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From Offline to Online: Strengthening Digital Literacy among MSMEs through Training on Digital Business Platforms

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Abstract : The rapid advancement of digital technology has encouraged Micro, Small, and Medium Enterprises (MSMEs) to adopt digital platforms to enhance their competitiveness and ensure business sustainability. However, many MSME owners, particularly those in rural areas, continue to face challenges related to digital literacy and the effective utilization of digital technologies. This community service program aimed to strengthen the digital literacy of MSMEs in Berok Village, Central Bangka Regency, through training on digital business platforms. The program was implemented using a combination of lectures, demonstrations, hands-on practice, and mentoring sessions. The training focused on three key areas: creating and managing business profiles on Google Maps, utilizing WhatsApp Business for customer communication and marketing activities, and operating the Stroberi Kasir application for digital transaction management. The results indicated that participants improved their understanding of digital business tools and developed the ability to independently create and manage digital business profiles, business communication channels, and digital cashier systems. Furthermore, the program enhanced participants' readiness to adopt digital technologies to support marketing activities and business operations. These findings demonstrate that practical digital literacy training can facilitate the digital transformation of MSMEs and contribute to improving their competitiveness in the digital era

Keywords *Digital Literacy, MSMEs, Digital Business Platforms, WhatsApp Business, Google Maps, Digital Cashier System*

Introduction

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in supporting economic growth, employment generation, and community welfare in Indonesia. Micro, Small, and Medium Enterprises (MSMEs) are the structural foundation of Indonesia's economy, contributing to over 60 percent of national Gross Domestic Product and employing approximately 97 percent of the labor force [1] Their pivotal role in promoting employment, improving household welfare, and fostering regional development renders MSMEs indispensable to Indonesia's broader socioeconomic agenda. Despite this significance, many MSMEs, particularly those led by women and operating within the informal sector, continue to face persistent structural challenges. These include limited access to affordable financing, exclusion from formal supply chains, and inadequate support for transitioning toward environmentally and socially sustainable business models [2].

The growth of digital entrepreneurship among MSMEs, including convenience, access to comprehensive information, product availability, and cost and time efficiency.Advancements in information technology have facilitated easy access to product information and reviews, enhancing transparency for consumers. Moreover, digital business models enable real-time price comparisons, allowing consumers to find the best deals more easily [3], [4], [5]. However, the success of digital entrepreneurship is not solely dependent on technology use; it also requires continuous innovation and a supportive ecosystem. For MSMEs to compete in the global market, enhancing digital capabilities and improving technological literacy are essential factors. Thus, this research focuses on a conceptual analysis of the role of digital entrepreneurship in strengthening MSMEs and its implications for economic growth in Indonesia. Understanding the factors that influence digital transformation among MSMEs will aid in developing more effective strategies for supporting this sector's development [6], [7]). As MSMEs navigate challenging economic landscapes intensified by the pandemic, embracing digital transformation is crucial for their sustainability and growth. The adoption of digital practices serves not only as a response to current challenges but also as a pathway for future business resilience and competitiveness. Digital literacy has become an essential competency for MSMEs seeking to remain competitive in the digital era. Digital literacy refers to the ability to access, understand, evaluate, and utilize digital technologies effectively for business and communication purposes. Previous studies have demonstrated that improving digital literacy can significantly enhance MSMEs' capacity to engage in digital marketing, manage customer relationships, and optimize business operations. Therefore, strengthening digital literacy among MSME actors is an important strategy for accelerating digital transformation and promoting sustainable business development.

Platforms such as Google Maps Business Profile enable enterprises to increase their online visibility, making it easier for potential customers to discover business locations, products, and services through online searches. Similarly, WhatsApp Business has emerged as a widely accessible communication tool that allows MSMEs to interact directly with customers, manage product catalogs, automate responses, and conduct digital marketing activities more efficiently.

In addition to digital marketing and communication tools, the adoption of digital cashier systems has become increasingly important for improving business management. Digital cashier applications facilitate transaction recording, inventory management, and financial reporting, thereby increasing operational efficiency and reducing the risk of manual recording errors. The integration of such technologies can support better decision-making and contribute to long-term business sustainability.

Despite the potential benefits of digital technology, observations conducted in Berok Village, Central Bangka Regency, indicated that many local MSME owners still relied on conventional business practices. Most businesses had not yet established a digital presence through online business profiles, lacked structured digital communication channels with customers, and continued to manage transactions manually. These conditions limited their market reach and reduced opportunities to compete in an increasingly digital business environment.

