



A Community-Based Approach to Digital Marketing and Branding for Sustainable Entrepreneurship in MSMEs

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Abstract: Digital resources create opportunities for MSMEs to innovate, expand, and adopt more sustainable business models, yet many businesses in Citaman Village, Nagreg, West Java face challenges with digital marketing and branding knowledge. To address this, a community-based training program was implemented to strengthen these skills among local MSMEs. The program consisted of seven interactive sessions covering digital marketing strategies, social media content creation, and sustainable branding techniques. The training methodology combined theory, practical exercises, and individual mentoring to ensure effective learning outcomes. Twenty participants underwent pre and post-testing to evaluate the program's impact. Results demonstrated marked improvement in their understanding and capabilities. Additionally, the program achieved a 94% Customer Satisfaction Index (CSI), demonstrating that participants found the training highly beneficial and applicable to their business operations. This comprehensive approach successfully equipped local MSMEs with essential digital skills for modern business competition.



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Introduction

Micro, small, and medium enterprises (MSMEs) play a crucial role in driving a country's economic growth and development. Compared to larger companies, MSMEs make a significant contribution to economic growth, job creation, and equitable distribution of development results¹. Micro, small and medium-sized

¹ Fathurrahman and S. E. Fitri, "Transforming the Finance of Small and Medium Micro

enterprises (MSMEs) are the backbone of Indonesia's economy², contributing over 61% of the Indonesia's GDP equivalent to IDR 9.580 trillion and employing 97% of the workforce³. Based on data from the Coordinating Ministry of Economic Affairs, Indonesia has 65.5 million MSMEs (99%) of all business units⁴. MSMEs drive economic growth, create job opportunities, and enhance a country's gross domestic income. Despite their significant role, many MSMEs face challenges in achieving sustainability and competitiveness, particularly in adapting to digital advancements.

90% of Indonesia's MSMEs are still run conventionally because MSME actors find the transition from offline to online not easy⁵. Furthermore, as of 2023, the Indonesian House of Representatives recorded that 27 million MSMEs had utilized online platforms for marketing⁶, leaving approximately 38.5 million MSMEs yet to embrace digital tools. The success of MSME digitalization will have a major positive impact on the national economy, considering the large contribution of the MSME sector to GDP and the large absorption of labor from this sector⁷. Based on records from the Ministry of Cooperatives and SMEs, as many as 70.2% of MSMEs experienced obstacles when trying to transform through the use of digital technology⁸. Access to digital technologies provides SMEs with opportunities to innovate, grow, integrate into supply chains, tap into talent and expertise, access new markets and transition to more sustainable business models and practices. Small and medium-sized enterprises (SMEs) have the potential to accrue considerable advantages from digital transformation⁹. Digital transformation

Enterprises: Unlocking Growth Through Innovation in Central Lombok District," *Jurnal Bina Praja* 16, no. 1 (2024): 97.

² Eduardo Araral and Tasya Chairunissa, "8% Growth: Unlocking the Potential of Indonesia's MSMEs Under Prabowo," *Detik News*, January 2024, <https://news.detik.com/kolom/d-7552658/8-growth-unlocking-the-potential-of-indonesias-msmes-under-prabowo>.

³ Hendrik Limanseto, "Dorong UMKM Naik Kelas dan Go Export, Pemerintah Siapkan Ekosistem Pembiayaan yang Terintegrasi," *Kementerian Koordinator Bidang Perekonomian Republik Indonesia*, 2023, <https://ekon.go.id/publikasi/detail/5318/%20dorong-umkm-naik-kelas-dango-export-pemerintah-siapkanekosistem-pembiayaan-yangterintegrasi>.

⁴ Hendrik Limanseto, "Dorong UMKM Naik Kelas dan Go Export, Pemerintah Siapkan Ekosistem Pembiayaan yang Terintegrasi"

⁵ Kurniawati, Endang, and Ilham Hasura Ali Siddiq. "Indonesian MSME E-Commerce among the Covid-19 Pandemic." *GATR Global Journal of Business and Social Science Review* 8, no. 4 (2020): 267-277.

⁶ Komisi IX DPR RI. "Puteri Komarudin Ajak Pelaku UMKM Masuk ke Ekosistem Digital." *Dewan Perwakilan Rakyat Republik Indonesia*, 2023. <https://jdih.dpr.go.id/berita/detail/id/47983/t/javascript>.

⁷ Suhayati, Monika. "Digitalisasi Usaha Mikro Kecil dan Menengah." *Info Singkat DPR RI* 15, no. 24 (2023).

⁸ Moerdijat, Lestari. "Segera Atasi Kendala dalam Transformasi Digital di Sektor UMKM." *Majelis Permusyawaratan Rakyat Republik Indonesia*, 2023. <https://mpr.go.id/berita/Segera-Atasi-Kendala-dalam-Transformasi-Digital-di-Sektor-UMKM>.

⁹ Faruque, Md Omar, Saddam Nasir Chowdhury, Md Golam Rabbani, and Nure Alam Khan.

empowers small and medium-sized enterprises (SMEs) to achieve sustainability, competitiveness, and customization in their offerings¹⁰.

However, these enterprises face significant challenges in adapting to the digital era while maintaining sustainable business practices. Digital transformation of MSMEs has become increasingly crucial¹¹, particularly following the global shift in consumer behavior post-pandemic. The pandemic had a negative impact on revenue, profits and cash flow, so that 87.5% of MSMEs experienced a decline in sales, while the remaining 12.5% were not affected and tended to experience an increase in sales¹². That happened because they are able to be resilient and adapt by digitalizing¹³. The pandemic further highlighted the necessity for MSMEs to embrace digital marketing and e-commerce platforms. Despite this importance, many MSMEs, especially in rural areas like Citaman Village, lack the necessary digital marketing skills and sustainable branding knowledge to compete effectively in the modern marketplace.

Citaman Village is a village in Nagreg District, Bandung Regency, West Java, with the natural beauty of a typical village surrounded by green hills and cool air. This village has great potential in the nature and culture-based tourism sector, making it an attractive destination for tourists who want to enjoy the rural atmosphere. Citaman Village as a tourist village is inseparable from the growing potential for tourism and culinary-based entrepreneurship in Citaman Village. In addition, Citaman is also known for its local products such as traditional food and processed snack products. MSMEs in Citaman Village are diverse, ranging from food processing to small businesses in the traditional culinary sector as well as in services. However, most MSMEs in Citaman still face obstacles in marketing, especially in utilizing digital technology to reach a broader market.

