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Empowerment Of Msmes In Hakatutobu Village Through Artificial Intelligence-Based Digital Marketing Training

Pemberdayaan UMKM Di Desa Hakatutobu Melalui Pelatihan Pemasaran Digital Berbasis Kecerdasan Buatan

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ABSTRAK

Pengabdian ini bertujuan memberdayakan pelaku UMKM olahan hasil laut di Desa Hakatutobu melalui pelatihan digital marketing dan pemanfaatan Artificial Intelligence (AI). Kurangnya keterampilan pemasaran digital dan keterbatasan teknologi menjadi hambatan utama mitra dalam memperluas jangkauan pasar. Metode yang digunakan adalah Participatory Action Research (PAR) dengan teknik pelatihan dan praktik langsung (hands-on) pada 25 peserta. Materi inti berfokus pada literasi prompting AI untuk menghasilkan copywriting dan desain promosi. Keberhasilan diukur melalui perbandingan pre-test dan post-test serta uji-t berpasangan. Hasil kuantitatif menunjukkan peningkatan rata-rata pemahaman peserta sebesar 55% (dari 50.0 menjadi 77.5), yang terbukti signifikan secara statistik ($p < 0.001$). Secara kualitatif, peserta mampu menghasilkan konten promosi digital pertama mereka. Kesimpulan menunjukkan bahwa intervensi hands-on berbasis AI sangat efektif dan efisien dalam meningkatkan kompetensi digital UMKM, sehingga produk olahan laut lokal dapat bersaing di pasar yang lebih luas.
Kata Kunci: AI, Copywriting, Digital Marketing, Prompting, UMKM

ABSTRACT

This community service aimed to empower seafood processing Micro, Small, and Medium Enterprises (MSMEs) in Hakatutobu Village through digital marketing training and the utilization of Artificial Intelligence (AI). The lack of digital marketing skills and technological limitations were the main obstacles faced by partners in expanding market reach. The method employed was Participatory Action Research (PAR) combined with hands-on training for 25 participants. The core material focused on AI prompting literacy to generate effective copywriting and promotional designs. Success was measured by comparing pre-test and post-test scores and paired sample t-test. Quantitative results showed an average increase in participants' understanding of 55% (from 50.0 to 77.5), which was proven statistically significant ($p < 0.001$). Qualitatively, participants were able to produce their first digital promotional content. The evaluation instrument comprised 20 items assessing five digital marketing competency indicators, with face validity confirmed by expert review. The PAR approach engaged partners iteratively through planning–action–reflection cycles rather than one-way training. These findings indicate that the AI-based hands-on intervention produced a statistically significant and practically meaningful

improvement in MSMEs' digital marketing competence, enabling local processed seafood products to reach a broader market.
Keywords: Artificial Intelligence, Copywriting, Digital Marketing, Prompting, MSMEs

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INTRODUCTION

Hakatutobu Village in Pomalaa District, Kolaka Regency, has strong economic potential, especially in the household processed marine product industry. Products like fish balls, fish floss, and fish nuggets show great quality potential and can compete in larger markets. However, this potential is limited by ongoing marketing challenges. Currently, the sales reach of these MSME products mainly stays within the local village area (Aba, 2024). The main issues are a lack of digital marketing skills, the entrepreneurs' inability to create appealing promotional content, and limited ability to use the latest technology (Tisin, 2024; Hilmi, 2025).

As digital transformation happens quickly, the manual marketing methods used by MSMEs are no longer effective or efficient (Putranto, 2025; Hendrawan, 2024; Rakhmadani, 2021). The traditional marketing approach takes up a lot of time and costs, which slows down their business growth (Nadhiroh, 2024). There is a gap between the high quality of the processed marine products and the low ability for digital promotion. Therefore, a technology-based solution is needed to close this gap. Using Artificial Intelligence (AI) can offer time and cost-efficient solutions that MSMEs with limited resources can benefit from (Sharma, 2022; Shakya, 2023).

