
Empowering Batik SMEs Through Digitalization: Development of a Business Profile Website for Batik Tapak Dara

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ABSTRACT

Batik Tapak Dara is a small and medium enterprise (SME) engaged in batik craft with strong product potential, yet lacking a website as a medium for business information and promotion. This community service activity aimed to empower Batik Tapak Dara SMEs through digitalization by developing a business profile website and providing website management training to the partner. The implementation method comprised five stages: observation, needs analysis, website design and development, training, and program evaluation. The results indicate that the business profile website was successfully developed and can be utilized as a digital medium to present business information, product catalogs, and contact information. Furthermore, the training provided effectively enhanced the digital literacy of the SME owner in managing website content independently. The implementation of this website also increased business visibility and supported the digital marketing strategy of Batik Tapak Dara SMEs. These outcomes demonstrate that website development can serve as an effective strategy to support digital transformation and SME empowerment.

Keywords: batik industry, business profile website, community service, digital marketing, SMEs digitalization

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INTRODUCTION

The rapid development of information and communication technology has had a significant impact on various business sectors, including Small and Medium Enterprises (SMEs). Digital transformation enables business actors to improve operational efficiency, expand market reach, and enhance competitiveness in an increasingly digital global marketplace (Bahtiar et al., 2025).

SMEs play a strategic role in the Indonesian economy by creating employment opportunities and contributing significantly to national economic growth. However, many SMEs continue to face difficulties in adopting digital technology due to limited resources, low digital literacy, and insufficient understanding of the benefits of information technology in business development (Agung et al., 2022; Khristiana et al., 2024). The Ministry of Cooperatives and SMEs (Kemenkop UKM, 2022) reported that only 20% of Indonesian SMEs have adopted digital technology, with 30% citing resource limitations and another 30% lacking understanding of the benefits of digitalization.

The batik craft industry, as one of the SME subsectors, possesses high cultural value alongside significant economic potential, both in domestic and international markets (Auliarahman et al., 2024). Distinctive batik motifs of high artistic value have the potential to compete in broader markets when supported by appropriate digital marketing strategies. Nevertheless, this potential is often not realized optimally due to the limitations faced by SME actors in adopting digital technology. The marketing reach of most SMEs remains reliant on conventional methods that are geographically and scale-limited (Sari et al., 2024).

One effective form of digital technology utilization for SMEs is the development of a business profile website. A website serves as a medium for introducing a business identity, displaying product catalogs, and providing information that is easily accessible to consumers (Noerchoidah & Nurdina, 2022; Laksitowening & Kusumo, 2024). In addition, a website can enhance business credibility and support digital marketing strategies (Pradana et al., 2024).

Batik Tapak Dara is an SME engaged in batik craft, producing distinctive motifs with considerable market potential. However, preliminary observations and interviews conducted by the community service team from Universitas 17 Agustus 1945 (UNTAG) Semarang in early 2024 revealed a set of concrete problems. The business owner reported that marketing activities were conducted entirely through word-of-mouth and occasional participation in local exhibitions, with no online platform, including social media or a website, being maintained consistently. The SME owner and crafting group members had very low digital literacy, with no prior experience managing online content. As a result, business information was only obtainable through direct personal communication, severely limiting market reach, and the business lacked a documented digital identity. This condition is consistent with the pattern identified in the broader literature, where the absence of digital channels creates a structural barrier to market expansion for culturally-based SMEs (Muis, 2025; Kargas et al., 2026).

Based on this identified gap, the community service program implemented by UNTAG Semarang aimed to address the digital deficiency of Batik Tapak Dara through two primary interventions: the development of an official business profile website encompassing business information, product catalogs, and contact channels and website management training to enable the business owner to independently update and maintain digital content after the program concludes. This initiative is expected to enhance business visibility, broaden the reach of digital product marketing, and lay the foundation for the

sustained digital transformation of Batik Tapak Dara SME ([Purnomo et al., 2024](#); [Muis, 2025](#)).

