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## Digital Literacy and AI-Based Marketing Training for Startup Entrepreneurs

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### ABSTRACT

**Background:** Startup entrepreneurs are entrepreneurs who are just starting a business. Startup entrepreneurs need a good understanding of digital technology to manage and market their products. Having good digital literacy is a necessity for running a business in the digital age.

**Purpose of the Study:** The purpose of this community service is to provide digital understanding to 35 entrepreneurs who are member of the Nahdlatul Ulama Scholars Association of Tulungagung Regency and the Business and Technology Incubator of the Faculty of Economics and Islamic Business UIN Sayyid Ali Rahmatullah Tulungagung.

**Methods:** The method used in this service program is to use Participatory Action Research combined with technical training (experience learning).

**Results:** The results of the training and mentoring showed a 13.33% increase in digital literacy understanding. All 35 participants successfully created promotional brochures, despite differences in time and trial success. Participants' satisfaction with the training and mentoring program was satisfactory. The assessment of the impact of the training and mentoring on participants' businesses fell into the "sufficient" category, indicating that participants were beginning to feel the benefits of the program, but the impact was not yet optimal.

### Keywords

Digital Literacy; Marketing Training; Startup; Entrepreneur

### Article History

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## Introduction

Tulungagung Regency has enormous potential for creative economic development. According to data from the East Java Central Bureau of Statistics (BPS), the MSME sector is a major pillar of the regional economy, making significant contribution to the GRDP. Referring to the latest data from the Tulungagung Regency Statistics Agency (BPS) in 2024 there was significant growth in the number of MSMEs, reaching 259.895 units. This is an increase of 120.511 units, or 86.45%, from 2023. Which only had 139.386 units (BPS, 2025). This figure confirms that MSMEs in Tulungagung Regency have great potential to be developed through digital empowerment.

This growth is supported by the burgeoning demographic of young entrepreneurs. The primary target groups in this community service activity are young entrepreneurs affiliated with the Association of Nahdlatul Ulama Graduates (ISNU) of Tulungagung Regency and the Business Technology Incubator (INBISTEK) of FEBI UIN Sayyid Ali Rahmatullah Tulungagung. ISNU entrepreneur members are a group of graduates who are intellectually ready to be agents of change in the community's economy, with broad networking potential. Meanwhile, Inbistek fostered entrepreneurs whose products and business models have undergone a curation and incubation process. Both groups have a high motivation to develop their business and become drivers of the regional economy. In general, the types of business sectors pursued by partners are very diverse, including the culinary sector, the craft and fashion sector, and the creative sector, and the creative sector. However, this great potential has not been fully capitalized on digitally.

On a macro level, data from the Association of Indonesian Internet Service Providers (APJII) in 2024 indicates that internet penetration in Indonesia has reached 75% of the total population. This means that 221.563.479 Indonesians are using the internet. Java contributes 58,76% and East Java contributes 15, 33% (APJII, 2024). This is a significant number, further reinforcing the urgency for entrepreneurs to leverage digital technology in their businesses. In East Java itself, internet penetration is relatively high, dominated by social media usage. However, this phenomenon is not directly proportional to productive utilization in the business sector.

Many micro and small business owners, including members of partner organizations, have quality products but are experiencing stagnant sales. This is due to marketing patterns that still heavily rely on conventional methods and market reach that is limited to local geographic areas. Meanwhile, the e-Conomy SEA report shows that Indonesia's digital economy is projected to reach USD 210 – 330 billion by 2030, which is a huge opportunity for local entrepreneurs (Google, Temasek, & Bain & Company, 2023).

Digital marketing literacy is crucial because it enables entrepreneurs to increase market reach, marketing cost efficiency, and data-driven decision making. By using digital technology, entrepreneurs can dissolve geographical boundaries and reach consumers at the national and global levels (Tjiptono, 2019). Furthermore, entrepreneurs can replace expensive conventional promotion methods with more measurable and targeted digital advertising. And by using digital analytics features such as insights on social media or Google Analytics, they can understand consumer behavior, product preferences, and adjust business strategies in real-time (Kotler, Hermawan Kartajaya, & Iwan Setiawan, 2021).