Previous community service initiatives have shown that digital marketing training can effectively expand MSME market reach (Deviyanti, 2024; Alteza, 2025; Husen, 2024). However, a significant gap remains: most earlier studies focus on platform use (social media or e-commerce) without considering the language skills required to create persuasive promotional content. This issue is especially evident in rural coastal communities, where education levels vary. This community service aims to fill that gap by introducing AI Prompting Literacy as a central skill an approach that, to the authors' knowledge, has not been used in MSME empowerment programs in Eastern Indonesia. Since the service team comes from the English Language Education study program, the training leverages their expertise in creating effective prompts for generative AI tools. This enables quick production of high-quality copywriting and promotional content in both Indonesian and English. Gherdan (2022) confirms that combining language skills

with digital technology leads to more relevant outputs—a principle that supports this initiative's uniqueness.

Therefore, carrying out this community service activity is crucial. It represents a concrete effort by the academic community to fulfill the tridharma of higher education, particularly in community service. The collaboration between the lecturer team's knowledge in language and digital technology serves as the foundation for creating an effective empowerment model. The goal is that this activity will not only enhance partners' technology skills but also create a learning model that can be applied in other villages with similar MSME traits.

Based on the background and gap analysis, this community service aims to:

1) Increase the understanding of processed marine product MSME actors in Hakatutobu Village about the concept and urgency of digital marketing.
2) Provide practical skills and a step-by-step guide to partners on using AI tools for the efficiency of creating copywriting and promotional designs.
3) Encourage the digital transformation of Hakatutobu Village MSMEs to expand the market reach of their products through social media.

METHOD

This community service project used the Participatory Action Research (PAR) approach. PAR was chosen because it engages partners as active co-researchers who take part in every phase of the intervention (Busindeli, 2024). The PAR cycle in this study included three phases: (1) Planning, where the service team and MSME partners identified marketing barriers and co-designed the training agenda; (2) Action, where partners practiced AI prompting and digital content creation with guidance; and (3) Reflection, where the team and partners evaluated results, identified challenges, and discussed plans for continued independent practice. This participatory setup ensured the intervention tackled local issues instead of imposing outside solutions. The evaluation tool had 20 multiple-choice questions measuring five skills: (1) understanding digital marketing concepts, (2) awareness of AI tools for content creation, (3) ability to create basic prompts, (4) copywriting skills, and (5) knowledge of promotional design principles. Two expert judges reviewed the tool for face validity before it was used.

This methodology focused on addressing specific field problems, like the limited digital marketing skills and the underuse of generative AI among MSMEs in Hakatutobu Village.

A. Location, Time and Subjects of the Service

The community service activity was conducted in Hakatutobu Village, Pomalaa District, Kolaka Regency, on February 22, 2025, in accordance with the Letter of Assignment issued. The subjects of the service were the MSME actors of processed marine products (producers of fish balls, fish floss, and fish nuggets) as well as representatives of the local youth organization (Karang Taruna) who were directly involved in product promotion. The total number of target participants was approximately 25 to 30 individuals.

B. Program Implementation Stages

The program implementation was divided into three main stages:

1. Preparation Stage (Planning):
    - Situation Analysis: The team conducted an initial observation and short interviews with the village officials and several MSME actors to validate the existing problems and potential.
    - Curriculum Development: The team designed a structured training module and hands-on materials, focusing on basic Digital Marketing and AI Prompting.
    - Evaluation Instrument Preparation: The team created Pre-test and Post-test questionnaires to measure the partners' level of understanding before and after the intervention.
2. Execution Stage (Action):
    - Pre-test: The team measured the participants' initial knowledge of digital marketing and AI.
    - Session 1: Digital Marketing Concepts & AI Urgency: The session delivered basic material on social media marketing, branding, and why AI is essential for MSME efficiency.
    - Session 2: Hands-on AI Prompting and Copywriting: This constituted the core activity, involving direct practice using AI tools (such as ChatGPT or Google

Gemini) to generate appealing sales copywriting, and using AI design tools (such as Canva AI) to create promotional flyers. Emphasis was placed on effective prompt construction techniques, in line with the article's novelty.