METHODS

This community service activity was conducted at the Batik Tapak Dara SME location in Meteseh Village, Tembalang District, Semarang City, Central Java. The location was selected based on preliminary observation findings indicating that the partner required direct on-site mentoring to ensure effective and contextual knowledge transfer. The activity was carried out on February 7 and 8, 2026, with session intensity adjusted to the program stages.

The participants of this program consisted of 8 people are 1 SME owner who served as the primary decision-maker and website manager, and 7 active members of the Batik Tapak Dara crafting group who participated in the website management training. The SME owner was designated as the primary respondent for both the pre and post-training questionnaires, given their central role in managing business operations and digital content. The crafting group members participated as secondary respondents in the digital literacy assessment component. The overall program implementation encompassed five interrelated stages:

1. **Observation and Problem Identification.** Direct observation at the Batik Tapak Dara SME location and in-depth interviews with the business owner were conducted to assess existing business conditions and identify problems related to digital technology utilization. The observation was guided by a structured checklist covering three aspects: Basic Website Knowledge, Content Management Skills, and Confidence in Independent Operation.
2. **Needs Analysis.** This stage aimed to determine the relevant types of information and features to be incorporated into the website, including business profile, product catalog, production activity gallery, and contact information. Needs analysis was carried out through focused discussion with the SME owner to prioritize content aligned with the partner's actual marketing needs ([Giao, 2020](#)).
3. **Website Design and Development.** Designing the website structure and user interface using the user-centered design (UCD) approach. The website was developed on the WordPress platform with a custom domain ([griyaumkm17.com](#)) and hosting, comprising five main pages: homepage, business profile, product catalog, activity gallery, and contact page.
4. **Training and Mentoring.** Upon website completion, the community service team provided hands-on training to all 8 participants on how to manage and update website content, including uploading product photos, editing text content, and managing contact information. The training used a practical, step-by-step approach to accommodate participants without prior technical backgrounds.
5. **Program Evaluation.** Evaluation was conducted to measure the achievement of community service program objectives, encompassing two primary aspects: the success of website development as a functional digital medium, and the improvement of participants' digital literacy in managing the website independently.

Two data collection instruments were used in this study. First, a structured observation sheet was used to assess business conditions before and after program implementation, focusing on three indicators: Basic Website Knowledge, Content Management Skills, and Confidence in Independent Operation ([Pratama et al., 2025](#)).

Second, a digital literacy questionnaire consisting of 12 items was administered to all 8 participants both before (pre-test) and after (post-test) the training. The questionnaire was developed based on three measured dimensions: (a) basic website knowledge (4 items), (b) practical skills in managing and updating website content (4 items), and (c) self-

confidence in operating the website independently (4 items). Each item was measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The complete questionnaire instrument is presented in [Table 1](#).

Table 1. Digital literacy questionnaire instrument

No	Dimension	Item Code	Statement
1	Basic Website Knowledge	P1	I understand the definition and basic concept of a website
		P2	I know how to access a website using a browser
		P3	I understand the concepts of domain and hosting in website management
		P4	I understand the benefits of a website for business promotion
2	Content Management Skills	P5	I am able to log in to the website dashboard independently
		P6	I am able to upload product photos to the website
		P7	I am able to edit and update text content on the website
		P8	I am able to update contact information on the website
3	Self-Confidence in Independent Operation	P9	I am confident in managing the website independently
		P10	I am confident in routinely updating website content
		P11	I am able to independently resolve basic obstacles in website management
		P12	I am ready to become the primary website manager for Batik Tapak Dara

Instrument validity was tested using Pearson product-moment correlation. An item was declared valid if its corrected item-total correlation value (r-count) exceeded the r-table value at a significance level of 5%. With a sample of $n = 8$ respondents, the r-table value ($df = 6$, $\alpha = 5\%$) was 0.707. All 12 questionnaire items yielded r-count values above 0.707, confirming construct validity across all three dimensions. Instrument reliability was assessed using Cronbach's Alpha coefficient, which produced a value of $\alpha = 0.95$, exceeding the minimum acceptable threshold of 0.70 ([Hair et al., 2021](#)). This result indicates high internal consistency across all 12 items. Both tests were conducted using SPSS version 25.