Strengthening digital marketing literacy has become extremely urgent due to the inevitable digital acceleration, especially post-pandemic, where consumers have fully shifted to online shopping preferences. For local entrepreneurs, a delay in adaptation is no longer just a matter of missing out on domestic market opportunities, but a real risk of being displaced by competitors from other regions who are more aggressive and skilled in the digital realm. Therefore, for young entrepreneurs who are members of ISNU and Inbistek, strengthening digital marketing literacy is a fundamental key to transforming their businesses into tangible economic value, while also contributing to the economic independence of the community and the region.

With the increasing use of digital technology by the public today, it is imperative for young entrepreneurs who want their businesses to be competitive to utilize digital technology in introducing, marketing, and selling their products. Therefore, it is crucial for young entrepreneurs to possess the competence, knowledge, and skill to leverage technology.

## Method

This community service method is designed using a Participatory Action Research approach combined with experiential learning. This strategy ensures that those being assisted not only receive knowledge transfer but also actively participate in the adaptation and implementation of digital technology according to the unique needs of their business.

This community service activity is aimed at 35 entrepreneurs who are members of the Nahdlatul Ulama Scholars Association of Tulungagung Regency and Technology Incubator of FEBI UIN Sayyid Ali Rahmatullah Tulungagung. The stages of this community service activity consist of four stages: the planning stage, the training implementation stage, the mentoring stage, and the evaluation stage.

The main innovation in this community service activity lies in the integration of artificial intelligence technology as a practical solution to the classic challenges faced by aspiring entrepreneurs in producing marketing content. While digital literacy training typically focuses solely on social media, this program emphasizes the technical skills required to create fast and professional visual content with the help of AI.



Figure 1. Diagram of the stages of the mentoring program.

We evaluate our community service activities by evaluating the training process, evaluating participant skills, and evaluating participant satisfaction with our community service programs. The evaluation instruments are as follows:

Table 1: Evaluation Instrument

| No | Evaluation Objectives  | Instrument                                                                                                                                                                                                        |
|----|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Pre-Test and Post Test | Basic digital literacy (3 questions)<br>Understanding AI (3 questions)<br>Creating promotional flyers (4 questions)<br>Digital ethics and security (3 questions)<br>Practical flyer creation skills (2 questions) |
| 2. | Skills Evaluation      | Ability to use AI tools<br>Able to create brochure designs<br>Design creativity<br>Product compatibility                                                                                                          |

| No | Evaluation Objectives   | Instrument                                                                                                                     |
|----|-------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|    |                         | Product independence                                                                                                           |
| 3. | Satisfaction Evaluation | Satisfaction with the training process<br>Satisfaction with the mentoring process<br>Impact on participant business activities |

## Result

### Planning Stage

In the initial stage of community service activities, we conducted an initial FGD with the aim of understanding the condition of entrepreneurs. We did this as a basis for planning further community service activities to suit the needs of entrepreneurs. At this stage, we mapped entrepreneurs based on the product they sell, the length of time they have been in business, their use of social media for marketing their businesses, and discussed various obstacles and issues that entrepreneurs face in building and managing their businesses. From the mapping we conducted of 35 participants, we obtained the following result:

Table 2. Classification of Product Types

| No | Product Type | Quantity |
|----|--------------|----------|
| 1. | Culinary     | 20       |
| 2. | Fashion      | 5        |
| 3. | Services     | 4        |
| 4. | Creative     | 3        |
| 5. | Medicine     | 2        |
| 6. | Cleaning     | 1        |

The data above shows that most participants in the community service activity have culinary products and other products such as fashion, services, creative products, medicine, and cleaning products.

Based on the duration of their business, the following is an overview of the participants in the community service activity:

Table 3. Business Duration

| No | Business Duration | Quantity |
|----|-------------------|----------|
| 1. | Less than 1 year  | 24       |
| 2. | 1,5 – 3 years     | 6        |
| 3. | Over 5 years      | 5        |

The data table shows that 68.57% of participants in the community service activity are start-up entrepreneurs who have been running their businesses for less than a year. Therefore, entrepreneurs are in dire need of guidance and training related to digital marketing literacy.