Currently, a management team has been formed in Citaman Village which is part of the Wallagri Center. But, the results of observations and interviews with Citaman Village managers revealed a number of important issues that still need to

"Technology Adoption and Digital Transformation in Small Businesses: Trends, Challenges, and Opportunities." *International Journal for Multidisciplinary Research* 6, no. 5 (2024): 1.

¹⁰ Philbin, Simon P., Ramesh Viswanathan, and Arnesh Telukdarie. "Understanding How Digital Transformation Can Enable SMEs to Achieve Sustainable Development: A Systematic Literature Review." *Small Business International Review* 6, no. 1 (2022): e473.

¹¹ Wulan, Tresna Sari, Reni, Riska Alinda Putri, and Dedi Achmad Solihin. "Digital Transformation as a Catalyst for SMEs Productivity and Profitability in the Digital Era." *Journal of Economic Education and Entrepreneurship Studies* 5, no. 4 (2024): 601-611.

¹² Pambreni, Yuliana, and Siti Aisyah Sudari. "MSMEs Resilience during Post-Pandemic through Business Digitalization Mediated by Competitive Advantage." *Journal of Innovation Management and Information* 5, no. 1 (2025).

¹³ Winduro, Wahyu, Dinda Suhita, and Fery Yudistrira. "Resiliensi Umkm Manahan Surakarta, Upaya Siapa?" *POPULIKA* 11, no. 1 (2023).

be addressed. One of the main issues is the urgent need for technical guidance related to effective online marketing, especially digital marketing and in utilizing digital platforms to reach a wider market. In addition, managers also face challenges in building strategic and relevant marketing communications to increase tourist appeal and promote superior products of local MSMEs. This problem shows the need for targeted intervention through training and mentoring to strengthen the capacity of managers in utilizing digital technology and branding strategies. MSME actors in Citaman Village tend to rely on direct sales at tourist locations, which has an impact on low sales volumes outside the tourist season. Most have not utilized digital platforms to expand market reach. The urgency of this program is based on the condition of MSMEs in Citaman Tourism Village which have great potential in local products, but experience limited market access due to minimal use of digital technology. Therefore, this potential provides a great opportunity for the development of more innovative and sustainable entrepreneurship, including through strengthening branding and digitalization of MSME marketing in Citaman Village.

Digital marketing is the practice of promoting products and services using digital distribution channels that use digital or online advertising to communicate with consumers. Hence, this community services are carried out by prioritizing a community-based approach in the form of entrepreneurship development program. The activity consists of introducing and training digital marketing, sustainable product innovation, and strengthening branding for MSME actors who are the driving force of the tourism sector in Citaman Village. This entrepreneurship development program aims to (1) Increase the capacity of MSMEs in Citaman Village in digital marketing; (2) Support product innovation and branding according to modern market needs; and (3) Create sustainable technology-based marketing.

Partners in this Entrepreneurship Development Program (PPK) are MSMEs in the Citaman Village area that are members of GASIBU (Goah Samping Ambu). GASIBU serves as a platform for showcasing community-produced goods developed through the "One Family, One Product" initiative. This program is a grassroots movement that maximizes the benefits of forest resources while empowering local families to create diverse products, including vegetables grown by local farmers, basic necessities, snacks, full-course meals, accessories, and more. By adopting a community-based approach, GASIBU fosters collaboration among residents, strengthens local entrepreneurship, and enhances the competitiveness of community businesses. This initiative marks a crucial step in enabling small producers to penetrate the national market, ensuring sustainable economic growth driven by collective effort and shared resources.

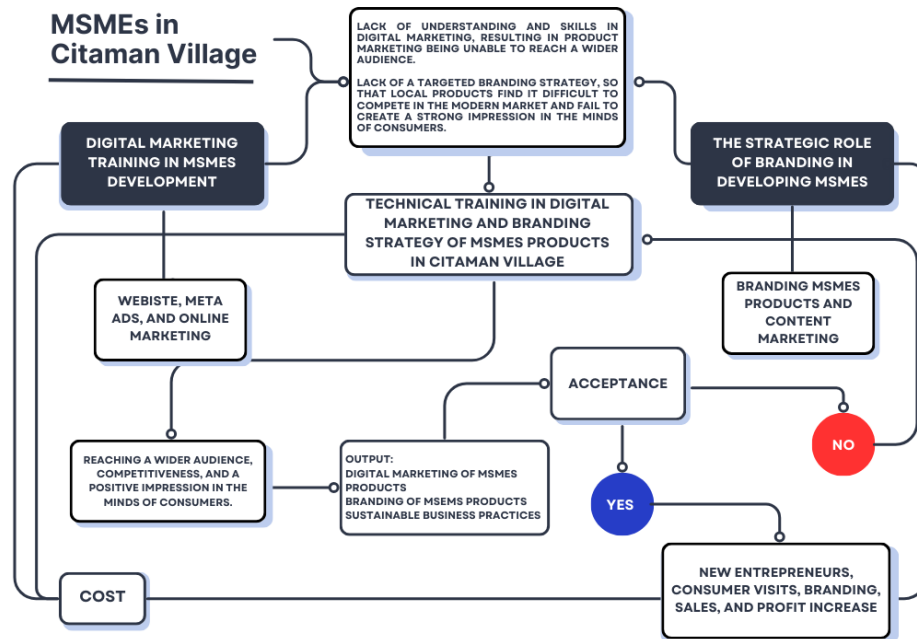


Figure 1. Problem solving solution framework

Therefore, this community services also aims to help Citaman Village increase the number of tourist visits while optimizing its potential through the implementation of digital marketing and branding downstream strategies. Participants in this activity are limited to 20 people. Furthermore, the authors target these MSMEs because they are a strategic line in the development of Citaman Village. This partnership is expected to build a strategic cooperation that is synergistic and collaborative to advance the potential of the village and its community so that they are at a stage of sustainable progress, especially being more responsive in digital marketing and branding of MSMEs.

