



Empowering MSMEs in Punia Urban Village Mataram City through Website Optimization and Digital Content Training to Enhance Digital Promotion

I Nyoman Rai Widartha Kesuma^{1,*}, I Wayan Candra Winetra¹, Luh Gede Putri Suardani¹, I Putu Astya Prayudha¹, and Ida Bagus Adisimakrisna Peling¹

¹ Information Technology Department, Politeknik Negeri Bali, Bali, Indonesia
raiwidartha@pnb.ac.id

Abstract. This community service program aims to enhance the digital promotion capacity of Micro, Small, and Medium Enterprises (MSMEs) in Punia Village, Mataram City, through website optimization and digital content creation training. Although a website had previously been established as an information and promotion medium for MSMEs, its utilization remained suboptimal due to the village officials' limited capacity in managing digital content. This initiative employed a participatory approach consisting of five stages: socialization, training, technology implementation, mentoring and evaluation, and program sustainability. The program involved Punia Village officials and representatives of MSME actors as training participants. The technological implementation focused on optimizing the existing Laravel-based website with a Filament administrative panel through improved content structure, MSME category mapping, and a dedicated product catalog, while training strengthened participants' ability to create digital promotional content. The evaluation results showed that 85% of village officials were able to independently operate the administrative dashboard and upload content, while MSME promotional content updates reached 75% of the initial target. Functional User Acceptance Testing (UAT) further confirmed that the main administrative functions could be performed through the administrative panel. Overall, the program demonstrates that integrating technological optimization with human resource capacity building can provide an applicable approach for improving the utilization and sustainability of an existing community-based MSME digital promotion platform.

Keywords: Digital Content, Digital Transformation, MSMEs, Website.

1 Introduction

Punia Village (*Kelurahan Punia*) is one of the administrative areas located in Mataram Subdistrict, Mataram City, West Nusa Tenggara Province. This village possesses considerable economic potential, particularly through Micro, Small, and Medium Enterprises (MSMEs) operating in various fields such as culinary, crafts, and services. MSMEs play a strategic role in supporting economic growth and creating local employment opportunities (Affandi et al., 2024; Sharabati et al., 2024). Along with technological advancements, the digitalization of marketing through websites and

social media can expand market reach, enhance product visibility, and provide consumers with convenient access to product information (Gao et al., 2023; Samudro & Dermawan, 2025). Therefore, optimizing the utilization of digital technology has become an important necessity for both MSME actors and the village government as a facilitator. As an initial step toward supporting digital transformation, a community service activity was conducted in the previous year to develop the Punia Village website as an information medium and a platform for promoting local potential (Pradnyana et al., 2025).

However, based on post-implementation evaluation, the utilization of the website remained suboptimal because content management was not conducted consistently, available information was still limited, and MSME products had not been presented in an attractive and structured manner. This condition was also associated with the limited capacity of village officials to manage the website, upload content, and prepare promotional information that meets digital market needs (Anatan & Nur, 2023; Maknunah & Prasetyo, 2022; Su et al., 2023). Based on these conditions, the current community service activity was designed as a continuation program focusing on website optimization, digital content creation, and content management training for village officials and MSME representatives. From an economic perspective, many MSMEs in Punia Village still rely on conventional marketing methods, which may limit their marketing reach and product competitiveness in the digital era (Affandi et al., 2024; Gao et al., 2023). From an institutional and infrastructure perspective, the village already possesses basic facilities, including computers and internet access; however, their utilization for website management has not been maximized due to human resource capacity constraints. Therefore, an empowerment approach combining hands-on practical training and sustainable mentoring is required to enable the available technological infrastructure to be managed more independently (Anatan & Nur, 2023).

The primary objective of this study is to address the practical and implementation gap in the sustainable utilization of an existing village website as a digital promotional medium for local MSMEs. Although previous initiatives had established the technological infrastructure, the availability of a website alone did not ensure its effective utilization, continuous content updating, or the independent participation of local administrators. The gap therefore lies not only in the availability of digital infrastructure but also in the integration between website information architecture, content management capability, and the capacity of local human resources to maintain the platform.

