing, and the role of students in providing education and conducting business evaluations. The final stage involved drawing and verifying conclusions, in which the researchers formulated the main findings and interpreted the data within the context of empowering rural MSMEs through the PRISMA Program.

This analytical procedure follows the interactive model of Miles and Huberman as described by Sugiyono (2022). The validity of the data was maintained through source triangulation, by comparing information obtained from MSME actors, village officials, and community leaders, and through technique triangulation, by cross-checking interview data against field observations and documentation. In addition, the summary of findings for each MSME was confirmed with the respective owner during the evaluation stage as a form of member checking. Through the application of this systematic, participatory, and locally needs-based service method, the activity was expected not only to produce academic outputs but also to generate practical impacts by increasing the understanding, awareness, and readiness of MSME actors in Teja Village to adopt digital marketing gradually and sustainably.

RESULT AND DISCUSSION

The implementation of community service activities through the PRISMA Program in Teja Village, Rajagaluh District, produced various findings that described the condition of the digital literacy of the community, especially non-digital MSME actors, as well as the initial dynamics of the digital transformation process at the village level. The results of the service were obtained through field observations, interviews with village officials, MSME actors, and the community, as well as documentation during the activity taking place. In general, the results of the service show that mentoring and digital literacy activities carried out by students have a positive impact on increasing public knowledge, awareness, and attitudes towards the use of digital technology, although a number of structural and technical obstacles are still found.

The results of field observations show that most of the people of Teja Village, including MSME actors, already have digital devices in the form of smartphones and have access to the internet network. However, the quality of internet signals in some areas is still unstable, thus limiting the optimal use of digital technology. Prior to the implementation of community service activities, the use of digital devices by the community tended to be limited to communication and entertainment activities, such as the use of instant messaging applications and social media for personal purposes. After the socialization and digital literacy assistance activities were carried out, the community began to show a better understanding of the productive use of digital technology, including to find relevant information, use social media as a means of promoting small-scale businesses, and understand the basic principles of digital security in the use of technology.

The results of interviews with MSME actors and the community revealed an increase in awareness of the importance of digital literacy in dealing with technological developments and changes in consumer behavior. MSME actors are beginning to realize that digital marketing can be an opportunity to expand market reach and increase business competitiveness. Meanwhile, village officials and community leaders said that community service activities provide new insights into the potential for village digitalization, both in supporting community economic activities and in increasing the effectiveness of village administrative services. However, the limitations of internet network infrastructure and the lack of follow-up assistance are still felt as the main obstacles in implementing digital literacy knowledge in a sustainable manner.

The discussion of the results of the service shows that increasing the digital literacy of the community cannot be separated from the availability of adequate digital infrastructure and the sustainability of mentoring programs. These findings are in line with various studies that affirm that digital literacy and technological infrastructure are two interrelated aspects in supporting the success of digital transformation, especially in rural areas. Therefore, this service activity emphasizes the importance of a collaborative approach between village governments, academics, students, and other stakeholders in encouraging village digitalization and empowering MSMEs in an inclusive and sustainable manner.

Indicators of Service Success

The success of community service activities in Teja Village is measured through a number of qualitative indicators that describe changes in public knowledge, attitudes, and behaviors towards the use of digital technology. The first indicator is the increasing understanding of the public, especially MSME actors, about the concept of digital literacy. This is reflected in the change in public perception that has begun to understand the importance of using digital technology wisely, safely, and productively, not only for communication needs, but also to support economic activities and business development.

The second indicator is the increase in community participation and involvement in community service activities. The enthusiasm of the community can be seen from the activeness in discussion and question and answer sessions, as well as direct involvement in the digital literacy mentoring process carried out by students. This high participation shows that the participatory and communicative approach applied in the PRISMA Program is able to encourage active community involvement and create a conducive learning atmosphere.

The third indicator is the initial change in the pattern of digital technology use among the community and MSME actors. Some MSME actors are starting to try to use social media as a means of business promotion, while others are starting to use digital technology to find information that supports economic and educational activities. Although this change is still preliminary and requires further assistance, the findings show the potential for sustainability and positive impact of the service activities that have been carried out.