### ***Training implementation stage***

During the training implementation stage, the level of participant participation showed quite high results. All participants participated in the activities from the beginning to the end of the training. The presenter provided a good explanation regarding the importance of digital literacy for entrepreneurs, an explanation of AI, important material in creating promotional flyers, and ethics and security in utilizing digital technology. Participants were also active in the discussion session. Participants were enthusiastic in asking questions related to the use of AI, prompt writing techniques, visual design selection, and strategies for creating effective promotional flyers. The high level of participant participation indicates that the training material is in line with the needs of participants in facing the development of digital transformation.



Figure 2. Digital Marketing Literacy Training

Observations during the training process indicated a change in participants' abilities in utilizing digital technology. Before the training, participants tended to use social media only as a means of communication and sharing simple information. However, after the training, participants began to understand that social media is a crucial tool for promoting their products and businesses. Understanding and utilizing AI effectively can help businesses overcome time, cost, and human resource constraints in preparing promotional content. AI can be utilized to support more effective and creative promotional strategies. This change is evident in participants' increased ability to craft more communicative promotional messages and their increased confidence in using AI-based applications.

### **Mentoring Stage**

During the mentoring stage, participants received direct support from the community service team. This support was provided to assist participants experiencing difficulties using the application, developing prompts, or developing visual designs. The mentoring process demonstrated that intensive support helped participants understand the practical application of AI technology. Interactions during the mentoring session also demonstrated increased independence in completing promotional designs independently.



Figure 3. Mentoring entrepreneurs in creating flyers

At this stage, the participants creative results in creating promotional flyers are displayed and evaluated together. From this process, participants will receive feedback and guidance regarding the promotional flyers they created. Participants will understand what needs to be improved, both in terms of color selection, design, and other important aspects of promotional flyers related to the product and how to make a purchase when someone is interested in buying. Next, participants make improvements based on the feedback given. From this process, participants will not only receive mentoring but also learn a lot from the input provided by both the service team and from other participants. Therefore, participants will be able to learn a lot from the creative results of other participants.

### ***Evaluation Stage***

The following is an evaluation table of the community service program that we have carried out for 35 people:

*Table 4:* Results of Pre-test and Post-test Evaluation of Training Participants

| No    | Evaluation Aspect               | Total Questions | Pre-test               |            | Post-test              |            | Improvement |
|-------|---------------------------------|-----------------|------------------------|------------|------------------------|------------|-------------|
|       |                                 |                 | Average Correct Answer | Percentage | Average Correct Answer | Percentage |             |
| 1.    | Basic digital literacy          | 3               | 2,6                    | 86,7%      | 3                      | 100%       | 13,3%       |
| 2.    | Understanding AI                | 3               | 2,4                    | 80%        | 3                      | 100%       | 20%         |
| 3.    | Creating promotional flyers     | 4               | 3,5                    | 87,5%      | 4                      | 100%       | 12,5%       |
| 4.    | Digital ethics and security     | 3               | 2,7                    | 90%        | 3                      | 100%       | 10%         |
| 5.    | Practical flyer creation skills | 2               | 1,8                    | 90%        | 2                      | 100%       | 10%         |
| Total |                                 | 15              | 13                     | 86,7%      | 15                     | 100%       | 13,3%       |

Based on the results of pre-test and post-test evaluations of 35 participants, there was an increase in their understanding and skills after participating in digital literacy training and the use of AI in creating promotional flyers. In the pre-test, participants were able to answer an average of 13 out of 15 questions correctly, with a score of 86.7%. After the training and mentoring, all participants were able to answer all questions correctly in the post-test, increasing the score to 100%. The greatest improvement was seen in the Understanding AI aspect, indicating that the training successfully enhanced participants' understanding of the concept and use of AI technology in digital promotional activities. Furthermore, the Creating Promotional Flyers and Practical Flyer Creation Skills aspects also improved, indicating that participants not only understood the concept but were also able to implement practical skills in creating AI-based promotional flyers. The evaluation results indicate that the PAR method combined with experiential learning is effective in improving participants' digital literacy because the learning process is participatory, applicable, and based on direct experience.