The scientific contribution of this study lies in an applied implementation model that integrates website information architecture optimization, administrator capability building through hands-on CMS training and mentoring, and measurable MSME promotional content implementation. Rather than developing a new CMS from the ground up, this study demonstrates how an existing Laravel-based website with a Filament administrative interface can be systematically adapted to meet the operational and promotional needs of a local MSME ecosystem. In the context of global development, this activity contributes to the Sustainable Development Goals (SDGs), particularly Goal 8 (Decent Work and Economic Growth) and Goal 9 (Industry, Innovation, and Infrastructure) (Nations, 2015). It also supports the role of higher

education institutions in applying science and technology to address practical problems in society through community-based digital transformation.

This activity also represents the implementation of the Higher Education *Tridharma*, particularly in the field of community service. Within the national policy framework, this activity aligns with the strategic direction of digital transformation and the strengthening of MSME-based economies (Alviani & Munawaroh, 2025). Through this program, the village website is expected to function effectively as a publication medium for local products to increase visibility and foster economic growth within the MSME community in Punia Village.

2 Methodology

The implementation employed a participatory, applicative, and sustainable approach consisting of five stages: socialization, training, technology implementation, mentoring and evaluation, and program sustainability. Figure 1 illustrates the overall workflow.

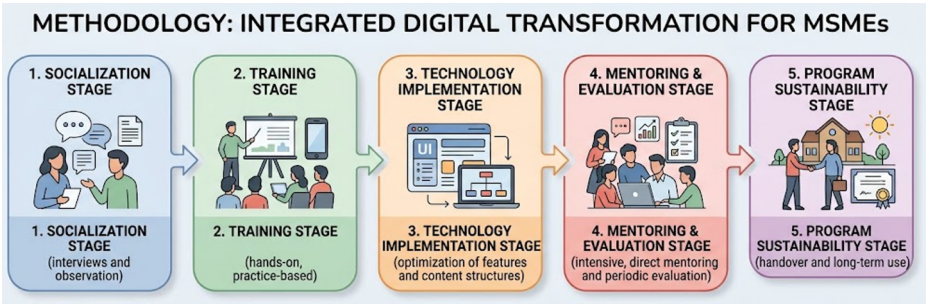


Figure 1. Methodology

The socialization stage involved coordination, observation, and interviews with village authorities to identify website management and digital content challenges. The training stage used hands-on practice covering CMS operation and digital promotional content creation, including product photography, simple visual design, and product description writing. Technology implementation focused on optimizing the existing Laravel-based website and restructuring MSME information into a dedicated and categorized product catalog. The mentoring and evaluation stage assisted village officials in implementing the optimized website and updating MSME content. Evaluation measured program achievement and administrator independence, complemented by functional User Acceptance Testing (UAT) of the main administrative functions. Finally, the sustainability stage included the preparation of a practical user guide, transfer of website management access, appointment of internal operators, and establishment of a commitment for periodic content updates.

3 Result and Discussion

3.1 Result

The community service program in Punia Village, Mataram City, was implemented through five stages: socialization, training, technology implementation, mentoring and evaluation, and program sustainability. The results demonstrate progress in administrator capacity, website structure, and MSME promotional content implementation.

Socialization Stage. The socialization stage involved coordination, discussions, observations, and interviews with Punia Village authorities. The initial assessment showed that although the village website was already available, its utilization as an MSME promotional medium remained limited. The main issues were the absence of structured MSME product mapping and the limited technical capacity of village officials to manage the administrative dashboard. These findings became the basis for restructuring the website and preparing targeted training activities

Training on Website Management and Digital Content. The training was conducted offline using a hands-on approach and involved village officials and MSME representatives (Figure 2). The training covered two main areas: website management and digital promotional content creation. Village officials practiced operating the Content Management System (CMS), including login, information management, and MSME catalog management. Participants also practiced product photography, simple visual design, and writing informative product descriptions using smartphones or PCs. The hands-on approach enabled participants to practice directly and produce initial promotional content independently.



Figure 2. Training Session

Technology Implementation. This stage focused on optimizing and adapting the existing Punia Village website to better support MSME promotion. The website shown

in Figure 3 was implemented using the Laravel framework with Filament as the administrative panel for managing MSME information, product catalogs, and promotional content. In this study, the CMS functionality refers to the administrative features provided through the Filament panel, enabling village officials to independently manage and update website content without directly modifying the application's source code.