Table 1. Indicators of Achievement of Community Service Activities in Teja Village

No	Indicator	Condition before the program	Condition after the program	Form of achievement
1	Community understanding of digital literacy	Understanding limited to the use of social media and communication applications for personal purposes	The community begins to understand the concept of digital literacy, including the productive and safe use of technology	Increased knowledge and digital awareness
2	Awareness of MSME actors of digital marketing	MSME actors still rely on conventional marketing and hold a negative perception of	MSME actors begin to recognize the potential of digital marketing for business promotion and	Changes in perceptions of and attitudes toward digitalizatio

No	Indicator	Condition before the program	Condition after the program	Form of achievement
		digital marketing	market expansion	n
3	Community participation in program activities	Community involvement is still passive and limited	The community actively participates in discussions, question-and-answer sessions, and digital literacy mentoring	Increased participation and active engagement
4	Pattern of digital technology use	Digital technology is used for entertainment and communication	Some community members begin to use digital media for productive activities, such as business promotion and information seeking	Early changes in technology use behavior
5	Understanding of village officials regarding village digitalization	Limited understanding that is not integrated into village planning	Village officials begin to understand the potential of digitalization for public services and village economic development	Capacity building of village institutions
6	Readiness for program sustainability	No plan for follow-up mentoring	A need for follow-up training and sustainable collaboration emerges	Basis for program sustainability planning

Source: Field observation, interviews, and documentation (processed by the authors, 2026).

Analysis of Achievement Indicators

Table 1 presents a qualitative picture of changes in the conditions of the community and MSME actors in Teja Village before and after the implementation of service activities through the PRISMA Program. The table shows that service does not only focus on knowledge transfer, but also encourages changes in perceptions, attitudes, and patterns of use of digital technology. Each indicator in the table describes the stages of interrelated achievements, ranging from increasing understanding of digital literacy, growing awareness of MSMEs towards digital marketing, to the emergence of readiness towards program sustainability.

Meanwhile, a comparison across the indicators in Table 1 shows that community participation is the indicator with the clearest change, as reflected in the active involvement of community members in discussions, question-and-answer sessions, and mentoring. This indicates that the participatory approach and direct assistance carried out by students are able to encourage active community involvement during service activities. This participation is the main supporting factor for the success of the digital literacy process and MSME empowerment.

Indicators of digital literacy understanding and MSME awareness of digitalization also show clear qualitative changes. This is in line with the findings in the table that show a change in the perception of the public and MSME actors towards the use of digital technology, from initially limited to communication and entertainment needs to be more open to the use of technology for productive activities and business development. This achievement shows that the socialization and mentoring activities carried out have succeeded in increasing basic knowledge and public awareness of the importance of digital literacy.

On the other hand, indicators of productive use of digital technology and sustainability readiness remain at an early stage. As shown in Table 1, that changes in digital technology utilization behavior are still in the early stages. This condition shows that even though the community and MSME actors have a better understanding and awareness, the implementation of digital marketing and business digitalization consistently still requires further assistance, capacity building, and more adequate digital infrastructure support.

Overall, the achievement indicators in Table 1 show that service activities through the PRISMA Program have had a positive impact on aspects of community knowledge and attitudes, as well as opening up opportunities for the development of utilization digital technology in a sustainable manner. However, these results also confirm that the success of service is not only determined by short-term achievements, but also requires program continuity, collaboration between stakeholders, and policy support to ensure that the digital transformation of MSMEs and villages can run optimally.

Tangible Outputs of the Mentoring

Beyond changes in knowledge and attitudes, the mentoring produced tangible digital branding assets for the three focal MSMEs, as shown in Figures 6–8. For Situ Ciranca Agrotourism (M1), a logo was designed to provide a consistent visual identity that can be used on social media accounts, directional signs, and promotional materials for the agrotourism site. For UD Tunas Mekar Nursery (M3), a logo was created to distinguish the nursery from other plant sellers and to support the display of its products in a digital catalogue. For Krupuk Kulit Jaya Abadi (M2), the packaging was redesigned to display the brand name and product information more clearly, so that the product can be photographed and presented attractively in online promotion.



