Business Feasibility Analysis and Digitalization of Village-Owned Enterprises (BUMDesa) for Marketing Village Products in the Global Market

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ABSTRACT

Strengthening the capacity of Village-Owned Enterprises (BUMDesa) and Joint Village-Owned Enterprises (BumDesMa) is a strategic step toward building village businesses that are adaptable to digitalization and globally oriented. This program is designed to equip participants with the skills to analyze business feasibility, prepare company profiles, and apply business digitalization concepts as the foundation for developing competitive village businesses. The activities were carried out through the stages of needs identification, material design, interactive training, technical assistance, and pre-test and post-test-based evaluation. A total of 116 participants took part in the program. To measure the effectiveness of the training, the non-parametric Wilcoxon signed-rank test was applied, yielding a p-value of 0.00083. These results confirm that the training significantly improved participants' ability to understand and apply the concepts taught. More significant than the numerical results, participants successfully produced business feasibility analysis documents and company profiles as concrete outputs that most BUMDesa and BumDesMa did not previously possess. This achievement reflects an increase in substantive capacity for professional planning and management of village businesses. The implications of this achievement confirm that strengthening document-based competencies can strengthen the foundation for business sustainability and enhance the competitiveness of BUMDesa and BumDesMa at both regional and global levels.

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INTRODUCTION

The development of digital technology has significantly changed the face of the global economy, particularly through digital products, which include applications, digital content, online services, and e-commerce platforms that have become major drivers of global economic growth. Indonesia, with the fourth-largest number of internet users in the world, has significant opportunities to utilize the digital economy. A report by Google, Temasek, & Bain Company (2023) notes that the value of Indonesia's digital economy reached USD 82 billion, the largest in the ASEAN-6 region, with a projected annual growth of 8%. The contribution of MSMEs to the digital ecosystem is also becoming increasingly significant, considering that this sector accounts for over 63% of national business units (Asian Development Bank, 2021). However, only around 22 million MSMEs (33.6%) have utilized digital platforms, while some are still lagging behind due to limitations in digital literacy, financial access, and technological infrastructure Ministry of Cooperatives and SMEs, 2022). This condition indicates a significant opportunity as well as a major challenge for strengthening the capacity of local business actors in facing digital transformation.

Digitalization not only supports business processes but also reshapes industry structures and global competitiveness. Lankshear & Knobel (2015) emphasize that digital literacy is not merely a technical skill but also encompasses critical abilities in understanding, managing, and effectively utilizing digital information. This perspective reinforces the view that digital literacy is becoming a key foundation for entrepreneurs to actively participate in the technology-based market. Putri et al. (2023) found that digital literacy influences the ease of digital business, including for BUMDes and BUMDesMa. The role of these two institutions is crucial as the driving force of the village economy (Odang Permana et al., 2023; Satoto et al., 2024), although many still face limitations in business management, innovation, and digitalization (Fitriani et al., 2024; Hilmawan et al., 2023; Maf'ul Taufiq, 2024).

Several previous community service activities have attempted to enhance the digital capacity of BUMDes through e-commerce and digital marketing training. Malaikosa et al. (2024) showed that social media training proved capable of increasing BUMDes capacity while also improving product visibility. Meanwhile, Hidayat et al. (2023) added the dimensions of trademark assistance and halal product certification to strengthen institutional capacity. Then, Nahan & Abdi (2025) provided digital marketing and financial management mentoring, which proved to have a significant impact; however, the sustainability of these results requires continued mentoring. Haeruddin et al. (2025) encourage digitalization in business governance and promotion, making BUMDes more prepared to adopt digital systems. In general, these various programs affirm that digital-based interventions can enhance the capacity of BUMDes, but they have not yet addressed the fundamental aspect of business feasibility analysis as the basis for sustainable digitalization development.

This service program was developed to address this gap by integrating business digitalization training and business feasibility analysis as the foundation for strengthening BUMDesa and BumDesMa capacity. The goal is to equip BUMDesa and BumDesMa managers with skills in preparing feasibility analyses, company profiles, and business digitalization strategies to strengthen the marketing of village flagship products. This approach is expected not only to enhance technical competencies but also to strengthen institutional capacity so that BUMDes are able to develop business models that are adaptive, sustainable, and competitive in the digital economy era.