Data analysis employed a comparative descriptive approach, comparing conditions before (pre) and after (post) program implementation. Quantitative questionnaire data were analyzed by calculating mean scores and percentage improvements for each measured dimension across all 8 respondents. The percentage improvement was calculated using the formula:

$$\text{Improvement (\%)} = [(Post\text{-}test\ Mean - Pre\text{-}test\ Mean) / Pre\text{-}test\ Mean] \times 100\%$$

Quantitative data from observation sheets and interview notes were analyzed thematically to provide a comprehensive picture of the program's impact on the partner's business development ([Hair, 2019](#); [Sari et al., 2024](#)).

RESULT AND DISCUSSION

This section presents the results of the community service program conducted with Batik Tapak Dara SME, encompassing the website development outcomes as the primary program product, the measurable impact of digitalization on the partner's business conditions, improvements in partner digital literacy, and the facilitating and inhibiting factors identified during program implementation.

Website Development Outcomes

The primary outcome of this community service activity was the establishment of an online-accessible business profile website for Batik Tapak Dara SME, publicly accessible at griyaumkm17.com/lander. The website was developed on the WordPress platform with a registered custom domain and an annual hosting subscription. Website administration is managed by the SME owner, with technical support available from the UNTAG Semarang community service team. The website was verified to be publicly accessible at the time of this report (see [Figure 1](#)).