To address these challenges, a community service program entitled “From Offline to Online: Strengthening Digital Literacy among MSMEs through Digital Business Platform Training” was conducted in Berok Village, Central Bangka Regency. The program aimed to enhance the digital literacy and technological capabilities of local MSME owners through training and hands-on mentoring focused on three digital business tools: Google Maps Business Profile, WhatsApp Business, and the Stroberi Kasir digital cashier application. Through this initiative, participants were expected to improve their ability to utilize digital platforms for marketing, customer communication, and business management, thereby supporting the digital transformation and competitiveness of MSMEs in the digital era.

A. The Role of MSMEs in Indonesia's Economy

Micro, Small, and Medium Enterprises (MSMEs) are undeniably the backbone of Indonesia’s economy, playing a crucial role in employment generation and GDP contribution. As of 2023, Indonesia had approximately 66 million MSMEs, representing 99% of all business units and contributing 61% to the national GDP, equivalent to IDR 9.58 quadrillion [8], [9] Their expansive presence highlights their importance as key drivers of grassroots economic activity and job creation.

MSMEs dominate various key industries, such as apparel, wood product manufacturing, and food & beverages. Of the 4.21 million MSMEs operating nationwide, the food & beverage sector leads with 1.51 million units (36%), followed by wood product manufacturing with 632,100 units (15%), and apparel with 591,300 units (14%) [100

Despite their economic significance, many MSMEs continue to face challenges related to market access, business management, financial literacy, and technological adoption. These challenges are particularly evident in rural areas, where business owners often have limited access to technological resources and digital skills training [2].

B. Digital Literacy and MSME Competitiveness

Digital literacy refers to the ability to access, understand, evaluate, create, and utilize digital technologies effectively for communication, information management, and business activities. In the context of MSMEs, digital literacy has become a critical

factor influencing business performance and competitiveness in the digital economy. Business owners with adequate digital literacy are more capable of leveraging digital platforms for marketing, customer engagement, operational management, and business expansion.

Previous studies have shown that digital literacy significantly influences MSMEs' readiness for digital transformation. Limited knowledge of digital technologies, insufficient technical skills, and low awareness of digital opportunities remain major barriers preventing MSMEs from fully utilizing digital platforms. Consequently, many businesses continue to rely on conventional business practices that restrict their ability to compete in increasingly digitalized markets.

C. Digital Business Platforms for MSME Development

Digital business platforms provide practical solutions for enhancing business visibility, improving customer communication, and optimizing operational efficiency. One of the most widely used platforms is Google Business Profile, which allows businesses to establish an online presence and improve discoverability through Google Search and Google Maps. Through this platform, customers can easily locate businesses, access operating information, and interact through reviews and ratings.

Another widely adopted platform is WhatsApp Business, which offers various features that support customer relationship management, including automated messaging, product catalogs, and business profile management. These features enable MSMEs to communicate more effectively with customers and implement low-cost digital marketing strategies.

In addition to marketing and communication platforms, digital cashier applications have become increasingly important in improving business operations. Digital cashier systems facilitate transaction recording, inventory monitoring, sales tracking, and financial reporting, thereby improving efficiency and reducing the risk of human error. The integration of these digital tools can support more informed business decision-making and contribute to long-term business sustainability.

D. Digital Transformation Challenges among Rural MSMEs

Digital transformation involves the integration of digital technologies into business processes to create value and improve organizational performance. Although digital transformation offers numerous benefits, many rural MSMEs continue to experience barriers to adoption. Common challenges include limited digital literacy, lack of technological infrastructure, inadequate training opportunities, and resistance to technological change.

Studies have emphasized that knowledge transfer initiatives conducted through universities and community service programs can play a significant role in enhancing MSMEs' readiness for digital transformation. Practical training and mentoring activities enable business owners to develop digital competencies and increase confidence in utilizing digital technologies for business development

PROBLEM STATEMENT

Field observations conducted prior to the implementation of this community service program revealed that many MSMEs in Berok Village, Central Bangka Regency, continued to operate using conventional business

practices. Most business owners had not established a digital presence through Google Business Profile, limiting their visibility in online searches and reducing opportunities to attract potential customers. Furthermore, customer communication was generally conducted through personal messaging applications rather than dedicated business communication platforms.

In addition, transaction recording and financial management processes were predominantly carried out manually, increasing the risk of recording errors and limiting the availability of accurate business information for decision-making. These conditions indicate that the adoption of digital technologies among local MSMEs remains relatively low despite the increasing importance of digitalization in contemporary business environments.

Another critical issue identified during preliminary observations was the limited digital literacy among MSME owners. Many participants were unfamiliar with digital business platforms and lacked the technical skills required to utilize digital tools effectively. Consequently, local businesses faced difficulties in expanding market reach, improving operational efficiency, and adapting to changing consumer behavior in the digital era.