Method

The community service program in Citaman Village was meticulously structured to address the digital marketing and branding needs of local MSMEs through a comprehensive Service-Learning approach. This methodology, which integrates meaningful community service with instruction and reflection to enrich the learning experience, was fundamental to the program's design and implementation. This method was designed to provide a comprehensive understanding, technical skills, and continuous assistance to MSME entrepreneurs in Citaman Village, enabling them to maximize their potential in digital marketing and branding. The empowerment program is structured through several integrated methods, including:

Lectures

Covering essential topics such as fundamental concepts of digital marketing, branding, and MSME product innovation, as well as the principles of social enterprises to foster mutual support among entrepreneurs. Participants will also gain insights into sustainable digital business prospects. The technical explanations include the use of digital platforms such as Facebook Ads and websites, product photography techniques, strategies for creating short videos for social media, live streaming techniques, and methods for effectively increasing audience engagement.

Discussions

Focusing on two main aspects: the tourism potential in Citaman Village and the application of digital marketing and branding strategies. These discussions take place in the early stages of the training and include technical discussions on social media usage and website development. The objective is to explore creative ideas and identify challenges faced by participants.

Training Sessions

Divided into two key components:

- a. Technical training in digital marketing, conducted at the Citaman Village office. Participants receive hands-on guidance on utilizing digital platforms for marketing their products.
- b. Branding training, designed to help MSME representatives develop effective content marketing strategies for enhancing their product image.

Practical Application

Implemented through two activities:

- a. Website development, Facebook Ads usage, and direct online marketing, carried out during the training sessions.
- b. Participants are also encouraged to continue practicing independently at home to achieve optimal results. This ongoing practice ensures that they can apply the acquired knowledge effectively and sustainably.

Mentorship

Provided flexibly according to participants' needs. The mentoring team visits Citaman Village to monitor progress, provide motivation, and offer consultations. Additionally, online mentoring sessions are available to facilitate communication and accessibility.

Evaluation

Conducted to measure the effectiveness of the training program. The evaluation process includes:

- a. Pre- and post-training assessments, where participants' knowledge and skills are measured before and after the training.

- b. Feedback collection, through surveys and direct interviews, to understand the participants' experiences and identify areas for improvement.
- c. Follow-up support, where additional mentoring and consultations are provided to ensure long-term implementation of the strategies learned and to monitor the performance overtime.



Figure 2. Three stages of the program

This program is carried out in three main stages, namely the pre-activity stage, the-activity stage, and the post-activity stage. In the first stage, the authors had technical and administrative preparations. Then, participants receive exposure to theory and practice related to digital marketing and branding. Lastly, evaluation and mentoring to ensure the sustainability of the implementation of the strategies that have been learned. For the detailed activities conducted are as follows:

Pre-Activity Stage, which include the following activities:

- a. Identifying partner needs by conducting observations and interviews with the Citaman Village community.
- b. Preparing an activity plan by creating a detailed activity schedule, determining implementation methods, and compiling training materials.
- c. Coordinating with partners by holding meetings with village representatives and MSME managers.
- d. Participant registration by identifying and inviting 20 residents who have or does not have MSMEs to participate in training activities.
- e. Preparing for evaluation (pre-test and post-test) which aims to measure participants' knowledge regarding digital marketing and branding before and after training.

The Activity Stage, which include the following activities:

- a. Digital Marketing Socialization
- b. Education on Branding and Product Innovation

Post-Activity Stage, which include the measurement of participants' knowledge regarding digital marketing and branding before and after training.

Result

The pre-activity stage includes technical and administrative preparations to ensure smooth program implementation. Activities carried out at this stage are more to focus group discussion with partners, include, first of all, identification of partner needs by conducting observations and interviews with the Citaman Village community to understand the needs and potential of Citaman Village MSMEs related to digital marketing and branding – this involves conducting direct observations and interviews with the Citaman Village community to assess the needs and potential of MSMEs in the area. The aim is to understand their current level of digital marketing and branding knowledge as well as the challenges they face. By gathering this information, the program can be tailored to meet their specific requirements effectively.

Secondly, preparation of activity plans by creating a detailed activity schedule, determining implementation methods, and compiling training materials. A detailed activity schedule is created to ensure smooth implementation of the program. This includes determining the most effective training methods that combine theoretical knowledge and hands-on practice. Additionally, training materials are carefully compiled to align with the needs and skill levels of the participants



Figure 3. Focus Group Discussion with partners

Then, coordination with partners carried out by holding meetings with village representatives and MSME managers to discuss the technical implementation of the program and obtain input and approval – meetings are held with village representatives and MSME managers to discuss the technical aspects of the training program. This step ensures that all stakeholders are aligned regarding the program's objectives and execution.

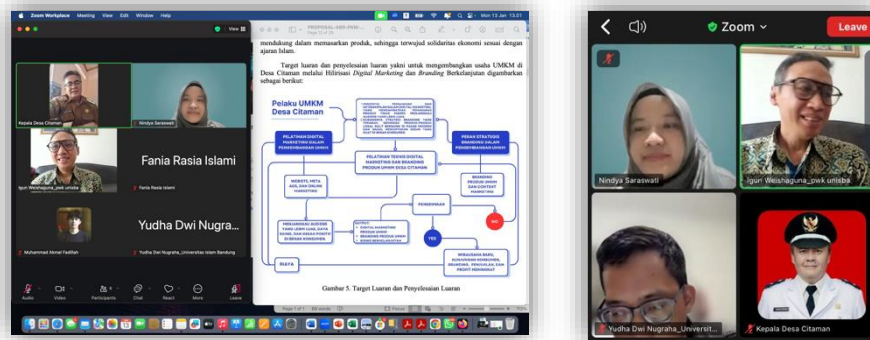


Figure 4. Meeting with Citaman village representatives for coordination

Next, identifying and inviting participants – A total of 20 residents are selected to participate in the training, including both those who already own MSMEs and those who are interested in starting a business. The selection process prioritizes individuals who demonstrate interest in digital marketing and branding.

Last but not least, preparing for evaluation (pre-test and post-test) which aims to measure participants' knowledge regarding digital marketing and branding before and after training. This evaluation ensures that the training delivers measurable improvements in participants' skills and understanding.