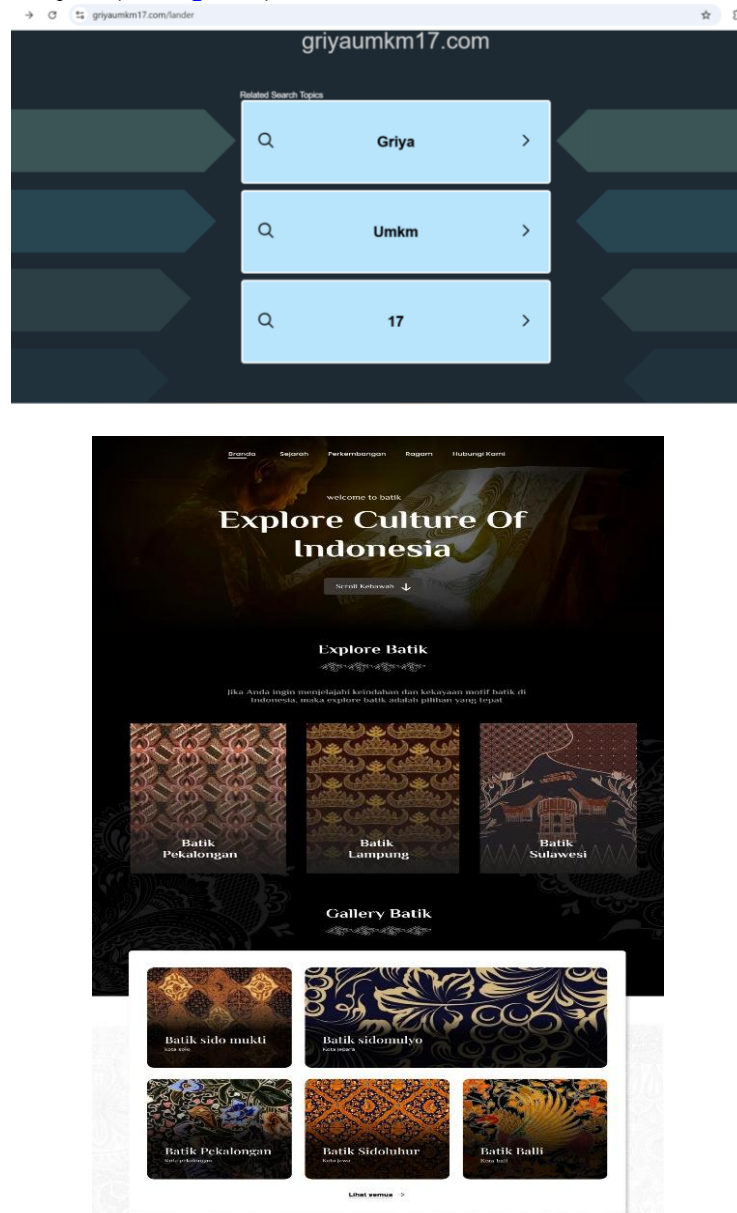


Figure 1. Website Profile Display

The website was developed using the user-centered design (UCD) approach, taking into account the technical capabilities of the business owner as the end user, resulting in an interface that is simple, intuitive, and easily managed independently (Nurlaela et al., 2024). The website structure consists of five main pages, as outlined in [Table 2](#).

Table 2. Features and functions of the Batik Tapak Dara SME website pages

No	Page	Content	Function
1	Homepage	Business welcome, featured product photos	Creates the first impression for visitors
2	Business Profile	History, vision, and mission, business identity	Builds consumer credibility and trust
3	Product Catalog	Photos, names, and descriptions of batik products	Facilitates consumer product discovery and selection
4	Activity Gallery	Documentation of the batik production process	Showcases product authenticity and cultural value
5	Contact Page	Phone number, address, and WhatsApp link	Facilitates direct communication with consumers

The presence of a business profile website constitutes a strategic step in SME digitalization, as a website can serve as an effective medium for introducing business identity, displaying product catalogs, and providing information that is easily accessible to consumers at any time and from any location (Laksitowening & Kusumo, 2024). This directly addressed the partner's prior reliance on direct communication and unstructured social media management.

In addition to content aspects, the website interface was designed with attention to visual identity consistency, display responsiveness across various devices, and ease of navigation. This is important given that the professional appearance of a website influences consumer perceptions of business credibility (Bahtiar et al., 2025).

Impact of Digitalization on the Partner's Business Conditions

Website implementation produced measurable changes across several aspects of Batik Tapak Dara SME's business conditions. A comparison of conditions before and after the program is presented in Table 3.

Table 3. Comparison of business conditions before and after the program

Aspect	Before Program	After Program
Digital media availability	No website or digital profile	Active business profile website (griyaumkm17.com/lander) accessible to the public
Product promotion	Limited to direct and informal promotion only	Product catalog available online and accessible at any time.
Business information accessibility	Information only obtainable through direct personal communication	Complete and structured business information is available on the website.
Market reach potential	Limited to the local market and existing customers	Potential to reach consumers outside the local area digitally (to be monitored).
Business credibility	No representative digital identity	Professional digital business profile available.
Content management	No digital content management capability	The owner and participants are able to independently update content after training.

The comparison in Table 3 demonstrates that website development has created the foundational conditions for improved business visibility and market reach for Batik Tapak Dara SME. This is consistent with Pradana et al. (2024), who reported that digital transformation positively impacts SME performance, particularly in marketing and market reach. It is noted that aspects such as increased visitor traffic and consumer

inquiries represent potential outcomes that will require monitoring over time as the website becomes more established.

The establishment of a professional digital identity through a website is an important strategic step for SME credibility. Businesses with official websites tend to be perceived as more professional and trustworthy by consumers compared to those relying solely on social media or direct communication (Bahtiar et al., 2025). For Batik Tapak Dara SME, this is particularly significant, as Batik products with distinctive motifs require a presentation medium capable of visually conveying aesthetic value and product authenticity to prospective consumers.

Improvement of Partner Digital Literacy

Beyond producing a website as its primary tangible output, this program also generated measurable improvements in the participants' digital literacy through website management training. Training evaluation was conducted using pre-test and post-test questionnaires with a five-point Likert scale (1 = Strongly Do Not Understand to 5 = Strongly Understand), comprising 12 items across three dimensions (4 items each): (1) basic website knowledge, (2) content management skills, and (3) self-confidence in operating the website independently. The instrument was declared valid (all r -count > r -tabel = 0.707, n = 8) and reliable (overall Cronbach's alpha = 0.952) (see Table 4).