Method

A. Community Service Location and Participants

This community service program was conducted in Berok Village, Central Bangka Regency, Bangka Belitung Islands Province, Indonesia. The participants consisted of local Micro, Small, and Medium Enterprise (MSME) owners operating in various business sectors, including food and beverage, retail, and home-based enterprises. The program was designed to enhance participants' digital literacy and improve their ability to utilize digital business platforms for marketing, customer communication, and business management.

B. Program Design

The community service program employed a participatory training approach that combined lectures, demonstrations, hands-on practice, and mentoring activities. This approach was selected to ensure that participants not only acquired theoretical knowledge but also developed practical skills in utilizing digital business platforms.

The program was implemented through four sequential stages:

1) Needs Assessment and Preparation

The initial stage involved field observations and discussions with village representatives and MSME owners to identify challenges related to digital technology adoption. The assessment revealed that many participants had limited experience with digital business platforms, lacked online business visibility, and still relied on conventional methods for customer communication and transaction management. Based on these findings, training materials and practical modules were developed to address participants' needs.

2) Training and Knowledge Transfer

The second stage focused on providing participants with fundamental knowledge regarding digital literacy and the importance of digital transformation for MSMEs. The training sessions introduced participants to various digital business platforms and explained how these tools could support business

growth, improve customer engagement, and increase operational efficiency.

3) Practical Training Sessions

Hands-on training was conducted to enable participants to directly apply the knowledge gained during the training sessions. The practical activities covered three main topics:

- **Google Business Profile (Google Maps):** Participants learned how to create and manage business profiles, register business locations, upload business information, and optimize online visibility through Google Search and Google Maps.
- **WhatsApp Business:** Participants were trained to create business accounts, develop product catalogs, configure automated responses, and utilize business communication features to improve customer interaction and marketing activities.
- **Stroberi Kasir Application:** Participants received practical guidance on recording sales transactions, managing product inventories, monitoring business performance, and generating simple financial reports using the digital cashier application.

4) Mentoring and Evaluation

Following the practical sessions, participants received direct assistance from facilitators to ensure successful implementation of the digital platforms. Individual mentoring was provided to address technical difficulties and strengthen participants' understanding of the applications. Program evaluation was conducted through observation, participant feedback, and assessment of participants' ability to independently operate the digital business platforms introduced during the training.

C. Data Collection and Evaluation

Data were collected through direct observation, participant discussions, documentation, and feedback obtained during the training activities. The effectiveness of the program was evaluated based on participants' engagement, their ability to create and manage digital business accounts, and their level of understanding regarding the utilization of digital platforms for business development. The evaluation results were used to assess the achievement of program objectives and identify opportunities for future community empowerment initiatives.

D. Program Framework

The implementation framework of the community service program consisted of four stages: (1) needs assessment and preparation, (2) training and knowledge transfer, (3) practical training on Google Business Profile, WhatsApp Business, and Stroberi Kasir, and (4) mentoring and evaluation. This systematic approach was intended to facilitate the effective adoption of digital technologies among MSME owners and support their transition from conventional business practices to digital business operations.

Result and Discussion

A. Implementation of the Community Service Program



The community service program entitled *"From Offline to Online: Strengthening Digital Literacy among*

MSMEs through Digital Business Platform Training" was successfully conducted in Berok Village, Central Bangka Regency. The activity was attended by local MSME owners representing various business sectors, including culinary businesses, retail stores, and home-based enterprises. The program aimed to improve participants' digital literacy and enhance their capacity to utilize digital technologies for business development.

The implementation began with a socialization session introducing the importance of digital transformation for MSMEs in the current business environment. Participants were informed about the opportunities and benefits offered by digital technologies, particularly in relation to marketing, customer engagement, and business management. The session also highlighted the growing importance of digital platforms in supporting business competitiveness and sustainability.

Following the introductory session, participants received practical training on three digital business platforms: Google Business Profile (Google Maps), WhatsApp Business, and the Stroberi Kasir application. The training combined demonstrations, hands-on practice, and direct mentoring to ensure that participants could effectively apply the knowledge acquired during the sessions.

B. Improvement of Digital Literacy among MSME Owners

The training activities contributed positively to participants' understanding of digital business platforms. Prior to the program, many participants had limited knowledge of how digital technologies could be utilized to support business operations. Most businesses relied on traditional marketing methods, face-to-face communication, and manual transaction recording systems.

Through the training sessions, participants gained practical knowledge regarding the creation and management of digital business profiles, digital customer communication, and digital transaction management. The hands-on approach enabled participants to directly experience the benefits of digital technologies and increased their confidence in utilizing digital tools for business purposes.

The findings support previous studies indicating that digital literacy plays a crucial role in improving MSMEs' readiness for digital transformation. Enhanced digital competencies allow business owners to access wider markets, communicate more effectively with customers, and improve business efficiency through technology adoption.