Table 5: Skill evaluation.

| Skills Aspect                   | Very good | Good | Enough | Total participants |
|---------------------------------|-----------|------|--------|--------------------|
| Ability to Use AI Tools         | 18        | 12   | 5      | 35                 |
| Able to Create Brochure Designs | 25        | 7    | 3      | 35                 |

The skills evaluation results showed that most participants were able to utilize AI technology to create digital promotional media. In the Ability to Use AI Tools aspect, 18 participants scored in the "Very Good" category, and 12 in the "Good" category. This indicates that most participants were able to operate AI applications to support independent promotional content creation. Meanwhile, in the "Able to Create Brochure Designs" aspect, 25 participants scored in the "Very Good" category, and 7 in the "Good" category. These results demonstrate that participants not only understand how to use AI applications but are also capable of producing more attractive and communicative brochure or flyer designs. Overall, the skills evaluation results demonstrate that the experiential learning approach implemented through hands-on practice and intensive mentoring was effective in improving participants' technical skills in using AI for digital promotional purposes.

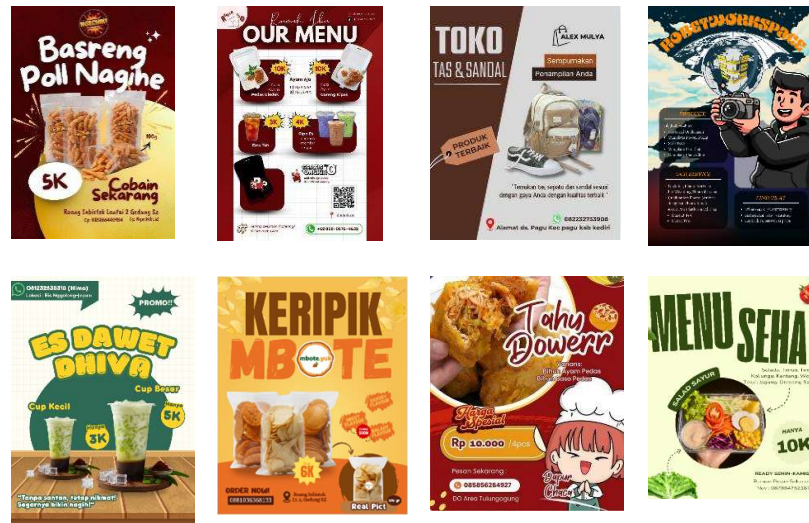


Figure 4. Sample of Flyer results successfully created by participant

Table 6: Satisfaction Evaluation.

| No | Evaluation aspect                         | Score | Category   |
|----|-------------------------------------------|-------|------------|
| 1. | Training process                          | 3.97  | Satisfied  |
| 2. | Mentoring process                         | 3.91  | Satisfied  |
| 3. | Impact on participant business activities | 3.41  | Sufficient |

The results of the participant satisfaction assessment regarding the training process showed an average score of 3.97, which falls into the "satisfaction" category. This indicates that participants responded positively to the training, both in terms of material delivery and methods. However, this score did not reach the "very satisfied" category, indicating that the quality of future training still needs to be improved. The results of the participant satisfaction assessment regarding the

mentoring aspect showed an average score of 3.91 from 35 respondents. This score falls into the "satisfaction" category, indicating that participants considered the mentoring provided during the training to be effective, helpful in understanding the material, and effectively supporting practice. However, this score did not reach the "very satisfied" category, indicating that there is still room for improvement in the quality of mentoring, particularly in terms of the intensity of guidance and the personalization of assistance provided to participants. The results of the assessment of the impact on participant business activities showed an average score of 3.41 from 35 respondents. This score falls into the "sufficient" category, indicating that participants are beginning to feel the benefits of the activities, but the impact has not yet been optimally felt. This is likely due to the limited timeframe for post-training implementation and the uneven distribution of participants' ability to apply the material learned to their businesses.