Table 4. Pre-test and Post-test Reliability Results

Reliability Statistics	
Cronbach's Alpha	N of Items
0,996	12
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Cronbach's Alpha	N of Items
0,952	12

Percentage scores were derived using the formula: Percentage = (Mean Likert Score/ 5) x 100% and Improvement (%) = [(Post-test Mean – Pre-test Mean) / Pre-test Mean] × 100%. Evaluation results are presented in Table 5.

Table 5. Pre-Test and Post-Test Results of Partner Digital Literacy

Aspect	Mean Pre-Test	% Pre-Test	Mean Post-Test	% Post-Test	Improvement (%)
Basic website knowledge	2,75	55,0%	3,66	73,20%	33,09%
Content management skills	2,75	55,0%	3,66	73,20%	33,09%
Self-confidence in independent operation	2,78	55,6%	4,06	81,20%	46,04%
Overall mean	2,76	55,2%	3,79	75,87%	37,44%

The evaluation results indicate significant improvements across all measured aspects, with the overall mean increasing from 2,76 (55,2%) in the pre-test to 3,79 (78,87%) in the post-test. The greatest improvement was observed in content management skills (from 2,75/55,0% to 3,66/73,20%), followed by basic website knowledge (from 2,75/55,0% to 3,66/73,20%), and self-confidence in independent operation (from 2,78/55,6% to 4,06/81,20%).

4,06/81,20%). The reliability of the instrument was confirmed with a Cronbach's alpha of 0.952 (overall, 12 items), and all 12 items were declared valid with r -hitung values ranging from 0.770 to 0.918, exceeding the r -tabel value of 0.707 ($df = 6$, $\alpha = 0.05$). These improvements demonstrate that the hands-on, practical training method applied in this program was effective in enhancing participants' digital literacy (Agung et al., 2022). This finding is consistent with Nurlaela et al. (2024), who found that practical and contextual digital platform management training can improve user independence within a relatively short period.

Following the training, participants were able to perform several website management tasks independently, including updating product information in the catalog page, uploading activity documentation photos to the gallery, and managing business contact information (see Figure 2). This capability is a key indicator of program success, as content management independence is essential to sustaining the website's benefits after the community service program concludes (Cahyaningrum et al., 2023).



Figure 2. Training and Mentoring Activities

Facilitating and Inhibiting Factors

Several facilitating factors supported the success of this program: (1) the high motivation and cooperative attitude of the SME owner and crafting group members; (2) the use of a user-centered design approach that accommodated the technical level of participants; and (3) the availability of an internet connection at the SME location to support hands-on training.

Inhibiting factors and program limitations were also identified: (1) participants had very low initial digital literacy, requiring extra time for basic familiarization with devices and the internet before website-specific training could begin; (2) the relatively short duration of the program (two days) may limit the depth of skill acquisition; and (3) the long-term sustainability of website management depends on the continued motivation and availability of the SME owner. To address the sustainability risk, the community service team has committed to providing remote technical support and conducting follow-up

visits. Future programs may benefit from a longer mentoring period and from integrating additional digital technologies such as search engine optimization (SEO) and social media marketing to further strengthen SME competitiveness.

CONCLUSION

The community service activity conducted through the digitalization program of Batik Tapak Dara SME in Semarang was successfully implemented. The program produced a publicly accessible business profile website (griyaumkm17.com), developed on the WordPress platform, which can be utilized as a digital medium for information and promotion of batik products. In addition, the training activities provided effectively enhanced the digital literacy of 8 participants (SME owner and crafting group members) in managing website content independently, as evidenced by a mean improvement from 55,2% to 75,87% across three evaluated aspects. These outcomes demonstrate that website development combined with practical training constitutes an effective strategy for supporting digital transformation and empowerment of SMEs. Going forward, similar community service activities may be further developed by integrating additional digital technologies, such as SEO, social media marketing, and e-commerce platform integration, to further strengthen SME competitiveness in the digital economy era.

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest.

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