METHOD

The stages of activity implementation include preparation, training, technical assistance, and results evaluation. The preparation stage involves coordinating with the Pacitan District Community and Village Empowerment Office to determine program needs and develop training modules. The implementation stage includes training and technical assistance activities for BUMDesa and BumDesMa managers to strengthen participants' understanding of the material provided. Evaluation is conducted through monitoring results, gathering participant feedback, and assessing competency achievement measured through pre-tests and post-tests.

The main output of this activity is a business feasibility analysis document and a company profile, which serve as a reference for the sustainable development of the village's business. This activity involves 116 participants, consisting of representatives from Village-Owned Enterprises (BUMDesa) and Joint Village-Owned Enterprises (BUMDesMa), with each institution sending one manager as a training participant.

Preparation

The preparation stage was carried out through intensive coordination with the Department of Village Community Empowerment (DPMD) of Pacitan Regency in order to obtain institutional support and ensure that the program aligned with community needs. In addition, the community service team prepared a training module covering business feasibility analysis, village business digitalization, and institutional strengthening strategies. This module was developed based on literature studies and initial observations to make it more applicable.

Implementation

The training was conducted online on Thursday, February 6, 2025, via Zoom Meeting. In this session, the presenter delivered material on business feasibility analysis and business digitalization, accompanied by the Department of Village Community Empowerment of Pacitan Regency, which reinforced aspects of policy and field implementation. After the presentation session, the activity continued with technical assistance, where participants were guided to identify business potential, conduct village landscape analysis, and design a company profile for village enterprises. This mentoring aimed to ensure that participants not only understood the theory but were also able to practice it in accordance with the local context.

Evaluation

The learning evaluation stage is conducted through pre-tests and post-tests administered to participants using Google Forms. The test instruments cover two main topics: business feasibility analysis and business digitalization, with multiple-choice questions. The indicators and content distribution are presented in Table 1. Pre-test and post-test data were analyzed descriptively by calculating the mean, median, and score range to illustrate the distribution of participants' achievements. Further analysis used inferential statistical tests to determine significant differences between pre- and post-training results.

TABLE 1. Pre-test and Post-test Question Indicators for BUMDes Training

No	Material	Indicator	Item Number
1	Business Feasibility Analysis	Company Profile	1,2,3
		Competitive Advantages	4,5,6
		Marketing Strategies	7,8,9
		Financial Aspects	10,11,12
		Organizational structures and Legalities	13,14,15
2	Business Digitalization	Digitalization Basic Concepts	1,2,3,4,5
		Digitalization Tools and Strategies	6,7,8,9,10
		Marketing Strategies and Zero Waste	11,12,13,14,15

Before performing the difference test, the data was tested for the normality assumption using the Shapiro-Wilk test. The data is considered normally distributed if it has a p-value > 0.05 (Ghasemi & Zahediasl, 2012). When this assumption is met, the analysis proceeds using the parametric paired sample t-test to determine significant differences between pre-test and post-test scores, with a significance level of $p < 0.05$ (Pallant, 2020). Conversely, if the data is not normally distributed, the non-parametric Wilcoxon signed-rank test is used with the same significance criteria ($p < 0.05$) (Pallant, 2020). The quantitative data were processed using the R statistical software program.

In addition to quantitative data, this activity also produced qualitative outputs in the form of a business feasibility analysis and a company profile as evidence of participants' improved competence after the training. To strengthen the evaluation results, interviews were conducted with BUMDesa and BumDesMa managers to gather their experiences, perceptions, and changes in their abilities during the training program.