## Discussion

### *Digital literacy for entrepreneurs*

Digital literacy is a crucial skill for startup entrepreneurs to navigate the digital economic transformation. Digital literacy encompasses not only the ability to use technological devices but also the ability to access information, evaluate digital content, communicate effectively, and utilize technology for business development. Community service activities demonstrated a 13.33% increase in participants' digital literacy understanding, indicating that training and mentoring improved their ability to utilize digital technology for business needs. The ability of entrepreneurs to understand and use digital technology is a necessity. This has become a requirement and a demand due to technological developments and consumer behavior, which now increasingly uses digital technology for daily needs. This includes shopping and purchasing products needed for daily needs. In a study conducted by Fauziah (2025), it was found that digital literacy and marketing through social media positively improve the marketing performance of MSMEs, expand markets, and strengthen consumer relations as an effective digital channel.

Increased digital literacy also impacts on the capacity of entrepreneurs within the digital ecosystem and encourages technology-based economic growth (Widiati & Saragih, 2025). Another study found that digital literacy positively influences entrepreneurial intentions and the ability to run digital businesses. Entrepreneurs with a high level of digital literacy tend to be better able to utilize social media, marketplaces, and other digital platforms as marketing and business development tools. Findings (Patria, Fatchul Alam, Mulyadi, & Setyarko, 2023) indicate that digital literacy can influence business performance and maintain sustainable growth.

In addition, research by Kader et al. (2024) describes how the digitalization of MSMEs can improve product quality and sales volume, which ultimately supports business growth. Digital literacy training for entrepreneurs and technical training, such as flyer creation, are not just promotional tools, but marketing strategies that can improve communication effectiveness in the digital market. Entrepreneurs will learn how to create attractive flyers that simulate consumers' desire to buy their products. In addition, it will also enable communication with consumers regarding product quality, so that the quality of the products will improve periodically in line with consumer expectations.

In the context of digital transformation, MSMEs often face various challenges. Low literacy, limited capital, limited technology, including digital marketing (Sitompul, Sari, Gaol, & Harapan, 2025). These findings reinforce the need to combine digital literacy training with more comprehensive adaptation strategies to produce more sustainable impact. Entrepreneurs need to be provided with practical assistance to overcome various basic obstacles in optimizing digital marketing.



### *The use of AI in creating promotional content*

One of the biggest challenges faced by startup entrepreneurs, especially those involved in MSMEs, is limited human resources and time. In an increasingly competitive business world, effective marketing depends heavily on the ability to create attractive promotional materials, such as flyers. However, creating professional graphic designs requires special skills and sufficient time, which are often unavailable to entrepreneurs with limited resources. As a solution, the use of artificial intelligence (AI) in creating promotional flyers can overcome these two major obstacles. By leveraging AI, businesses can increase marketing efficiency and effectiveness ([Balamurung, 2024](#)). Integrating visual content with artificial intelligence is key to acquiring and retaining loyal customers ([Mayahi & Marco Vidrih, 2022](#)).

Research on AI and digital literacy in MSMEs shows that low technological understanding remains a barrier to optimizing AI use in small businesses. Therefore, training and mentoring are crucial factors in improving entrepreneurs' ability to utilize AI for digital marketing needs. The results of this community service activity indicate that an experiential learning approach through hands-on practice helps participants understand AI usage more easily than theory alone ([Istikomah, 2026](#)).

With the help of AI, entrepreneurs can produce attractive promotional flyers in a short time without having to hire graphic designers or spend hours learning complex design software. AI can assist in designing automation, where these platforms provide templates that can be automatically customized according to the type of business and product being promoted. For example, users only need to enter information about the product, select relevant images or icons, and AI will automatically generate designs that match modern aesthetics and marketing needs. This has been proven in research ([Li, et al., 2024](#)) that AI not only improves the automation and efficiency of the design process but also encourages creative thinking and understanding of users' emotional needs.

