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BUSINESS STRATEGY USING AI (ARTIFICIAL INTELLIGENCE): MSME TRAINING IN JAYAPURA CITY

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Abstract: The rapid pace of digital transformation highlights the need to empower Micro, Small, and Medium Enterprises (MSMEs) in Jayapura City by integrating Artificial Intelligence (AI) into their business strategies. This community service initiative aims to assess MSME actors' initial understanding of AI, deliver targeted training, and evaluate improvements in strategic planning using the Value Proposition Canvas (VPC). The program was conducted in three stages: pre-assessment, training implementation, and post-training evaluation. Initial findings revealed that most participants had limited knowledge of AI and its applications. However, after the training, there was a significant increase in participants' confidence and capability. The training effectively reduced lack of knowledge by 40%, addressed infrastructure and internet challenges by 45%, and decreased uncertainty regarding AI's return on investment by 30%. Participants began applying tools such as ChatGPT, Canva AI, and the VPC method to better understand customer needs. Although the study was limited by a short evaluation period and a specific geographic focus, it offers valuable insights for policymakers, educators, and development stakeholders. The findings support the importance of accessible, hands-on training in making AI a practical and beneficial resource for small businesses, ultimately promoting inclusive, technology-driven growth.

Keywords: artificial intelligence, business strategy, jayapura, MSME, youth

Abstrak: Transformasi digital yang pesat mendorong perlunya pemberdayaan Usaha Mikro, Kecil, dan Menengah (UMKM) di Kota Jayapura melalui integrasi kecerdasan buatan (AI) dalam strategi bisnis mereka. Program pengabdian masyarakat ini bertujuan untuk menilai pemahaman awal pelaku UMKM terhadap AI, memberikan pelatihan terarah, dan mengevaluasi peningkatan dalam perencanaan strategis menggunakan Value Proposition Canvas (VPC). Kegiatan ini dilaksanakan dalam tiga tahap: pra-asesmen, pelatihan, dan evaluasi pascapelatihan. Hasil awal menunjukkan bahwa mayoritas peserta memiliki pengetahuan terbatas tentang AI dan penerapannya. Namun, pascapelatihan terlihat peningkatan signifikan dalam kepercayaan diri dan kemampuan peserta. Pelatihan berhasil menurunkan tingkat ketidaktahuan sebesar 40%, mengurangi kendala infrastruktur dan internet sebesar 45%, serta menekan keraguan atas keuntungan penggunaan AI sebesar 30%. Peserta mulai memanfaatkan alat seperti ChatGPT, Canva AI, dan metode VPC untuk meningkatkan pemahaman kebutuhan pelanggan. Meski terbatas pada waktu evaluasi yang singkat dan wilayah Jayapura, studi ini memberikan wawasan penting bagi pembuat kebijakan, pendidik, dan pemangku kepentingan untuk mendorong pertumbuhan UMKM berbasis teknologi secara inklusif.

Kata kunci: anak muda, bisnis strategi, jayapura, kecerdasan buatan, UMKM

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INTRODUCTION

In the rapidly evolving landscape of technology and business, Micro, Small, and Medium Enterprises (MSMEs) are increasingly turning to Artificial Intelligence (AI) as a strategically to enhance operational efficiency and competitiveness. AI's capabilities extend beyond automating routine tasks; they encompass sophisticated data analysis, customer engagement, and optimization of business processes. This trend is particularly pertinent in developing regions like Jayapura, where MSMEs play a critical role in economic proliferation and job creation WONG & Yap (2024). Recent studies have highlighted that MSMEs adopting AI-driven strategies can expect significant improvements in productivity and innovation, which are crucial for survival in today's competitive market (Sutrisno et al., 2023). Therefore empowering MSMEs with accessible and practical AI tools is essential to bridge the digital divide and foster inclusive economic growth.

Although AI offers many advantages, MSMEs in areas like Jayapura still face difficulties in using it due to limited infrastructure, digital skills, and technical support (Hendrawan, 2024). Interest in entrepreneurship is growing, especially among young people, but many MSMEs still lack access to digital tools and proper business training, even with support from government and institutions. Somisu (2023) explains that factors like environment, personality, and access to business information influence young people's interest in starting businesses. Therefore, improving digital literacy and helping MSMEs build strategic planning skills—especially using AI and customer-focused tools—are important steps to support strong and competitive local businesses.

This community service program was created to help micro, small, and medium enterprises (MSMEs) adapt to rapid technological change. Held at Rumah BUMN Jayapura, a hub for MSME development, the program equips local entrepreneurs with practical, affordable, and easy-to-use AI tools. Its main goal is to build strategic capacity through hands-on training in AI applications like ChatGPT, combined with the Value Proposition Canvas (VPC). By improving planning, market analysis, and innovation, the training aims to strengthen the sustainability and competitiveness of local businesses in Papua.

METHOD

This community service program uses a three-stage approach to help MSMEs in Jayapura integrate Artificial Intelligence (AI) into their business strategies. It begins with a pre-training assessment to identify key barriers, followed by hands-on training using tools like the Value Proposition Canvas (VPC), and ends with a post-training evaluation to assess impact. Each stage equips MSMEs with practical skills and confidence to apply AI effectively. Details of each stage are described below on Picture 1. Scheme

The first stage is the Pre-Training Assessment, where initial data were collected through surveys and interviews with MSME participants. This step aimed to understand their current use of AI in strengthening business strategy, including their level of technological knowledge, perceived challenges, and readiness to adopt AI-based tools in daily

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operations. According to Santosa and Surgawati (2024) and Rachmiani et al. (2025), this initial assessment is important as it employs surveys and interviews that aim to elucidate the experiences and challenges faced by these small businesses in harnessing AI effectively. Additionally, insights from open-ended interviews offer a deeper understanding of participants' experiences with AI, helping to identify key barriers such as knowledge gaps and adoption challenges (Fajri, 2025; Bhalerao et al., 2022). These findings serve as a foundation for designing targeted and practical training interventions that address the specific needs and limitations of MSMEs in adopting AI, ensuring that the subsequent stages of the program are both relevant and impactful.