RESULTS AND DISCUSSION

Strengthening the capacity of Village-Owned Enterprises (BUMDesa) and Joint Village-Owned Enterprises (BumDesMa) is a strategic step in building a village business ecosystem that is adaptable to digitalization and capable of penetrating global markets. This service activity is designed to address the urgent need for improved digital literacy and business feasibility analysis skills among BUMDes managers, who have previously been limited to operational aspects. The training program is structured through two main topics: business feasibility analysis, which also covers company profiles, and the digitalization of village businesses. These topics were chosen to provide the necessary knowledge and skills for BUMDes to design sustainable business strategies integrated with digital systems.
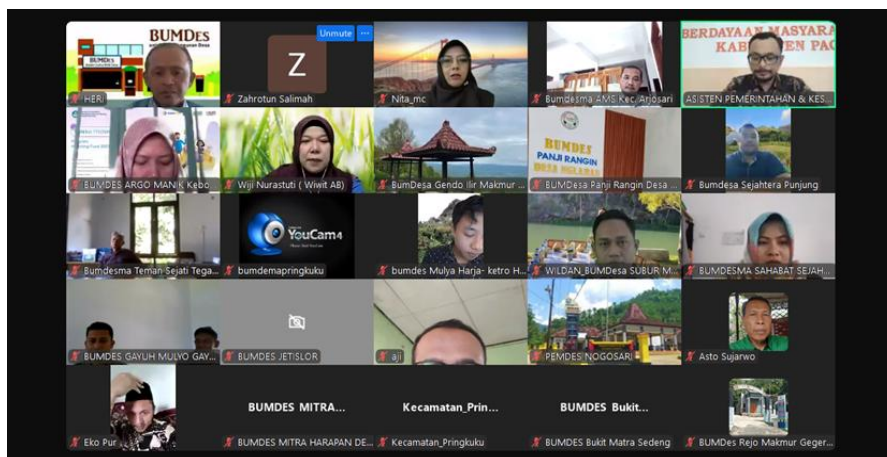
FIGURE 1. Business Feasibility Analysis and Business Digitalization Training.

FIGURE 2. Business Delivery of Training Materials.

The training activity was attended by 116 participants who were representatives of BUMDes and BUMDesMa managers from various sub-districts in Pacitan Regency. Before attending the training, participants took a pre-test containing questions about business viability and business digitalization. Initial results show an average score of 275 out of a total of 300 points, with a median of 280 and a score range of 130–300 (see Figure 3). This finding indicates that most participants already have a basic understanding of the concepts of business feasibility and digitalization, but there is still a significant gap in understanding between individuals. This situation reinforces the initial assumption that training is necessary to equalize perceptions, deepen technical understanding, and prepare participants to effectively implement the concept of business digitalization.

During the training process, participants received in-depth explanations of the basic and technical concepts of business feasibility analysis, including how to identify local potential, develop realistic business plans, and assess business prospects based on financial and non-financial parameters. In addition to the material presentation, participants also practiced creating a company profile that professionally represents their business identity, complete with vision, mission, organizational structure, and the village's flagship product profile. The business digitalization session was the most interesting part, as participants were introduced to various digital platforms and online marketing strategies relevant for expanding the market reach of village products, both through social media and e-commerce.
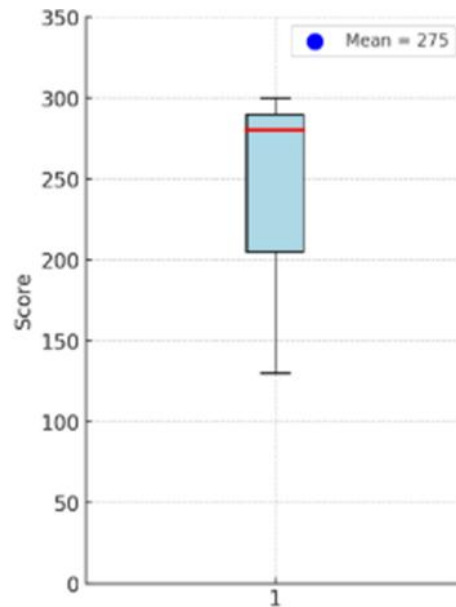
FIGURE 3. Distribution of Pre-test Scores.

Post-training evaluation is conducted through a post-test to measure participants' knowledge improvement after the activity. The post-test results show an average score of 280 out of 300 points, with a median of 285 and a range of 180–300 (see Figure 4). A comparison of the pre-test and post-test average scores indicates an improvement in participants' abilities after receiving the training intervention. To ensure that the difference is statistically significant, an inferential test was conducted using R software. The Shapiro-Wilk normality test showed a p-value < 0.001 (less than 0.05), indicating that the data is not normally distributed. Therefore, the non-parametric Wilcoxon signed-rank test was used, which yielded a p-value of 0.00083. These results prove that the training significantly impacts participants' ability to understand.
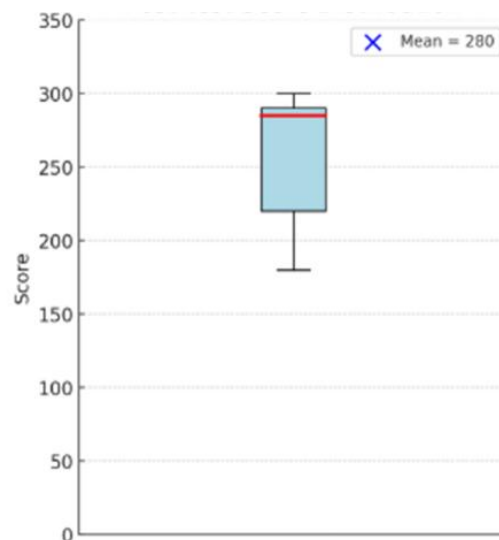

FIGURE 4. Distribution of Post-test Scores.