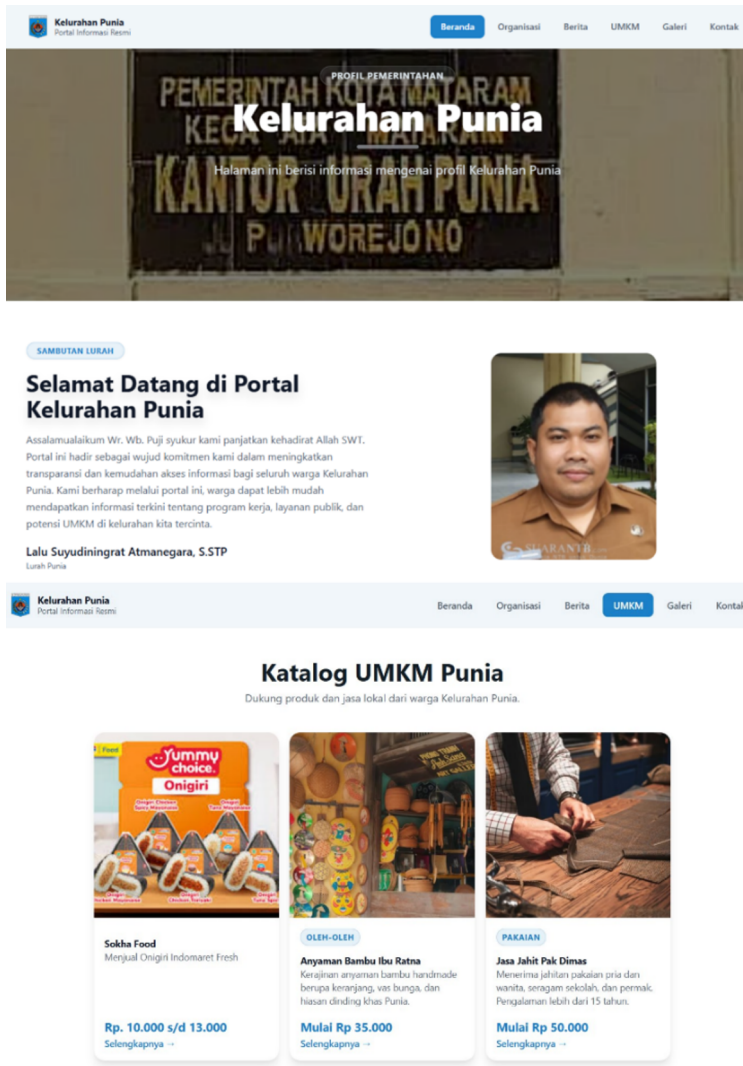


Figure 3. The Optimized Website

The implementation focused on restructuring website navigation and information architecture, adding a dedicated MSME catalog and promotional content sections, and

organizing local products into distinct business categories to facilitate information access. In addition, the structure of MSME information and promotional content was standardized to improve content consistency and simplify subsequent updates. The user interface was also optimized for access through computers and smartphones. Through these adaptations, the existing Laravel-Filament platform was transformed into a more structured digital promotional medium for local MSMEs while allowing routine content management to be performed independently by village officials.

Table 1. Program Evaluation Results

No	Evaluation Aspect	Success Indicator	Actual Post-Activity Result	Status
1	Technical Capacity of Officials	At least 80% of village officials are able to operate the CMS independently.	85% of village officials are capable of managing the admin dashboard and uploading content independently.	Achieved
2	MSME Data Mapping	Availability of a dedicated menu and structured MSME information management on the website.	The dedicated MSME catalog menu is active and has successfully mapped local product category profiles.	Achieved
3	Digital Content Creation	At least 2 digital contents (product photo and description) generated per MSME.	Training participants successfully produced an average of 2 ready-to-publish promotional contents for each business.	Achieved
4	Publication Content Updates	Information content is consistently updated with a data update rate of 70%.	Local product catalog content was successfully updated and integrated, reaching a 75% content update rate.	Achieved
5	Operational Standardization	Availability of 1 practical user guide document for website management to ensure partner independence.	1 application guide document has been compiled and handed over to the village authorities as a daily operational reference.	Achieved

Mentoring and Evaluation. The intensive mentoring stage was conducted directly after the training to support the implementation of the optimized website in the field. The team assisted village officials in uploading the mapped MSME data and performing content updates through the administrative panel. The mentoring process also addressed operational and technical difficulties encountered during website management. Subsequently, periodic evaluations were conducted to assess administrator independence and the achievement of program targets based on the success indicators established with the partner. The evaluation results showed measurable progress in

website utilization, administrator capability, and MSME content implementation, as presented in Table 1.