Picture 1. Scheme

Picture 2. First Stage- Pre Training Implication

The second stage is the Training Implementation, where a customized training program was developed based on the results of the pre-assessment. The focus of this program was to introduce the Value Proposition Canvas (VPC) as a strategic tool to help MSMEs align their products and services with customer needs (Osterwalder et al., 2014).

Picture 3. First Stage- Flyer Invitation

Participants were guided to explore the six key components of the VPC: Customer Jobs, Pains, Gains, Pain Relievers, Gain Creators, and Products & Services. To deepen this understanding, AI tools such as ChatGPT and Gemini were introduced (Santosa & Surgawati, 2024). These tools helped participants analyze customer behavior, generate content ideas, and formulate strategic responses based on real business contexts. According Rodríguez and Calvario, (2024), by integrating AI into the VPC framework, MSMEs were able to more effectively match their offerings with customer expectations and improve their overall business strategy.

The final stage is the Post-Training Evaluation, where follow-up surveys and interviews were conducted to assess the participants' progress. The same instruments from the pre-training phase were used to measure changes in

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AI adoption, understanding, and business performance (Laupichler, 2023). This phase is critical because surveys and interviews are used to track how participants apply AI tools and strategies in their businesses. Using the same measurement tools makes it possible to compare their knowledge before and after the training.

RESULTS AND DISCUSSION

The findings of this study reveal a comprehensive picture of the current state, progress, and impact of AI integration among MSMEs in Jayapura, based on data gathered through a three-phased research approach: pre-training assessment, training implementation, and post-training evaluation. During the pre-training assessment, the qualitative interview responses revealed that the majority of MSME participants had low exposure to AI tools and limited understanding of how AI could support their business strategies. Only about one-quarter of respondents reported prior experience using AI in any form—typically limited to social media advertising algorithms. The most commonly cited barriers to AI adoption included a lack of knowledge (83%), limited access to infrastructure and stable internet (68%), and uncertainty about how AI could produce tangible returns on investment (90%).

In addition, qualitative interviews also revealed a high level of curiosity and a strong motivation to learn practical applications of AI, particularly if the tools were accessible, free, and relevant to their local business context. Participants expressed the need for contextual training and tools that could be implemented with limited resources and minimal technical expertise.

The training phase introduced participants to practical AI applications designed for MSMEs, including the use of the Value Proposition Canvas (VPC) with ChatGPT. Through VPC exercises, they mapped customer segments, identified needs and pain points, and aligned their products or services with AI-based solutions. Examples included creating chatbot scripts for customer questions, designing personalized digital ads, and automating surveys. Learning was supported with interactive sessions, role-playing, and local case studies. Feedback showed that participants found the VPC especially useful for visualizing customer needs and business value. Integrating AI tools into this framework helped them think more strategically and systematically about using digital technology to improve competitiveness. The post-training outcomes demonstrated clear progress in addressing the key barriers previously identified by MSME participants. The initial concern—a lack of knowledge about AI (83%)—was significantly reduced to (40%), as participants gained foundational understanding through hands-on activities using accessible tools such as ChatGPT and Gemini. Many shared that the simple language, guided tutorials, and real business examples used during the training made the concepts easier to grasp and apply. The barrier of limited infrastructure and unstable internet, initially at 68%, was reduced to 45% by introducing AI tools designed to work effectively in low-bandwidth settings. Continue address the concern about return on investment (initially 90%), the training provided clear, measurable examples of how AI can improve customer identification strategies, enhance service, and save time—resulting in early signs of increased engagement and productivity. As a result, uncertainty was reduced to

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30%. Participants expressed a greater sense of confidence in using AI, not only because the tools were free and practical, but also because they now understood how to align AI functions directly with their business needs. This shift in perception—from skepticism to strategic application—marks a foundational step toward broader digital transformation among MSMEs in Jayapura.

Picture 4. Post Training

The results show that combining contextual training, business modeling (VPC), and easy-to-use AI tools greatly improved MSMEs' readiness and enthusiasm for digital transformation. This study highlights the importance of tailored programs to accelerate AI adoption, especially in areas like Jayapura where digital literacy and infrastructure are still growing. The findings provide useful insights for policymakers, incubators, and educators to support inclusive innovation and entrepreneurship in Eastern Indonesia.

CONCLUSION

This community service program shows that Micro, Small, and Medium Enterprises (MSMEs) can adopt Artificial Intelligence (AI) more easily when they receive practical, simple, and locally relevant training. The three-step method—pre-assessment, training, and post-evaluation—helped address problems like lack of knowledge, low confidence, and limited access to technology. By using the Value Proposition Canvas (VPC) and AI tools such as ChatGPT and Gemini, participants better understood their customers and made more informed business decisions. The shift from being unsure about AI to actively using it in business marks an important step for local entrepreneurs in the digital era. Although the post-evaluation was conducted right after the training, making it hard to see long-term effects, and the program only focused on Jayapura so it may not represent other regions, the results are still valuable. The success shows that similar programs can be applied in other areas to promote digital literacy, innovation, and sustainable growth for MSMEs in Indonesia.

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