In addition to the quantitative results, this activity also produced qualitative outputs in the form of a business feasibility analysis document and a village company profile as a form of applying the training

results (see Figure 5). This document serves as a practical guide for BUMDes managers to develop businesses that are more adaptive, measurable, and market-oriented. Post-training interviews also reinforced these findings, with participants reporting that they gained new, relevant, and applicable knowledge. One of the BUMDesMa managers stated, "Regarding the feasibility analysis, that was very helpful and beneficial for us." (BJ, Interview April 15, 2025). Another manager added that this material was very appropriate because it had never been received at the local level: "In my opinion, it was very appropriate because we couldn't get that kind of material locally in Pacitan." (BB, Interview April 15, 2025).

FIGURE 5. Documentation of Business Feasibility Analysis and Company Profile

Overall, this service activity made a real contribution to strengthening the institutional capacity of BUMDesa and BUMDesMa in Pacitan Regency. The knowledge gained by the participants not only enhances their technical skills but also builds awareness of the importance of digital transformation in managing village businesses. This increase is expected to encourage BUMDes to optimize technology-based local potential, create cross-sectoral collaboration opportunities, and strengthen village economic competitiveness amidst the challenges of global digitalization.

Revitalizing Village-Owned Enterprises (BUMDes) is a strategic step to strengthen the economic performance of villages so they can adapt to digital disruption. Satoto et al. (2024) emphasize that the revitalization of BUMDes not only includes digitalization aspects but also the strengthening of capital and strategic partnerships, which require inclusive policies to improve transparency and accountability in management. The main challenges they identified, namely limited resources and suboptimal collaborative governance, align with the field conditions in Pacitan Regency. This training activity empirically attempts to address these challenges through a capacity-building approach focused on business digitalization, the preparation of feasibility analysis documents, and company profiles as the foundation for professional business management.

The effectiveness of the training activities is reflected in the increased post-test scores and the emergence of concrete outputs in the form of business documents, which indicates success in strengthening the managerial competencies of BUMDes managers. Ikram et al. (2025) proved that education and training have a significant influence on motivation, innovation, and organizational performance, as they provide systematic learning opportunities based on real needs. The learning process in this activity adopts the principles of experiential learning as explained by Kolb (1984), where participants are actively involved through hands-on practice in preparing feasibility analysis documents and business profiles. This type of experiential training model deepens conceptual understanding while

also fostering confidence in applying new skills.

The participants' ability to identify business potential and develop business plans also represents the strengthening of dynamic capabilities as formulated by Teece (2007), namely the organization's capacity to recognize opportunities (sensing), leverage resources (seizing), and reconfigure business strategies (reconfiguring). Consistent with the findings of Pardede et al. (2022), the development of a business feasibility study is a crucial instrument for assessing the viability and growth prospects of a business before fully implementing digitalization. Therefore, the results of this activity not only demonstrate an increase in knowledge but also produce tangible outputs that can serve as a strategic reference for BUMDes and BUMDesMa in building businesses that are more adaptive, measurable, and competitive in the digital economy era.

CONCLUSION

This community engagement program demonstrates that training in business feasibility analysis effectively enhances the managerial capacity of BUMDesa and BUMDesMa to design and evaluate sustainable business strategies. The integration of digitalization proved valuable in improving competitiveness and expanding the market reach of village superior products. Sustainable mentoring is crucial to ensure that the knowledge and skills acquired through training can be consistently applied in daily business practices. Moreover, the outcomes indicate a strong potential for scaling this model to a national level, supporting broader efforts to strengthen village-based enterprises. Moving forward, this initiative offers a replicable framework for rural economic transformation that aligns with policy directions promoting digital inclusion, innovation, and community-based economic resilience.

ACKNOWLEDGMENTS

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