

LEVERAGING ARTIFICIAL INTELLIGENCE (AI) TECHNOLOGY TO IMPROVE BUSINESS PERFORMANCE AND BUSINESS SUSTAINABILITY IN MSMEs

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ABSTRACT

Current advancements indicate an accelerated proliferation of artificial intelligence (AI) technology. However, its adoption remains limited within many Micro, Small, and Medium Enterprises (MSMEs), hindering potential business advancement. MSME proprietors often perceive AI as primarily applicable to technology-qualified industries and creative or digital-native businesses. Empirical observation within the West Jakarta region, specifically Meruya Utara, reveals a persistence of traditional business methodologies among local MSMEs. This is characterized by an underutilization of effective digital internet technologies. Presently, the digital engagement of these entrepreneurs is largely confined to foundational applications, such as product promotion via SMS or basic social media platforms (e.g., Facebook, Instagram, WhatsApp). This limited adoption stems from constraints in both technological knowledge and human resource capacity for managing digital business operations. In response to this identified gap, universities, as educational institutions bearing a community responsibility, are positioned to provide solutions. Proposed interventions include delivering targeted training programs to MSME partner communities. These initiatives aim to enhance digital literacy, deepen understanding of sophisticated technologies, and build practical skills in AI utilization. Furthermore, universities can assist in facilitating the effective implementation of AI technology within these businesses. The anticipated outcomes encompass catalyzing innovation in product development and marketing strategies, ultimately leading to increased sales and contributing to long-term business sustainability.

Keywords: Artificial Intelligence, Business, Communities.

1. INTRODUCTION

The government continues to promote the competitiveness of Micro, Small, and Medium Enterprises (MSMEs) with the aim of positioning them as one of the main pillars in advancing the national economy. The resilience of these businesses has proven to be strong in the face of economic crises, supported by their reliable and independent nature.

The rapid advancement of technology requires society as a whole to be prepared to meet the demands of the times. In the business world, the impact of this development is increasingly evident. As consumer demand accelerates, technology has become a key tool in meeting daily needs. The use of information technology, particularly the internet, has become increasingly widespread as a readily accessible source of information. This shift in the era has also transformed consumer shopping behavior from conventional methods to online transactions, including through social media platforms.

This community service program focuses on enhancing understanding and improving the efficiency of marketing strategies among Micro, Small, and Medium Enterprises (MSMEs) in the Meruya Utara area, West Jakarta. The primary objective is to equip local residents with the competencies needed to effectively utilize digital technologies in marketing their MSME products. This initiative is essential given the significant impact of digitalization in promoting MSME products within the broader community.

The increasing intensity of business competition has compelled MSME actors to seek innovative solutions that facilitate greater access to their products. In the context of West Jakarta, particularly in Meruya Utara Area, it has been observed that many residents run home-based businesses but have limited knowledge regarding effective promotional strategies using internet technology. Alongside the rapid development of internet technology, the emergence of artificial intelligence (AI) presents new opportunities. Therefore, we are motivated to share knowledge about the application of AI technology to support product promotion and marketing efforts. It is hoped that this initiative will broaden the participants' perspectives and inspire business owners to innovate in their marketing strategies, thereby enabling their businesses to sustain and grow. To remain competitive in the business landscape, MSMEs must acquire knowledge and skills in utilizing digital tools and the internet (Purwana et al., 2017).

The advent of the internet has transformed the fundamentals of marketing from traditional models to digital marketing. Digital marketing has become a key determinant of business success, as it enables Micro, Small, and Medium Enterprises (MSMEs) to directly monitor customer behavior. New products launched online can be quickly evaluated in terms of reach, engagement, and conversion rates. As a result, MSMEs are better equipped to accurately understand

customer needs (Gurneet Kaur, 2017). With the convenience provided by the internet, the number of internet users continues to rise, creating new opportunities for MSMEs by offering an ideal platform for promoting their products.

MSME entrepreneurs can observe and analyze current business conditions and make informed predictions about future developments. In this context, Artificial Intelligence (AI) can serve as a highly valuable tool to support such business analysis and forecasting (Robby Alexander Chandra & Budi Tjahjono, 2023). The integration of Artificial Intelligence (AI) in Micro, Small, and Medium Enterprises (MSMEs) enables the automation of various business functions, including inventory management, financial reporting, customer data analysis, and customer service operations. This automation not only enhances productivity but also allows businesses to allocate more resources toward product innovation and development. Advanced data analytics further support MSMEs in identifying market trends, understanding customer preferences, and improving their competitive positioning. Moreover, the adoption of AI facilitates more efficient payment processing and the generation of financial reports. AI systems can also assist in detecting anomalies or potential fraud within financial data, thereby mitigating the risk of errors and financial losses (Ramadhani, R., & Trisnaningsih, S. 2022).