The advantage of this approach is the ease and speed of producing attractive promotional materials without requiring in-depth graphic design skills. AI not only provides templates, but also designs elements such as color selection, fonts and images according to the desired context. This process saves a lot of time, which is invaluable for entrepreneurs with limited resources.

### **Limitations of the Community Service Program**

This community service activity had several limitations, including the relatively limited number of participants, which prevented broad generalization of the results. Furthermore, the short duration of the training and mentoring resulted in suboptimal implementation of the material by participants in their business activities. The evaluation was also short-term, making it impossible to measure the tangible impact on sustainable business performance improvement. Furthermore, differences in digital literacy levels and limited access to devices and the internet also impacted on the effectiveness of the program.

Based on the results of the program, it is recommended that future community service programs focus not only on training but also include ongoing mentoring to ensure participants implement the material. Furthermore, increased practice and the provision of applicable AI templates and guides are needed to facilitate participant application of the skills learned. Mid-term evaluations are also crucial to measure the tangible impact on participant businesses. Collaboration with various stakeholders and the development of further materials are expected to enhance the sustainability and effectiveness of future community service programs.

## Conclusion

This community service program successfully provided digital marketing literacy to entrepreneurs and trained their skills in utilizing technology by creating product promotional brochures using AI. With this community service program, entrepreneurs were able to overcome time constraints and limited human resources in using and utilizing digital technology to market their products. From the pre- and post-tests conducted, there was an increase in knowledge of 13.33%. The training provided was effective in increasing participants' understanding of digital literacy and the use of AI to create promotional flyers. Of the 35 participants in the community service program's training and mentoring program, 25 participants successfully created promotional flyers during the mentoring session, while 10 others completed theirs outside of the mentoring session by practicing independently. The results of participant satisfaction with the training and mentoring program showed satisfactory results. The results of the assessment of the impact of training and mentoring on participants' businesses fell into the "sufficient" category, indicating that participants were beginning to feel the benefits of the activity, but the impact was not yet optimal. Input and recommendations for future community service programs include strengthening the digital literacy of entrepreneurs by exploring and deepening each application on social media and e-commerce platforms.

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## Conflicts of Interest

The author declares that there is no conflict of interest in the implementation of this activity. The activity was supported by the institution in the form of facilitation, but this did not affect the author's independence in the implementation process or reporting of the results of the activity.

## References

- APJII. (2024). *Survei Penetrasi Internet Indonesia 2024*. Jakarta: APJII.
- Az-Zahra, N. S. (2021). Implementasi Digital Marketing Sebagai Strategi Dalam Meningkatkan Pemasaran UMKM. *NCOINS: Nations Conference Of Islamic Natural Science*, 77-88.
- Bawden, D. (2001). Information And Digital Literacies: A Review of Concepts. *Journal of Documentation*, 57(2), 218-259.
- Balamurugan, M. (2024). AI-driven adaptive content marketing: Automating strategy adjustments