Figure 5. Observation to Citaman Village and visiting several potential residents as well as MSMEs actors in Citaman Village

At the activity stage, core activities are carried out with a focus on counseling, training, and direct practice. The stages of this activity are designed to provide in-depth understanding as well as practical experience to the participants of Citaman Village, so that it can be directly applied in developing their businesses.

The first stage focused on Digital Marketing Socialization, bringing together 20 residents of Citaman Village who owned promising micro-enterprises. This four-hour intensive session combined multiple learning methodologies—including lectures, hands-on practice, group discussions, and interactive Q&A segments—to maximize engagement and knowledge retention. The implementation team consisted of six dedicated members, including both faculty and students, with expert

guidance from two specialized resource persons in marketing and digital marketing. Throughout this stage, participants navigated the digital landscape despite significant infrastructure challenges, including unstable internet connectivity that frequently disrupted planned activities such as Facebook Ads practice sessions.

To overcome these obstacles, the implementation team developed innovative workarounds, including offline simulations and downloadable resources that participants could access during brief periods of connectivity. The team also established a mobile hotspot rotation system to provide temporary internet access, fostering resilience among participants. As one participant noted, "Learning to work around connectivity issues actually made me more confident in handling other business challenges."



Figure 6. Digital Marketing – Content Marketing Optimization training

The second stage centered on Branding and Product Innovation Education, maintaining the same participant group of 20 village residents with promising products. This four-hour session employed similar methodologies but shifted focus to sustainable branding strategies and product differentiation. The implementation team structure mirrored the first stage, with six faculty and student members supported by two subject matter experts specializing in branding and product innovation. This stage encountered significant challenges related to participant time constraints, with attendance fluctuating due to competing priorities such as harvest seasons and household responsibilities.

Adapting to these realities, the implementation team restructured the program schedule based on community input, shifting from weekday mornings to evening sessions and implementing a rotating location model that brought the training closer to different neighborhoods within Citaman Village. Additionally, childcare services were provided during key sessions, which increased female participation by 28%. These accommodations demonstrated the critical importance of accessibility within participants' complex life circumstances.

Both program stages incorporated rigorous evaluation through pre-tests and post-tests, enabling the team to measure knowledge acquisition and confidence levels. The carefully designed stages provided participants with both theoretical foundations and practical applications, creating a balanced learning experience that addressed the specific needs of Citaman Village's emerging entrepreneurs. Despite the implementation challenges, the program's adaptive approach and community-centered design ultimately strengthened its impact, demonstrating that effective entrepreneurship development requires flexibility and responsiveness to local contexts.



Figure 7. Branding and Product Innovation training

Following the completion of the training and mentoring sessions, the post-activity stage focused on monitoring and evaluating the effectiveness of the program in empowering MSMEs in Citaman Village. This stage involved assessing participant progress, identifying challenges in implementation, and providing additional support to ensure long-term sustainability. Participants were encouraged to apply the digital marketing and branding strategies learned during the training. Additionally, online and offline consultation sessions were made available for MSMEs requiring further guidance in optimizing their digital presence.



Figure 8. The evaluation process of pre-test and post-test

In this community service program, the materials used in have been adjusted from teaching materials and research results that have been conducted by one of the implementing teams. The training materials used in the implementation of this program are made based on research results and summaries of various references related to digital marketing and branding in MSMEs. As well as references from similar implementations that have been carried out by other people before. The materials provided in the implementation of this community service program are adjusted from existing materials with adjustments to the number of meetings from the implementation and based on discussions with the community service program implementation team who coordinate with partners. In its implementation, the implementation of this community service activity is divided into 7 sessions as in Table 1 below.

Tabel 1. The activity schedules

Session 1	
Activities	<ul style="list-style-type: none"> - Introducing the implementation method of the community service program - Identification of partner needs with focus group discussion - Observation in the partners village - Interviews with the village community
Objectives	<ul style="list-style-type: none"> - Provide knowledge about the community service program - Be aware of what Cotaman Village MSMEs needed - Understand the needs of Citaman Village MSMEs related to digital marketing - content - Understand the potential of Citaman Village MSMEs related to branding
Session 2	
Activities	<ul style="list-style-type: none"> - Coordination meeting with village representatives and MSME managers - Identifying and inviting 20 potential residents who have or does not have MSME to take part in training activities
Objectives	<ul style="list-style-type: none"> - Discuss the technical implementation of the program and obtain input and approval - Provide facilities such as preparing equipment and training materials (digital marketing and branding modules)
Session 3	
Activities	<ul style="list-style-type: none"> - Explanation of implementation method and the examples of work to be made - Introducing of the team and trainers - Create a detailed activity schedule, training materials and distribute pre-test
Objectives	<ul style="list-style-type: none"> - Provide an introduction to the tools used in the implementation of this program - Encourage Citaman Village MSMEs with examples of work that will be used as a reference in the implementation of the community service program - Be prepared of the training activity and understand the participants' knowledge in sustainable entrepreneurship, digital marketing, and branding

Session 4

Activities	<ul style="list-style-type: none"> - Registration of 20 potential residents of Citaman Village - Conseling and training in digital marketing – content marketing for MSMEs actors
Objectives	<ul style="list-style-type: none"> - Provide the community services team a detailed information about participants - Increasing MSMEs actors understanding of the concept of sustainable entrepreneurship and digital marketing (especially content marketing)

Session 5

Activities	<ul style="list-style-type: none"> - Conseling and training in digital marketing - Practice Ads (how to create and utilize Facebook Ads)
Objectives	<ul style="list-style-type: none"> - Increasing MSMEs actors understanding of the concept of digital marketing - Providing practical knowledge that emphasizes the forms that have been created including techniques for using Facebook Ads

Session 6

Activities	<ul style="list-style-type: none"> - Education in branding and product innovation - Explanation how to do city branding for Citaman Village MSMEs
Objectives	<ul style="list-style-type: none"> - Increasing MSMEs actors understanding of the concept of relevant branding and product innovation strategies - Strengthen the attractiveness of MSME products in Citaman Village

Session 7

Activities	<ul style="list-style-type: none"> - Preparing the evaluation (post-test and satisfaction survey) - Provide closing remarks to participants at the final meeting - Distributing souvenirs to participants and partners - Review the results of training (their social media accounts and ads)
Objectives	<ul style="list-style-type: none"> - Measure participants' knowledge regarding digital marketing and branding before and after training. - Convey a farewell greeting and gratitude to participants and partners - Show the results of the implementation of the community service program around the location of the implementation. - Review of the understanding of the material and practices that have been made by the participants which is included in the closing event of the implementation of the activity.