- Post-test: The team measured the increase in participants' knowledge and skills following the training.

3. Evaluation and Monitoring Stage:

- Data Analysis: The team performed a comparative analysis of the Pre-test and Post-test results.
- Reflection: The team identified the success factors and constraints that arose during the training.
- Short-term Monitoring: The team carried out online monitoring (via a WhatsApp group or partners' social media accounts) to ensure the sustained application of the knowledge that had been gained.

C. Data Analysis Technique

The data obtained from the Pre-test and Post-test were analyzed using Comparative Descriptive Analysis. The results of both tests were compared to calculate the percentage increase in partners' understanding. The formula used was:

$$\textbf{Precentage Increase } (g) = \frac{\textbf{Post-Test Average} - \textbf{Pre-Test Average}}{\textbf{Maximum Score} - \textbf{Pre-test Average}} \times 100\%$$

Furthermore, qualitative data, such as observation of partner participation and the digital content products created by participants during the hands-on sessions, were described to support the quantitative findings.

RESULT AND DISCUSSION

A. Description of Activities and Qualitative Outcomes

The community service (Pengabdian Kepada Masyarakat/PKM) activity in Hakatutobu Village, Pomalaa District, Kolaka Regency, was held on February 22, 2025. The program was attended by 25 active participants, consisting of micro and small enterprise (MSE) actors in processed marine products, such as fish ball, shredded fish floss (*abon*), and nugget producers, along with several representatives from the local youth organization (*Karang Taruna*) acting as digital change agents.

The entire activity proceeded according to the three phases of Participatory Action Research (PAR). The first phase (Preparation) confirmed that partners faced crucial problems related to copywriting and visual design skills. They found it challenging to create promotional content that was appealing, fast, and low-cost, causing their market reach to stagnate in the local area. The second phase (Action), which involved hands-on training, was the peak of the intervention.

The training focused on two main skills: AI Prompting Skills and Rapid Design Skills. The emphasis on AI prompting was due to the background of the service team from English Language Education, which introduced a novelty in how MSEs could utilize generative AI to produce persuasive promotional texts that adhere to good Indonesian language principles. The most tangible qualitative outcome of this phase was the Ready-to-Use Digital Content Product. After the hands-on session, 80% of participants successfully created a minimum of two debut promotional contents for their products that they had never possessed before. Partner engagement was notably high; however, observations noted minor technical constraints such as internet connection and limited-specification smartphones. This necessitated one-on-one assistance from the lecturer and student team. The intensive hands-on atmosphere and the support provided by the service team can be seen in Figure 1, 2, and 3.

Figure 1. Sharing session

Figure 2. Hands-on session

Figure 3. Photo session with all participants

B. Analysis of Understanding Improvement (Quantitative)

The quantitative success of the program was measured by comparing Pre-test and Post-test scores, with a maximum score of 100. The Minimum Competency Criteria (KKM) was set at a score of 70. To measure the effectiveness and significance of the training, descriptive statistical analysis and hypothesis testing were performed using a paired sample t-test on data from 25 participants. The statistical results are presented in Table 1 and Table 2.