C. Adoption of Google Business Profile (Google Maps)

One of the primary outcomes of the program was the successful creation of Google Business Profiles by participating MSMEs. During the practical session, participants learned how to register their business locations, provide accurate business information, upload business photographs, and optimize their online visibility.

The establishment of business profiles on Google Maps represents an important step toward increasing business accessibility and discoverability. Customers can more easily locate businesses, obtain contact information, and access directions through online searches. This increased visibility has the potential to attract new customers and strengthen business credibility.

Furthermore, participants recognized that an online business presence could

support long-term marketing efforts without requiring substantial financial investment. This finding aligns with previous research suggesting that Google Business Profile serves as a cost-effective digital marketing tool for small businesses seeking to expand their market reach.

D. Utilization of WhatsApp Business for Customer Communication

The WhatsApp Business training session also generated positive outcomes. Participants successfully created business accounts and learned how to utilize various features, including business profiles, automated greetings, quick replies, and product catalogs.

Prior to the training, many participants used personal messaging applications for customer communication. Following the training, participants demonstrated a greater understanding of how dedicated business communication platforms can improve customer service quality and enhance professionalism.

The utilization of WhatsApp Business enables MSMEs to establish more structured communication with customers, respond more efficiently to inquiries, and promote products through digital channels. These capabilities contribute to stronger customer relationships and may positively influence customer satisfaction and loyalty.

E. Implementation of the Stroberi Kasir Application

Another significant achievement of the program was the introduction of the Stroberi Kasir digital cashier application. Participants learned how to record sales transactions, manage product inventories, and monitor business performance through a digital platform.

Many participants reported that they previously relied on manual bookkeeping methods, which often resulted in incomplete transaction records and difficulties in monitoring business performance. Through practical training, participants gained experience in utilizing digital transaction systems that simplify financial recording and reporting processes.

The adoption of digital cashier systems can improve operational efficiency and provide business owners with more accurate information for decision-making. These benefits are particularly important for MSMEs seeking to improve business management practices and achieve sustainable growth.

F. Discussion

The results of this community service program demonstrate that practical digital literacy training can effectively support the digital transformation of rural MSMEs. The combination of theoretical explanations, hands-on practice, and mentoring activities enabled participants to develop both knowledge and technical skills related to digital business platforms.

The findings indicate that digital literacy is not only associated with technology usage but also influences the ability of business owners to adapt to changing market conditions and consumer behavior. By adopting Google Business Profile, WhatsApp Business, and digital cashier systems, MSMEs can improve visibility, strengthen customer relationships, and enhance operational efficiency.

These outcomes are consistent with previous studies emphasizing that digital technology adoption contributes significantly to MSME competitiveness and sustainability. Moreover, the

program highlights the importance of community-based interventions in addressing digital skill gaps among rural entrepreneurs. Universities and higher education institutions can therefore play a strategic role in facilitating digital transformation through training, mentoring, and knowledge transfer initiatives.

Overall, the program successfully addressed the digital literacy challenges faced by MSMEs in Berok Village and provided participants with practical tools to support their transition from conventional business operations to digital business practices. The positive response from participants indicates that similar initiatives could be replicated in other rural communities to accelerate MSME digitalization and strengthen local economic development.

Conclusion

The community service program entitled “From Offline to Online: Strengthening Digital Literacy among MSMEs through Digital Business Platform Training” was successfully implemented in Berok Village, Central Bangka Regency. The program contributed to improving the digital literacy and technological competencies of local MSME owners through training and hands-on mentoring on Google Business Profile, WhatsApp Business, and the Stroberi Kasir digital cashier application.

The training activities enhanced participants’ understanding of digital business platforms and increased their ability to utilize digital technologies for marketing, customer communication, and business management purposes. Participants were able to create and manage online business profiles, establish more professional communication channels with customers, and utilize digital transaction management systems to support business operations.

The findings demonstrate that practical digital literacy training can effectively facilitate the digital transformation of MSMEs, particularly in rural areas where the adoption of digital technologies remains limited. By integrating digital business platforms into daily business activities, MSMEs can improve business visibility, strengthen customer engagement, enhance operational efficiency, and increase their competitiveness in the digital economy

Recommendation

Based on the results of this community service program, several recommendations can be proposed. First, continuous mentoring and follow-up assistance should be provided to ensure the sustainable utilization of digital business platforms by MSME owners. Second, future training programs should expand the scope of digital competencies by incorporating additional topics such as social media marketing, e-commerce management, digital financial literacy, and content creation for business promotion.

Third, collaboration among universities, local governments, and business communities should be strengthened to support the long-term digital transformation of MSMEs. Such partnerships can facilitate access to training, technological resources, and business development opportunities. Finally, similar digital literacy programs should be replicated in other rural communities to accelerate MSME digitalization and contribute to local

economic development and sustainability.

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