The development of digital technology offers a variety of solutions, and business actors must possess the ability to pragmatically identify and implement digital innovations aimed at minimizing existing risks (Harefa Arief, 2022). In this regard, the presence of Artificial Intelligence (AI) is expected to transform the business ecosystem and reshape the relationship between companies and customers in the future, paving the way for continuous improvement. For example, AI can be utilized to analyze the most optimal timing for publishing content such as news or promotional videos for products and services, thereby enhancing the effectiveness of marketing campaigns.

According to a study conducted by Deloitte Access Economics in 2015, small and medium enterprises (SMEs) that adopt digital technology have demonstrated a greater capacity for innovation, with online businesses being 17 times more effective in implementing significant changes to their business models. This becomes increasingly crucial, especially for entrepreneurs or MSMEs aiming to engage in digital marketing activities (Susanti et al., 2020). Although the adoption of digital tools presents challenges for MSME actors, it simultaneously offers promising opportunities for their growth and competitiveness in Indonesia.

2. METHOD

The method employed in this community service program involves interactive training and counseling sessions. The activities are divided into several stages as follows:

1. Needs Analysis Stage:

Based on discussions and observations with MSME partners, it was identified that this program is highly necessary due to the following factors:

- a. A lack of knowledge and understanding among MSME partners regarding digital technology based on artificial intelligence (AI) and its potential to enhance their businesses.
- b. Limited human resource capacity among MSME actors to implement or apply AI-based digital technology in their business activities, particularly in promotion and marketing strategies.

2. Implementation Stage:

The activities were carried out through several approaches:

1. Presentations by the academic team highlighting the importance of using AI-based digital technology in MSME business operations to support growth and development.
2. Demonstration and practice on how to utilize AI tools such as the ChatGPT application, which can be used to gain insights into market trends and generate compelling advertising messages.
3. Implementation of the DALL·E application to help MSMEs create unique product images.
4. Utilization of Pebblely.com to enhance product photography, making it more visually appealing and engaging.

3. Partner Participation:

The MSME partners consist of community groups engaged in small and medium-scale businesses in Meruya Utara, Kembangan, West Jakarta. These partners actively participated in and supported all community service activities conducted by the team. The MSME partners were required to attend counseling, learning sessions, training, hands-on

practice, and implement the use of AI applications such as ChatGPT to obtain market trend insights and advertising suggestions, as well as DALL·E to generate unique product visuals.

4. Evaluation Stage:

This stage was carried out with the assistance of students by distributing questionnaires containing questions related to the activities involving digital technologies that can be utilized by MSME partners. The evaluation is considered successful if:

1. Partners understand the modules and practices provided by the community service team.
2. Partners are able to implement digital technology with AI applications into their business operations.
3. Partners express satisfaction with the community service activities and are willing to continue collaboration to receive ongoing benefits from the program.
4. Program sustainability is achieved.

4. RESULTS AND DISCUSSION

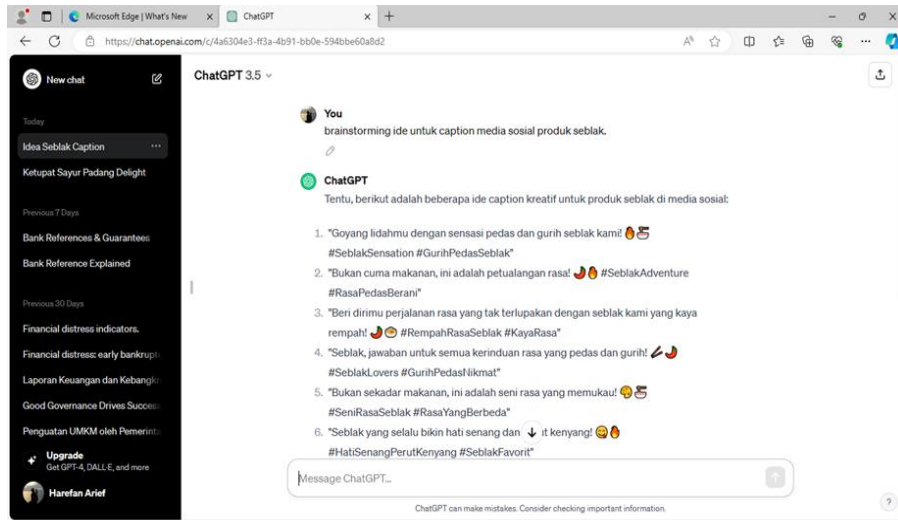
Artificial intelligence (AI) technology has been advancing rapidly over time. However, many Micro, Small, and Medium Enterprises (MSMEs) have yet to fully leverage this technology to support the growth of their businesses. Many MSME owners perceive AI technology as something that can only be utilized by highly tech-driven industries or businesses in the creative and digital sectors.