Table 1. Descriptive Statistics of Partner Evaluation Results (Pre-test and Post-test)

Indicator	Pre-test Statistics	Post-test Statistics	Notes
Number of Respondents (N)	25	25	-
Average Score (Mean)	50.0	77.5	Absolute Increase: 27.5 Points
Minimum Score	30.0	60.0	Increase in Basic Competence
Maximum Score	80.0	95.0	Best Participant Achievement
Standard Deviation (SD)	12.0	9.5	Consistency of Results After Intervention

Passing Rate (Score ≥ 70)	12%	88%	Significant Competency Improvement

The data in Table 1 shows an increase in the average score from 50.0 to 77.5. This notable increase indicates that the intervention has high effectiveness, with a 55% increase in partner understanding (calculated using the Normalized Gain formula). Descriptively, the training successfully reversed the partners' condition from a majority failing (only 12% scored ≥ 70) to a majority being competent (88% scored ≥ 70). To test whether this increase is statistically significant or merely coincidental, a paired t-test was performed. The t-test results are presented in Table 2.

Table 2. Paired Sample T-Test Results for Score Improvement

Test Statistic	**Value**	**Note**
t-Value	10.32	High t-Value
Degrees of Freedom (df)	24	(N - 1)
Significance Value (Sig. 2-tailed)	0.000	Highly Significant ($\alpha < 0.05$)
Mean Difference	27.50	Tested Average Difference

The results of the paired sample t-test (Table 2) show a Significance Value (Sig. 2-tailed) of 0.000 (reported as $p < 0.001$ following APA convention). Because the p-value is much smaller than the significance threshold α (0.05), it can be concluded that there is a highly significant difference between the Pre-test and Post-test scores. Thus, the hypothesis stating that this AI-based digital marketing training is effective in increasing the digital competence of MSMEs is accepted. The visualization of this score comparison is shown in Figure 4.

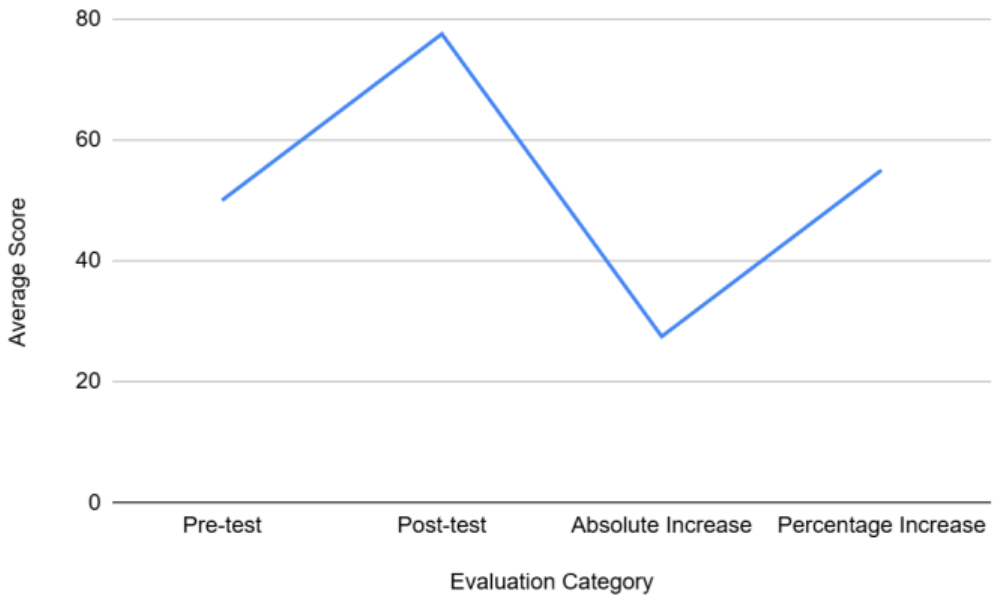

Figure 4. Comparison Graph of Average Pre-test and Post-test Scores of MSMEs in Hakatutobu Village

C. Discussion of the Results and Implications

The training effectiveness level reaching 55% and the t-test results showing a highly significant difference in scores ($p < 0.001$) are the main findings indicating the success of this Community Service Program (PKM). This success cannot be separated from three main factors: adaptation of the methodology, relevance of the AI content, and the novel focus on prompting literacy.