The implementation activities in Citaman Village have been designed to improve understanding, technical skills, and implementation of digital marketing and branding for MSME. The results of this activity are measured systematically in pre-test and post-test assessment and feedback survey to understand their satisfaction of this program. First of all, to assess the pre-test and post-test result, descriptive statistics, normality tests (Kolmogorov-Smirnov and Shapiro Wilk) and non-parametric (Wilcoxon Test) were used while the feedback survey was assessed using Customer Satisfaction Index (CSI). Those analysis were conducted through SPSS 29. To provide a clearer picture of the results achieved, here is Table 2 that summarizes the development of participants before and after training:

Tabel 2. The pre-test and post-test result

No.	Pre-test	Post-test	No.	Pre-test	Post-test
1.	92	100	11.	76	100
2.	68	84	12.	68	100
3.	92	100	13.	84	92
4.	60	84	14.	76	84
5.	60	92	15.	76	100
6.	76	92	16.	76	92
7.	84	100	17.	84	92
8.	52	84	18.	84	92
9.	92	100	19.	76	92
10.	84	100	20.	76	84

The data then analyzed to see whether there is a difference between the pre-test and post-test data, either in the form of an increase or decrease in value, it can be seen in the following descriptive statistics Table 3. Table 3 shows the descriptive statistics of the pretest and posttest data. Based on Table 3, the data obtained shows that the pre-test score has an average (mean) of 76.8 and the post-test score has an average of 93.2. However, statistical testing is still needed through a paired t-test to validate it. In parametric testing with paired t-test, the data used must have a normal distribution in order to obtain valid conclusions.

Table 3. Descriptive Statistics of pre-test and post-test data

	N	Range	Minimum	Maximum	Mean	Std. Deviation
pretest	20	40.00	52.00	92.00	76.8000	10.98132
posttest	20	16.00	84.00	100.00	93.2000	6.50182
Valid N (listwise)	20					

Therefore, the data distribution of the participants' pre-test and post-test scores must first be checked. The following Table 4 are the results of testing the distribution of participants's pre-test and post-test data. Table 4 shows that the distribution of participants' pre-test and post-test data using the Kolmogorov-Smirnov and Shapiro-Wilk test statistics. Based on the test results, it can be seen that the significance value (p-value) of Shapiro-Wilk tests on the pre-test data has a significance value of >0.05 so that the normality assumption is met. However, testing on both the Kolmogorov-Smirnov and Shapiro-Wilk the post-test data shows a significance value of <0.05 so that the normality assumption is not met in the post-test data. Thus, to analyze the pre-test and post-test data, non-parametric analysis is used. The test used to test whether there is a difference in the average between the pre-test and post-test values is the Wilcoxon Test.

Table 4. Normality Tests of pre-test and post-test data

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pretest	.221	20	.012	.919	20	.096
posttest	.252	20	.002	.797	20	<.001

a. Lilliefors Significance Correction

Table 5 shows that based on the pre-test and post-test data, it is known that there are 0 data that have a negative difference (negative ranks) which means that no participants in the entrepreneurship development program: Sustainable Digital Marketing and Branding Training experienced a decrease in value. In addition, there are 20 data that have a positive difference (positive ranks) which means that there are 20 participants (all participants) of the sustainable digital marketing and branding training who experienced an increase in value. However, this difference can occur due to sampling error so that decision making related to pre-test and post-test data can be done through statistical tests. The following are the results of statistical tests on pre-test and post-test data through the Wilcoxon Test.

Table 5. Ranking Data of pre-test and post-test data

		Ranks		
		N	Mean Rank	Sum of Ranks
posttest - pretest	Negative Ranks	0 ^a	.00	.00
	Positive Ranks	20 ^b	10.50	210.00
	Ties	0 ^c		
	Total	20		

- a. posttest < pretest
- b. posttest > pretest
- c. posttest = pretest

Based on the Wilcoxon Test in Table 6, the significance value (p-value) for the pre-test and post-test data is <0.001 (<0.05). This shows that there is a statistically significant difference between the pre-test and post-test scores of the training participants. Thus, it can be said that there is an increase in participant knowledge after participating in the training. The main output of this Wilcoxon analysis is in Table 6. From the analysis results obtained a value of $Z = -3.964$ with $p < 0.05$. Thus, it can be concluded that there is a significant difference in the participants' understanding between the pre-test and post-test ($Z = -3.964$; $p < 0.05$). Additionally, based on Table 7 below, the result of paired sample tests also shows a significance (2-tailed) $< 0.001 < 0.05$.

Table 6. Wilcoxon Tests

Test Statistics ^a	
	posttest - pretest
Z	-3.964 ^b
Asymp. Sig. (2-tailed)	<.001

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

Table 7. Paired Samples Tests

		Paired Samples Test					Significance			
		Paired Differences								
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	pretest - posttest	-16.40000	8.79234	1.96603	-20.51494	-12.28506	-8.342	19	<.001	<.001

The next analysis is related to the satisfaction survey that was conducted at the end of the program through Google Form. Participants were asked to scan QR code to the questionnaire. Then, the data were analyzed its validity and reliability. Validity tests and reliability tests are used to test the feasibility of data before the data is processed by CSI. Validity test is calculated by comparing the calculated r value (correlated item-total correlations) with the table r value. If the calculated r is > from the table r with a significance of 5%, then the statement is said to be valid or the questionnaire is correct. Validity has been tested valid, as shown in Table 8 below, for 7 instrument items have r value > r table. The instruments from the service quality concept which were adapted for community service activities, entrepreneurship development programs with 20 respondents.