To address the challenges faced by MSMEs in Meruya Utara, particularly regarding product marketing, this community service initiative aimed to provide insights into how artificial intelligence can be utilized to support business development, especially in business activities.

Following the implementation of this community service program, MSME entrepreneurs now possess improved knowledge and understanding of how to use artificial intelligence technology in the design and marketing of their products. The following section presents a visual documentation of the community service activities that have been conducted.

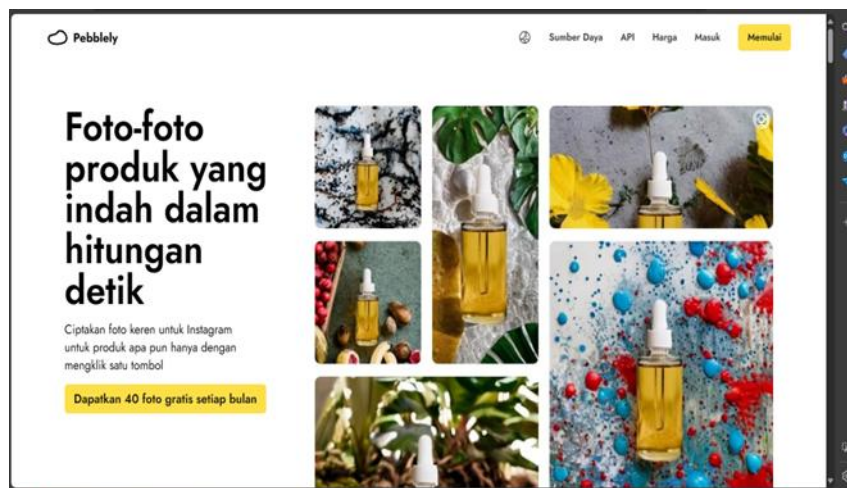






The participants were also introduced to advancements in artificial intelligence (AI) technology used for creating promotional marketing content. This included the introduction of the ChatGPT application, which can be utilized to generate compelling marketing language ideas (copywriting), create engaging marketing captions, and suggest relevant hashtags (#) that can be used to promote products uploaded to social media platforms.

Subsequently, the MSME entrepreneurs were introduced to another artificial intelligence application, Pebblely.ai. This application is particularly useful for MSMEs in enhancing the visual appeal of their product photos using simple equipment such as a smartphone. By utilizing this application, the resulting images can resemble professionally produced product photographs.



Ultimately, the MSME participants also gained comprehensive insights into digital marketing strategies that can enhance sales profits through various digital channels, including social media platforms as well as other emerging platforms such as TikTok Shop and YouTube Shorts.

5. CONCLUSION

The discussion results indicate that the implementation of Artificial Intelligence (AI) within Micro, Small, and Medium Enterprises (MSMEs) must be urgently socialized and actualized. AI presents various opportunities and challenges for MSMEs, including: (1) enhancing operational efficiency, particularly in administrative tasks and financial reporting; and (2) strengthening digital marketing strategies through market and customer data analysis, improved customer service, and the development of effective promotional strategies. Overall, the integration of AI into MSME business processes has opened the door to significant innovation and efficiency gains. By leveraging its capabilities in data analysis, predictive insights, and automation of routine tasks, AI supports MSMEs in making more

informed decisions, improving customer interactions, and optimizing daily operations. Although technical and ethical challenges remain to be addressed, the substantial potential of AI in supporting MSMEs demonstrates that collaboration between humans and advanced technology can yield sustainable benefits and make a meaningful contribution to business growth.

With the continuous advancement of technology, the use of Artificial Intelligence (AI) is becoming increasingly essential. AI is no longer limited to the creative and digital industries; its application can now also significantly benefit Micro, Small, and Medium Enterprises (MSMEs). Several key benefits can be drawn from the outcomes of this community engagement program, including the following:

1. Assisting in generating creative ideas for marketing strategies through social media.
2. Providing suggestions for advertising and promotional message ideas to support marketing campaigns.
3. Supporting the creation of unique and attractive product images or photographs.
4. Contributing to increased sales performance.
5. Saving time and costs in the implementation of marketing strategies.

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