Figure 6. Creation of the Situ Ciranca agrotourism logo



Figure 7. Making the UD Tunas Mekar Nursery Logo



Figure 8. Packaging Packaging of Jaya Abadi Leather Crackers

These outputs are important because a consistent visual identity is a prerequisite for recognizable digital content and for product positioning in online markets (Chaffey & Ellis-Chadwick, 2019; Kotler et al., 2021). In terms of the diffusion of innovations theory, the assets also increase the trialability and observability of digital marketing, because MSME actors can immediately see how their products would appear on digital platforms (Faiz et al., 2024). However, by the end of the program, the assets had only been handed over and introduced to the owners; their systematic use on digital platforms and their commercial effects had not yet been observed, which is consistent with the early-stage behavioral changes recorded in Table 1.

Discussion

The results of community service through the PRISMA Program in Teja Village, Rajagaluh District, show that mentoring and digital literacy activities carried out by students have a positive impact on increasing public knowledge, awareness, and attitudes, especially non-digital MSME actors, in utilizing digital technology. Based on the results of observations and interviews, the majority of MSME actors already have digital devices in the form of smartphones and have access to the internet. However, the use of digital technology before service activities is still limited to communication and entertainment functions, and has not been optimally utilized to support marketing and business development activities.

These findings show that the main problem for non-digital MSMEs in Teja Village does not lie in the availability of technological devices, but in the low digital literacy and limited understanding of the benefits of digital marketing. This condition is in line with the findings of Sakti et al. (2025) and Akbar and Kusnandar (2026) who stated that the ownership of digital devices in rural areas is not automatically followed by the ability to use technology productively. Thus, digital literacy is a key factor in encouraging the marketing transformation of MSMEs at the village level.

This result differs from studies that identify limited access to devices and internet connectivity as the dominant barrier for rural MSMEs (Nugroho et al., 2025; Tiwasing et al., 2022). The difference can be explained by the expansion of smartphone ownership and mobile networks in rural Indonesia in recent years (Priyadharma, 2024), which has shifted the main constraint from physical access to the capability to use technology productively. Nevertheless, the unstable signal reported in parts of Teja Village shows that infrastructure remains a secondary, rather than negligible, barrier, so that literacy-oriented interventions still need to be accompanied by infrastructure support.

The results of the service also show that the mentoring carried out by students is able to change the perception of some MSME actors towards digital marketing. MSME actors are beginning to understand that digital marketing does not always require large costs and can be adjusted to the scale of small businesses. This change in perception is an important initial capital in the gradual digital marketing adoption process. This finding strengthens the view of Rahayu and Day (2017) who affirm that the adoption of digital technology in MSMEs is greatly influenced by the perception of convenience and benefits felt by business actors.

From the perspective of the diffusion of innovations theory (Faiz et al., 2024), most MSME actors in Teja Village were at the knowledge and persuasion stages before the mentoring took place. The perception that digital marketing is difficult reflects high perceived complexity, whereas the belief that it is unsuitable for small businesses reflects low perceived compatibility. The mentoring, which used simple examples of social media practices, reduced perceived complexity and increased the observability of digital marketing benefits. This pattern is consistent with Ainin et al. (2015), who

found that compatibility and cost-effectiveness drive social media use among SMEs. However, unlike the firms in their study, the MSMEs in Teja Village had not yet reached the decision and implementation stages consistently, which explains why behavioral change remained preliminary.

From the perspective of village institutions, the results of interviews with village officials show that service activities open up new insights into the potential for digitalization in supporting the development of MSMEs and the local economy. The village officials see that digital marketing can be one of the strategies to increase the visibility of Teja Village MSME products. However, the limitations of internet network infrastructure and the lack of a continuous mentoring program are still the main challenges in realizing the optimal digitalization of MSMEs. These findings confirm that the success of digital-based MSME empowerment requires support for village policies, technological infrastructure, and sustainable cross-sector collaboration.