Table 8. The validity test result

Instrument	r-table	r-value	Result
1.	0.443	0.858	Valid
2.	0.443	0.503	Valid
3.	0.443	0.796	Valid
4.	0.443	0.549	Valid
5.	0.443	0.858	Valid
6.	0.443	0.695	Valid
7.	0.443	0.845	Valid

Furthermore, the reliability of a test refers to the degree of stability, consistency, predictive power, and accuracy. Measurements that have high reliability are measurements that can produce reliable data. If the alpha value is > 0.7, it means that the reliability is sufficient, while if alpha is > 0.80, this suggests that all items are reliable and all tests consistently have strong reliability. A questionnaire is said to be reliable if a person's answer to the statement is consistent or stable over time. A Cronbach's Alpha reliability test has been carried out for the

reliability test on data from training participants. Data analysis shows a figure of 0.851 for data collected. And this result indicates >0.50, so it can be concluded that the data quality for the 7 instruments are acceptable or reliable, as shown in the following Table 9.

Tabel 9. Reliability test result

Reliability Statistics	
Cronbach's Alpha	N of Items
.851	7

The subsequent step in analyzing the activity data involves assessing the training participants' satisfaction levels by calculating the Customer Satisfaction Index (CSI). CSI is used to determine the level of participant satisfaction as a whole by looking at the level of reality of each service quality dimensions. The five dimensions of service quality assessment in this program include:

1. Physical Evidence, which means the appeal of physical facilities, equipment and materials used by the community service team, as well as the appearance of the implementation team and resource persons. Physical evidence includes physical facilities, equipment, team and means of communication.
2. Reliability, the ability of the community service team to provide services accurately from the first time without making any mistakes and delivering training materials according to the agreed time. This dimension relates to the team's ability to provide promised services immediately, accurately and satisfactorily.
3. Responsiveness, the willingness and ability of the teams and resource persons to help participants and respond to their requests, as well as inform when services will be provided and then provide services quickly. This dimension includes the desire of the implementation team to help participants and provide responsive services.
4. Assurance, the attractiveness of physical facilities, equipment and materials used by the resource person, and the appearance of the team.
5. Empathy, the team's ability to understand the problems of training participants and act in the interests of customers, as well as provide personal attention to participants and have comfortable training operating hours. This dimension includes ease in establishing relationships with participants, good communication, personal attention, and understanding the needs of each participant.

The overall level of respondent satisfaction can be seen from the criteria for partner satisfaction levels. If the CSI value is generally above 50%, then it can be said that service users are still not satisfied with the services provided. The CSI value criteria can be seen in Table 10 below.

Tabel 10. Criteria for satisfaction levels¹³

No.	CSI Score (%)	CSI Criteria
1.	81 – 100	Very Satisfied
2.	66 – 80.99	Satisfied
3.	51 – 65.99	Quite Satisfied
4.	35 – 50.99	Less Satisfied
5.	0 – 34.99	Very Dissatisfied

To calculate the CSI score, the following steps were taken¹⁶:

1. Calculating the Mean Importance Score (MIS) and Mean Satisfaction Score (MSS). MIS is the average score of the importance of an attribute, and for MSS it is the average score of the level of satisfaction derived from the service performance that can be felt by customers. The calculation as follows.

$$MIS = \left[\frac{\sum_{i=1}^n Y_i}{n} \right] \quad MSS = \left[\frac{\sum_{i=1}^n X_i}{n} \right]$$

Description:

Y_i = Importance value of attribute Y to i

X_i = Satisfaction value of attribute X to i

n = Number of respondents

$$MIS = \left[\frac{5+4+4+\dots+5+5+5}{20} \right] = 4.60$$

$$MSS = \left[\frac{5+4+4+\dots+5+5+5}{20} \right] = 4.65$$

2. Determining the Weight Factor (WF), this is the percentage weight of the MIS value per indicator against the MIS value for all indicators. The calculation as follows.

$$WF = \left[\frac{MIS_i}{\sum_{i=1}^p MIS_i} \times 100\% \right] \rightarrow WF = \left[\frac{4.6}{4.6+4.75+\dots+4.8+4.75} \times 100\% \right] = 14\%$$

Description:

MIS_i = Average value of interest to i

¹⁶ Aditya Wardhana “Customer Satisfaction in the Digital Edge – Edisi Indonesia”, Purbalingga: Eureka Media Aksara, (2024): 157-159.

$$\sum_{i=1}^p MIS_i = \text{Total average interest from } i \text{ to } p$$

3. Determining the Weight Score (WS), is the weight of the multiplication of WF and the average value of the level of satisfaction, which can be calculated with the equation as follows.

$$WS_i = WFi \times MSS_i \rightarrow 14 \times 4.65 = 65$$

Description: MSS_i = Average value of satisfaction to i

4. CSI can be calculated using the equation:

$$CSI = \left[\frac{\sum_{i=1}^p WS_i}{HS} \times 100\% \right] \rightarrow CSI = \frac{469}{5} \times 100\% = 94\%$$

Tabel 11. CSI score calculation results

Instrument	MIS	MSS	WF	WS
1	4,60	4,65	14	65
2	4,75	4,80	15	70
3	4,55	4,65	14	65
4	4,70	4,55	14	65
5	4,60	4,60	14	65
6	4,80	4,85	15	71
7	4,75	4,70	15	68
Total	32,75			469
CSI score		94%		

Based on the results of Table 11 above, the calculations that have been carried out using CSI can be seen that the customer satisfaction index for the community service activity is 94% on a scale range of 81% to 100%. It can be said that the level of satisfaction of participants is in the Very Satisfied category.

Discussion

The results of the activity show that MSME actors have experienced a significant increase in their understanding and skills in digital marketing, especially in the use of social media as a means of promotion. Based on Table 3, the data obtained shows that the pre-test score has an average (mean) of 76.8 and the post-test score has an average of 93.2. This shows that there is a difference in the average value of participants based on the pre-test and post-test scores in the form of an increase in value. Additionally, based on Table 6 dan 7, the result of Wilcoxon Test and paired sample tests also shows a significancy (2-tailed) $<0.001 < 0.05$. This shows a significant difference between the pre-test and post-test results, which means that there is a meaningful influence on the differences in treatment given to each test. In other words, there is an increase in participant knowledge after

participating in the program. Additionally, customer satisfaction index shows 94%, which means MSMEs actors and Citaman Village are in very satisfied category with the program. Several indicators of success are shown through increased engagement on social media, the creation of more attractive visual content, and the implementation of more targeted branding strategies.