- for enhanced consumer engagement. *International Journal For Multidisciplinary Research*, 6(5), 27940.
- BPS. (2025). *Kabupaten Tulungagung Dalam Angka 2025*. Tulungagung: Badan Pusat Statistik Kabupaten Tulungagung.
- Carretero, S., & Punie, Y. (2017). *DigComp 2.1: The Digital Competence Framework For Citizens*. Luxembourg: JRC.
- Chaffey, D., Fiona Ellis, & Chadwick. (2019). *Digital Marketing: Strategy, Implementation And Practice*. Pearson Education.
- Cheren, & Hery Haryanto. (2022). Penerapan Strategi Digital Marketing pada UMKM Kuro Koci Meow & Woof. *Jurnal Pengabdian Kepada Masyarakat Nusantara*, 3(2), 1340-1351.
- Fauziah, & Ryan Suarantalla. (2025). Pengaruh Literasi Digital, Inovasi Produk, dan Pemasaran melalui Media Sosial terhadap Kinerja Pemasaran UMKM di Era Ekonomi Digital. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 10(01), 221 - 240. <https://doi.org/10.23969/jp.v10i01.30690>
- Google, Temasek, Bain & Company. (2023). *e-Conomy SEA 2023: Reaching new heights: Navigation the path to profitability growth*.
- Istikomah, I., Maulana, A., Susilawati, S., & Muchsam, Y. (2026). Artificial Intelligence and Digital Literacy for Competitiveness and Sustainability of Bandung MSMEs. *International Journal of Multidisciplinary Sciences and Arts*, 5(1), 10-19. <https://doi.org/10.47709/ijmdsa.v5i1.7580>
- Kader, M. A., Benny Prawiranegara, Reza Ananda Pahlevi Setiawan, Adel Shelyanti, & M Bintang Yudha Pratama. (2024). Digitalisasi UMKM Melalui Literasi Digital dan Digital Marketing dalam Meningkatkan Kualitas Produk dan Volume Penjualan. *Journal of Community Development*, 5(2), 349 - 362.
- Kotler, P., Hermawan Kartajaya, & Iwan Setiawan. (2021). *Marketing 5.0*. John Wiley & Sons.
- Li, H., Tao Xue, Aijia Zhang, Xuexing Luo, Lingqi Kong, & Guanghui Huang. (2024). The Application and Impact of Artificial Intelligence Technology in Graphic Design: A Critical Interpretive Synthesis. *Heliyon*, 1 -21.
- Mayahi, S., & Vidrih, M. (2022). *The impact of generative ai on the future of visual content marketing*. arXiv preprint arXiv:2211.12660.
- M. M., Wisika prajanti, S. D., & Wahyono, W. (2020). The Effect of Digital Literacy and Entrepreneurship Education Towards Online Entrepreneurship Intention Through Online Business Learning and Creativity At Marketing Department in Batang Regency. *Journal of Economic Education*, 10(1), 21-27. doi:10.15294/jeec.v9i2.41304
- Nabilah, L. D., & Sonja Andarini. (2023). Penyuluhan Tentang Pentingnya Inovasi dan Kemasan dalam Penerapan Digital Marketing di Era Revolusi Industri 4.0 pada UMKM di Desa Ngepoh. *Jurnal Pengabdian Masyarakat Sains dan Teknologi*, 3(3), 67-77.
- Nurfitriya, M., Azizah Fauziyah, Tika Annisa Lestari Koeswandi, Ismail Yusuf, & Nizza Nadya Rachmani. (2022). Peningkatan Literasi Digital Marketing UMKM Kota Tasikmalaya. *Acitya Bhakti*, 2(1), 57.
- Patria, H., Fatchul Alam, M. A., Mulyadi, A., & Setyarko, A. (2023). The Influences of Digital Technology, Digital Literacy, and Digital Marketing on the Performance of SMES in Bekasi. *Cakrawala*, 6(1). doi:<https://doi.org/10.52851/cakrawala.v6i1.235>
- Priyanto, R. (2025). Peningkatan Kapasitas UMKM Melalui Pelatihan Manajemen Bisnis dan Digital Marketing. *Jurnal Masyarakat Madani Indonesia*, 4(2), 114-122.
- Sitompul, P. S., Sari, M. M., Gaol, C. M., & Harapan, L. M. (2025). Transformasi Digital UMKM

Indonesia: Tantangan dan Strategi Adaptasi di Era Ekonomi Digital. *Jurnal Manajemen Bisnis Digital Terkini*, 2(2), 09 - 18.

Tjiptono, F. (2019). *Strategi Pemasaran: Prinsip & Penerapan*. Yogyakarta: Andi Offset.

Tohari, A., Faisol, Diah Ayu Septi Fauzi, Mia Dwi Prayogy, & Wihdatul Khoiriyah. (2025). Pemberdayaan Ekonomi Lokal: Pendampingan Digital Marketing Untuk UMKM Jatirejo. *JOMPA ABDI: Jurnal Pengabdian Masyarakat*, 4(1), 1-9.

Widiati, A., & Saragih, E. J. (2025). Digital Literacy Mentoring and Training Through Online Marketing for MSMEs. *Engagement: Jurnal Pengabdian kepada Masyarakat*, 09(01), 244-256. doi:<https://doi.org/10.29062/engagement.v9i1.1971>