1. Discussion on the Effectiveness of Method and Content

The significant increase in competence (from an average score of 50.0 to 77.5) demonstrates that the Participatory Action Research (PAR) approach, which emphasizes hands-on practice, proved effective in transferring knowledge to participants with diverse educational and technological backgrounds. In the context of MSMEs in regional areas, theory alone is insufficient; the intervention must immediately yield a usable product or output. In this case, the generated output was ready-to-upload copywriting and promotional flyers. This finding aligns with research that stresses that task-based practice results in higher knowledge retention and application in the small business sector (Keith et al., 2016; Marroh et al., 2025).

2. Implications of AI Efficiency as Marketing Catalyst

The core of this success lies in the utilization of Artificial Intelligence (AI). The 55% increase in understanding proves that the partners have internalized the AI value proposition: efficiency of time and resources. The majority of MSMEs in Hakatutobu Village face time and cost constraints for marketing, making a technology that can rapidly generate professional content (without hiring copywriters or designers) an ideal solution. AI functioned as an empowering technology that democratized professional marketing tools, enabling small businesses to compete with larger entities in the digital space. The experience in Hakatutobu reinforces the argument that AI is not merely a supplementary tool, but an essential catalyst for a quantum leap in MSMEs' digital competitiveness (Peretz-Andersson et al., 2024; Praginata et al., 2025).

3. Novelty and Linguistic Implication (Prompting Literacy)

The novelty aspect distinguishing this service activity is its focus on AI Prompting Literacy as a communication bridge. The expertise of the service team from the English Language discipline was directed at teaching partners how to communicate effectively with generative AI, not just use basic features. The high score increase proves that mastering good prompting techniques, including defining the audience persona, tone of voice, and call to action, successfully overcame the copywriting skill barriers previously faced by the partners.

The implication is that AI output quality is directly proportional to the quality of the input prompt provided. In other words, linguistic competence (in structuring prompts) becomes a new mandatory digital skill for MSEs to optimize AI potential (Korzyński et al., 2023). This research adds to the literature on the importance of digital soft skills over technical hard skills in grassroots AI adoption.

4. Impact on Local Economic Development

On a macro level, the implementation of this AI-based digital marketing has a significant impact on the economic development of Hakatutobu Village. Local processed marine products, such as shredded fish floss (abon) and fish balls, now have the potential to penetrate regional and even national markets through e-commerce and social media, overcoming existing geographical limitations. This empowerment directly supports the Local Government's agenda in strengthening the people's economy through the acceleration of technology literacy (Nugroho et al., 2025).

For sustainability, the active role of the Karang Taruna youth organization as agents of change is required. They must be mandated to become digital mentors for senior MSME actors, ensuring that the acquired knowledge does not cease after the program concludes. The success of this hands-on, AI-prompting-based model has strong potential for replication in other villages in Kolaka Regency facing similar marketing issues, making it a best practice model for sustainable technology-based MSME empowerment (Purnomo & Purwandari, 2025; Sopingi et al., 2025).

CONCLUSION

AI-based digital marketing training in Hakatutobu Village achieved its primary objective: the program produced a statistically significant mean score increase of 27.5 points ($p < 0.001$), with the proportion of competent participants rising from 12% to 88% post-intervention. These quantitative results confirm that combining PAR methodology with AI prompting literacy training effectively transfers practical digital marketing skills to MSMEs with diverse educational backgrounds. The key practical implication of this study is a replicable three-stage training model (PAR-based needs assessment, AI prompting hands-on session, reflective monitoring) that other villages in Kolaka Regency facing similar MSME marketing constraints can adopt directly. Sustained impact, however, depends on Karang Taruna youth members fulfilling their role as community digital mentors beyond the initial training event.

Future studies should employ a longitudinal design with actual sales data to measure the program's economic impact on MSME turnover. Policymakers and higher education institutions are recommended to institutionalize this AI prompting literacy model within formal MSME development programs at the regency level, ensuring structured mentoring support for at least six months post-training.

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