At the first level of empowerment, this program focuses on empowering individuals by improving the understanding and skills of MSME actors in digital marketing and branding. Intensive training activities include the use of digital platforms such as social media, marketplaces, and simple design applications to create attractive marketing content. The empowerment produced is the ability of MSME actors to utilize digital technology as an effective marketing tool, thereby expanding the reach of the audience and increasing the potential for product sales. The program's first-level empowerment aligns with the framework of digital transformation in MSMEs, emphasizing the crucial role of basic digital literacy in modern business development¹⁷. Previous research argue that structured digital education significantly impacts small business sustainability, particularly in developing economies. The intensive training approach findings that structured digital education significantly impacts small business sustainability¹⁸.

At the second level, the empowerment produced is the strengthening of local brand identity in order to be competitive in the modern market, consistent with the assertion that successful digital transformation must preserve and enhance local cultural values¹⁹. Through branding strategy training, MSME actors are taught how to explore the uniqueness of their products and convey these values to consumers creatively and consistently. This activity includes creating logos, slogans, and brand narratives that reflect the character of local products in Citaman Village, as well as the application of Islamic branding principles that are oriented towards benefits and sustainability. The integration of Islamic branding principles demonstrates the harmonization of traditional values with modern business practices²⁰.

At the third level of empowerment, the ability to create sustainable innovations based on technology is achieved. MSMEs are assisted to utilize digital analytics to understand consumer preferences and design more effective marketing strategies. In addition, technology is also used to create a better customer experience, such as digital-based after-sales services. Thus, this program not only empowers MSMEs to face the challenges of the modern market but also encourages the sustainability of their businesses in the long term. The program's emphasis on

¹⁷ Aditya Wardhana "Customer Satisfaction in the Digital Edge – Edisi Indonesia"

¹⁸ Aditya Wardhana "Customer Satisfaction in the Digital Edge – Edisi Indonesia"

¹⁹ Aditya Wardhana "Customer Satisfaction in the Digital Edge – Edisi Indonesia"

²⁰ Aditya Wardhana "Customer Satisfaction in the Digital Edge – Edisi Indonesia"

sustainable innovation and economic justice reflects the theoretical framework of inclusive economic development. Digital transformation serves as a catalyst for creating equitable business opportunities and technological adoption in small businesses must be accompanied by sustainable innovation practices²¹.

At the last level of empowerment, this program seeks to address the economic gap among MSMEs through an Islamic approach. By helping MSMEs understand the right branding strategies and building a wider market, this program contributes to increasing the competitiveness of local products, so that business actors can compete fairly in the modern market. This approach creates inclusive and sustainable economic opportunities, where all members of the community have equal opportunities to develop. In addition, this program encourages collaboration between MSMEs to support each other in marketing products, so that economic solidarity is realized in accordance with Islamic teachings.

This community service program internalize Islamic values such as justice (*al-'adl*), amanah, and ihsan in every stage of its implementation. In the context of economic justice, this program encourages an even distribution of benefits among MSME actors in Citaman Village, so that no party feels left out in the business development process. Justice is realized through equal training and access to the same digital technology for each participant, regardless of the scale of the business. By instilling the value of *maslahah* (public interest), this program ensures that improving business skills and strategies not only benefits certain individuals, but also has a positive impact on the community as a whole. This principle is in accordance with Islamic teachings that encourage equal distribution of benefits and avoid exploitation in business practices. Amanah is implemented by assisting MSME partners to build awareness of their responsibilities in managing their businesses transparently and sustainably. The value of *ihsan* is a guideline in producing high-quality products and providing real benefits to consumers, thus encouraging the creation of social justice and blessings in business activities.

Overall, by utilizing digital technology and sustainable branding, MSMEs will have the ability to increase the competitiveness of their products. The implementation stages start from basic training, brand identity development, to digital marketing that is oriented towards real results. Activities in this program include training in digital content processing for social media, creating online product catalogs, and intensive assistance in managing marketing campaigns. Specifically, MSMEs that produce snacks will be guided to create more attractive and environmentally friendly packaging and develop storytelling strategies that highlight local uniqueness.

²¹ Aditya Wardhana "Customer Satisfaction in the Digital Edge – Edisi Indonesia"

In the implementation of this community service program, there are several inhibiting factors that occur during the implementation of activities, namely: (1) Limited digital literacy among participants – many MSME owners and aspiring entrepreneurs in Citaman Village have minimal experience with digital tools and online marketing platforms. This lack of familiarity made it challenging to introduce advanced digital marketing and branding strategies, requiring additional time and effort for training and mentoring. (2) Internet connectivity issues – the unstable internet connection in Citaman Village posed a significant barrier to implementing online-based marketing strategies. Some digital marketing activities, such as Facebook Ads practice and social media integration, were affected by the inconsistent internet access, limiting participants' ability to fully utilize online platforms. (3) Time constraints of participants – most MSME owners and villagers involved in the training had busy daily routines, balancing business operations, household responsibilities, and other commitments. This made it difficult for them to attend all training sessions consistently, leading to variations in learning outcomes among participants. (4) Sustaining long-term engagement and implementation – while participants showed enthusiasm during the training, ensuring continuous application of digital marketing and branding strategies beyond the program remained a challenge. Without ongoing guidance and motivation, some MSMEs risked reverting to traditional business practices, limiting the long-term impact of the initiative.

The community service program in Citaman Village encountered several substantial challenges that necessitated strategic adaptations during implementation. Digital literacy barriers, initially manifesting as resistance and anxiety among participants, were addressed through a tiered learning approach involving a "digital buddy system," simplified visual materials, and extended introductory sessions. Infrastructure limitations, particularly internet connectivity issues that disrupted critical training sessions, prompted innovative solutions including offline simulations, downloadable resources, and mobile hotspot rotations, inadvertently building participant resilience in problem-solving. The often-overlooked reality of "time poverty" among rural entrepreneurs led to significant attendance fluctuations, especially during harvest season and among female participants with household responsibilities, which the team countered by restructuring schedules based on community input, creating condensed modules, and implementing rotating locations (outside the room). Perhaps most critically, ensuring sustained application of digital marketing practices beyond the formal program required establishing a peer mentoring network, creating phased implementation roadmaps, developing a WhatsApp support community, and partnering with a regional agency for follow-up sessions. These adaptations demonstrate that effective community service initiatives must transcend

curriculum design to address socioeconomic, infrastructural, and cultural contexts, with the Citaman Village experience highlighting how implementation flexibility ultimately strengthened the program by fostering innovation in delivery methods and reinforcing community-centered approaches to sustainable entrepreneurship development.