From a strategic marketing perspective, these findings have direct implications for market reach, positioning, and customer acquisition. For Teja Village MSMEs, whose customers are largely local, social media and instant messaging can extend market reach to visitors and buyers outside the village at a lower customer acquisition cost than conventional promotion (Chaffey & Ellis-Chadwick, 2019). The logos and packaging produced during the program support product positioning and brand recognition, which are prerequisites for effective digital content (Kotler et al., 2021). These findings are in line with Febriyantoro and Arisandi (2018), who regard digital marketing as a means for MSMEs to compete in a wider market, and with Aramburuzabala et al. (2024) and Duffett and Cromhout (2022), who emphasize community-based and student-led assistance as an effective bridge for MSME digitalization.

Proposed Empowerment Strategy

Based on the needs identified above, a three-phase empowerment strategy is proposed for non-digital rural MSMEs. The first phase, digital literacy foundation, focuses on basic training in the use of smartphones for business purposes, including creating business accounts, photographing products, and understanding the basic principles of digital security. The second phase, platform activation, adjusts the choice of platform to the type of business: visual social media such as Instagram and Facebook for the agrotourism site (M1) and the nursery (M3), whose products are attractive when displayed visually, and a WhatsApp Business catalogue combined with an online marketplace for the leather crackers (M2), which can be shipped to buyers outside the village. In this phase, MSME actors are encouraged to publish regular content, for example two to three posts per week, using the logos and packaging produced during the program.

The third phase, institutionalization and sustainability, places the mentoring role in the hands of the village government together with universities and local youth volunteers, for example through periodic digital mentoring clinics integrated into village development planning. The success of the strategy can be monitored using

simple indicators, such as the number of active business accounts, the frequency of content publication, and the number of inquiries or orders received through digital channels. This strategy operationalizes the recommendations of the present study and responds to the needs identified among the informants, namely basic digital literacy, continuous assistance, and infrastructure and policy support.

Limitations of Service

This service activity has several limitations that need to be considered. First, the scope of service is limited to non-digital MSMEs in one village, so that the results and findings cannot be generalized to other rural areas that have different social and economic characteristics. Second, the evaluation of digital literacy achievements and changes in MSME behavior is still qualitatively descriptive and has not been supported by standardized quantitative instruments. Third, the relatively short duration of the implementation of the PRISMA Program has not made it possible to observe the long-term impact of mentoring on the sustainability of digital marketing adoption by MSMEs.

Implications of Service

The findings of this service have theoretical and practical implications. Theoretically, this service strengthens the study of digital-based MSME empowerment by emphasizing the importance of digital literacy as a prerequisite for marketing transformation in rural areas. Digital literacy not only includes the technical ability to use devices, but also an understanding of the use of technology productively, safely, and in accordance with business needs.

Practically, the results of this service can be a reference for village governments and stakeholders in designing MSME empowerment programs that are more contextual and based on the real needs of business actors. Student involvement through the PRISMA Program has proven to be able to be a bridge between academic concepts and practices in the field, especially in increasing the awareness and readiness of MSMEs towards digital marketing. In addition, the participatory approach used is able to encourage the active involvement of MSME actors and increase the chances of sustainability of digitalization programs at the village level.

Further Service Recommendations

Based on the results and limitations of the service, several recommendations can be submitted for future service activities. First, future service is suggested to involve more villages or MSMEs with different characteristics in order to obtain a more comprehensive picture of the empowerment of non-digital MSMEs. Second, continuous and structured assistance is needed, including advanced training related to digital marketing and promotional content management. Third, stronger collaboration between village governments, universities, and the private sector needs to be enhanced

to support the provision of digital infrastructure and the sustainability of digital-based MSME empowerment programs.

CONCLUSION

This study shows that the main need of non-digital MSMEs in Teja Village is not access to devices, which most actors already possess, but basic digital literacy, an understanding of the benefits of digital marketing, and continuous assistance, because low adoption stems mainly from perceived complexity and incompatibility with small-scale businesses. Responding to the second objective, an appropriate empowerment strategy should proceed gradually from basic literacy training to platform activation tailored to each business type and to village-supported mentoring. Student-led mentoring increased awareness and produced logos and packaging, although their commercial use remains at an early stage. These findings therefore imply that rural MSME digitalization programs should prioritize capability building over device provision. Future research should apply longitudinal and multi-village designs to assess whether adoption persists after the mentoring ends.

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