In addition to the program achievement indicators presented in Table 1, functional testing was conducted to verify the main administrative functions of the optimized website. The testing focused on the functions directly used by village officials in managing the website through the Filament administrative panel. The results are presented in Table 2.

Table 2. Functional UAT Results

No	Test Scenario	Expected Result	Actual Result	Status
1	Administrator Login	Administrator can successfully access the Filament administrative dashboard using valid credentials.	Village officials successfully accessed the Filament administrative dashboard using their assigned credentials.	Pass
2	MSME Data Management	Administrator can add, edit, and save MSME profile information correctly.	Village officials successfully added, edited, and saved MSME profile information through the administrative panel.	Pass
3	Product Catalog Management	Administrator can add, edit, and save product catalog information correctly.	Village officials successfully entered and updated product catalog information, including product names, descriptions, and related information.	Pass
4	Promotional Content Management	Administrator can upload and update promotional content, including product images and descriptions.	Village officials successfully uploaded product images and promotional descriptions as part of the MSME promotional content.	Pass
5	Content Publishing	Updated MSME and promotional content can be published successfully through the administrative panel.	Updated MSME and promotional content were successfully published through the administrative panel and made available on the website.	Pass
6	Website Content Verification	Published MSME information and promotional content are displayed correctly on the public website.	Published MSME information and promotional content were successfully displayed on the public website according to the entered data.	Pass

Program Sustainability Stage. Sustainability was supported through four measures: provision of a practical website management guide, transfer of system access to village authorities (Figure 4), appointment of internal website operators, and an agreement for

periodic content updates. These measures support independent routine management of the website and reduce dependence on external technical assistance.



Figure 4. Official handover document with the village authorities.

3.2 Discussion

The success of the website optimization and human resource capacity building in Punia Village demonstrates that community-level digital transformation requires a balanced approach between refining technological aspects (software) and strengthening user capacity (brainware) (Anatan & Nur, 2023; Pradnyana et al., 2025). The quantitative evaluation results in Table 1 indicate that key constraints identified prior to program implementation were limited digital capacity and the lack of a structured product information architecture within the system (Pradnyana et al., 2025; Maknunah & Prasetyo, 2022). The implementation of MSME category mapping and a dedicated catalog structure addressed the need for more organized product information and provided a clearer pathway for presenting local products through the website (Samudro & Dermawan, 2025). The hands-on training method combined with intensive mentoring by students and lecturers supported the transfer of knowledge and practical skills (Anatan & Nur, 2023; Maknunah & Prasetyo, 2022). Through direct practice, village officials developed greater ability to operate the CMS administrative panel, with 85% of officials being able to manage the dashboard and upload content independently. This result indicates that the combination of practical training and mentoring contributed to strengthening administrator capacity. Enhancing digital media management skills is important because continuous training can support the competitiveness and digital readiness of micro-enterprises in the digital economy (Sharabati et al., 2024; Su et al., 2023).

The integration of MSME mapping and digital promotional content creation also strengthened the availability and organization of local product information on the website. An average of two promotional content items was produced for each participating MSME, while the implementation of targeted content updates reached 75% of the initial target. These results indicate initial progress in utilizing the website as a structured promotional medium for local MSMEs (Sharabati et al., 2024; Samudro & Dermawan, 2025). Functional UAT further confirmed that the main administrative

functions, including administrator login, MSME and product catalog management, promotional content management, content publishing, and website content verification, could be performed through the administrative panel. The handover of the practical system management guide and the involvement of internal village operators further support the sustainability of routine website management and reduce dependence on external technical assistance (Anatan & Nur, 2023; Maknunah & Prasetyo, 2022).