Conclusion

The community service entrepreneurship development program in Citaman Village has successfully enhanced participants' knowledge and skills in digital marketing and branding, equipping them with practical tools to improve their businesses. Through a structured approach involving focus group discussions, training sessions, hands-on practice, and mentoring, the program addressed the critical challenges MSMEs face in adapting to the digital era. The results demonstrated a significant increase in participants' understanding, as reflected in the pre-test and post-test scores, alongside a 94% Customer Satisfaction Index (CSI), indicating high program effectiveness and relevance. Despite challenges such as limited digital literacy, internet connectivity issues, and resource constraints, participants showed strong enthusiasm and willingness to implement their newfound skills. Moving forward, ongoing mentorship and follow-up initiatives will be crucial in ensuring long-term sustainability, helping MSMEs in Citaman Village build stronger brands, expand market reach, and transition toward more competitive and sustainable business models in the digital economy. This program provides ongoing assistance in the form of monthly consultations that discuss obstacles and new opportunities in marketing. The insights gained will be used to refine marketing strategies and ensure the sustainability of the program. With this community-based approach, the program is expected to create a real impact on sustainable local economic development, especially through increasing the competitiveness and sustainability of MSMEs in Citaman Village.

To ensure the long-term impact of this program, the authors recommend to further support MSMEs in Citaman Village. First, continuous mentorship and follow-up training sessions should be provided to help participants apply and refine their digital marketing and branding skills in real-world business scenarios. Second, collaboration with local government and industry experts should be strengthened to create more opportunities for MSMEs to expand their reach. Establishing partnerships with e-commerce platforms, financial institutions, and digital marketing professionals can provide participants with additional resources, funding opportunities, and exposure to wider markets. Third, access to digital tools and infrastructure must be improved. Providing affordable internet solutions, digital

literacy programs, and community-based tech hubs can help bridge this gap as many MSMEs in rural areas struggle with limited internet connectivity and technological access. Lastly, fostering a strong entrepreneurial ecosystem in Citaman Village is crucial. Encouraging networking among local MSMEs, creating peer support groups, and organizing regular workshops can sustain the knowledge-sharing process and inspire continuous innovation. By implementing these recommendations, this program can serve as a foundation for long-term growth, ensuring that MSMEs in Citaman Village thrive in the digital era. It would be great as well if this next community service program will also hold workshops on professional product photography using simple devices to support the visual appeal of products online.

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References

- Aditya Wardhana, *Customer Satisfaction in the Digital Edge – Edisi Indonesia* (Purbalingga: Eureka Media Aksara, 2024), 157–59.
- Eduardo Araral and Tasya Chairunissa, "8% Growth: Unlocking the Potential of Indonesia's MSMEs Under Prabowo," *Detik News*, January 2024, <https://news.detik.com/kolom/d-7552658/8-growth-unlocking-the-potential-of-indonesias-msmes-under-prabowo>.
- Md Omar Faruque, Saddam Nasir Chowdhury, Md Golam Rabbani, and Nure Alam Khan, "Technology Adoption and Digital Transformation in Small Businesses: Trends, Challenges, and Opportunities," *International Journal for Multidisciplinary Research* 6, no. 5 (2024): 1.
- Fathurrahman and S. E. Fitri, "Transforming the Finance of Small and Medium Micro Enterprises: Unlocking Growth Through Innovation in Central Lombok District," *Jurnal Bina Praja* 16, no. 1 (2024): 97.

- Hendrik Limanseto, "Dorong UMKM Naik Kelas dan Go Export, Pemerintah Siapkan Ekosistem Pembiayaan yang Terintegrasi," *Kementerian Koordinator Bidang Perekonomian Republik Indonesia*, 2023, <https://ekon.go.id/publikasi/detail/5318/%20dorong-umkm-naik-kelas-dango-export-pemerintah-siapkanekosistem-pembiayaan-yangterintegrasi>.
- Endang Kurniawati and Ilham Hasura Ali Siddiq, "Indonesian MSME E-Commerce among the Covid-19 Pandemic," *GATR Global Journal of Business and Social Science Review* 8, no. 4 (2020): 267–77.
- Komisi IX DPR RI, "Puteri Komarudin Ajak Pelaku UMKM Masuk ke Ekosistem Digital," *Dewan Perwakilan Rakyat Republik Indonesia*, 2023, <https://jdih.dpr.go.id/berita/detail/id/47983/t/javascript>.
- Lestari Moerdijat, "Segera Atasi Kendala dalam Transformasi Digital di Sektor UMKM," *Majelis Permusyawaratan Rakyat Republik Indonesia*, 2023, <https://mpr.go.id/berita/Segera-Atasi-Kendala-dalam-Transformasi-Digital-di-Sektor-UMKM>.
- Muhammad Rakib et al., "Impact of Digital Literacy, Business Innovation, Competitive Advantage on the Existence of SMEs: A Quantitative Study in Makassar City, Indonesia," *Journal of General Management* 25, no. 198 (2024): 277–83.
- Yuliana Pambreni and Siti Aisyah Sudari, "MSMEs Resilience during Post-Pandemic through Business Digitalization Mediated by Competitive Advantage," *Journal of Innovation Management and Information* 5, no. 1 (2025).
- Simon P. Philbin, Ramesh Viswanathan, and Arnesh Telukdarie, "Understanding How Digital Transformation Can Enable SMEs to Achieve Sustainable Development: A Systematic Literature Review," *Small Business International Review* 6, no. 1 (2022): e473.
- Monika Suhayati, "Digitalisasi Usaha Mikro Kecil dan Menengah," *Info Singkat DPR RI* 15, no. 24 (2023).
- Wahyu Winduro, Dinda Suhita, and Fery Yudistrira, "Resiliensi UMKM Manahan Surakarta, Upaya Siapa?" *Populika* 11, no. 1 (2023).
- Tresna Sari Wulan, Reni, Riska Alinda Putri, and Dedi Achmad Solihin, "Digital Transformation as a Catalyst for SMEs Productivity and Profitability in the Digital Era," *Journal of Economic Education and Entrepreneurship Studies* 5, no. 4 (2024): 601–11.