However, the evaluation primarily measured administrator capability, content implementation, and functional system use rather than direct website engagement or commercial outcomes. Therefore, the findings demonstrate initial adoption and improved content readiness rather than direct evidence of increased sales or market reach. Longer-term monitoring of website engagement and MSME-related inquiries would be required to assess the broader promotional and economic impact of the platform (Alviani & Munawaroh, 2025; Sharabati et al., 2024).

4 Conclusion

The community service program successfully re-optimized the Punia Village website as a structured digital promotional medium for local MSMEs by integrating website optimization with administrator capacity building. The evaluation showed that 85% of village officials were able to independently operate the CMS administrative dashboard and upload content, while MSME promotional content updates reached 75% of the initial target. Functional UAT confirmed that the main administrative functions could be performed through the Filament panel without requiring direct source-code modification. The provision of a user guide, transfer of system access, and appointment of internal operators support continued independent website management. However, the evaluation did not include direct website traffic, user interaction, or sales inquiry metrics; therefore, future evaluation should monitor longer-term website engagement and MSME business indicators to assess broader promotional impact.

References

- Affandi, Y., Ridhwan, M. M., Trinugroho, I., & Hermawan Adiwibowo, D. (2024). Digital adoption, business performance, and financial literacy in ultra-micro, micro, and small enterprises in Indonesia. *Research in International Business and Finance*, 70, 102376. <https://doi.org/10.1016/j.ribaf.2024.102376>
- Alviani, N. A., & Munawaroh, M. (2025). Transformasi Digital pada UMKM dalam Meningkatkan Daya Saing Pasar. *MASMAN Master Manajemen*, 3(1), 134–140. <https://doi.org/10.59603/masman.v3i1.717>
- Anatan, L., & Nur. (2023). Micro, Small, and Medium Enterprises' Readiness for Digital Transformation in Indonesia. *Economies*, 11(6), 156. <https://doi.org/10.3390/economies11060156>
- Gao, J., Siddik, A. B., Khawar Abbas, S., Hamayun, M., Masukujjaman, M., & Alam, S. S. (2023). Impact of E-Commerce and Digital Marketing Adoption on the Financial and Sustainability Performance of MSMEs during the COVID-19 Pandemic: An Empirical Study. *Sustainability*, 15(2), 1594. <https://doi.org/10.3390/su15021594>

- Maknunah, J., & Prasetyo, A. (2022). Pelatihan Pembuatan Konten Pemasaran Untuk Menunjang Promosi UMKM Di Kabupaten Malang. *JMM - Jurnal Masyarakat Merdeka*, 5(2), 95. <https://doi.org/10.51213/jmm.v5i2.110>
- Nations, U. (2015). Transforming Our World: The 2030 Agenda for Sustainable Development. In *Resolution Adopted by the General Assembly on 25 September 2015*. United Nations. <https://sdgs.un.org/2030agenda>
- Pradnyana, I. P. B. A., Govinanda, S. V., Multazam, A. W., Jaramamo, D. G. P., Setiawan, I. K. D. R., & Wisnawa, I. P. O. (2025). *Design and Implementation of a Web-Based Content Management System for Optimizing Local Potential Dissemination in Punia Urban Village, Mataram, Indonesia* (pp. 500–506). https://doi.org/10.2991/978-94-6463-882-0_57
- Samudro, F. P., & Dermawan, R. (2025). Peran Website dalam Meningkatkan Daya Saing UMKM Etika Jaya Makmur Desa Benowo. *As-Syirkah: Islamic Economic & Financial Journal*, 4(1), 84–89. <https://doi.org/10.56672/cj6h9y51>
- Sharabati, A.-A. A., Ali, A. A. A., Allahham, M. I., Hussein, A. A., Alheet, A. F., & Mohammad, A. S. (2024). The Impact of Digital Marketing on the Performance of SMEs: An Analytical Study in Light of Modern Digital Transformations. *Sustainability*, 16(19), 8667. <https://doi.org/10.3390/su16198667>
- Su, J., Zhang, Y., & Wu, X. (2023). How market pressures and organizational readiness drive digital marketing adoption strategies' evolution in small and medium enterprises. *Technological Forecasting and Social Change*, 193, 122655. <https://doi.org/10.1016/j.techfore.2023.122655>

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

