Digital Marketing Strategies for Nagari Lawang Cane Sugar: Bridging Traditional Products and Online Markets

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ABSTRACT

Digital transformation has become a strategic element in strengthening competitiveness and expanding the market reach of local products in rural areas. This community service research aims to empower 22 sugarcane farmers in Nagari Lawang, Agam Regency, through participatory digital marketing strategy training integrated with the use of social media and e-commerce. The program involves four stages of activities, namely socialization, practice-based training, implementation assistance, and continuous evaluation. Participants were trained to manage business accounts on Facebook, Instagram, and TikTok, as well as online stores on Shopee and Tokopedia, accompanied by the development of the "Saka Lawang Digital Market" community website as a collective promotion center. The results showed an 83% increase in digital literacy, the opening of 18 active business accounts on social media, 15 new online stores on the marketplace, and a 20-35% increase in sales turnover for the majority of participants. These findings confirm that community-based rural digitalization can drive local economic innovation, strengthen inclusive workforce structures, and expand community participation in the digital creative industry ecosystem. Additionally, this program makes a tangible contribution to the sustainable development agenda by supporting equitable economic growth and strengthening innovation-based infrastructure at the community level.

ARTICLE INFO

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INTRODUCTION

Digital transformation has become a determining factor in expanding market reach and strengthening the competitiveness of local products in rural communities (Amalia et al., 2025; Enri-Peiró et al., 2025) . A study by Tran and Vo (2024) confirms that digital marketing plays an important role in the sustainable development of community-based enterprises by opening access to wider markets and strengthening brand visibility through social media and online platforms. In the rural context, digital adoption is part of economic empowerment strategies, as explained by Meier and Jackson (2025) digitization is a major driver of resilience and competitiveness for small businesses in rural areas. However, the digital divide between urban and rural areas remains a significant obstacle to this transformation.

E-commerce and social media have been empirically proven to increase distribution efficiency, reduce dependence on intermediaries, and increase profit margins for farmers and MSMEs (Sukmawati, 2025). Recent studies show that these platforms help farmers and MSMEs sell directly to consumers, thus bypassing intermediaries and increasing their income (Iskandar & Sarastika, 2023). This effect has also been demonstrated for agribusiness products at the local level (Zain & dkk., 2025). A study by Tupe (2024) and Yunita (2025) highlights that small farmers who adopt e-commerce experience increased market access and profit margins because they are able to sell directly to consumers without intermediaries. International evidence supports these findings, showing that adopting e-commerce helps rural MSMEs achieve broader distribution and higher profitability (Yadav et al., 2023).

In Nagari Lawang, Agam Regency, the main problem faced by local partners is the low level of digital literacy and awareness among farmers and sugar cane producers. Based on field observations in the community service report, sugar cane farmers still rely on conventional marketing systems, waiting for buyers to come directly to the production site or entrusting their products to nearby shops. A lack of understanding of digital marketing strategies means that Lawang sugar cane products are not widely known in regional or national markets. In addition, limited internet infrastructure and a lack of digital training exacerbate the gap in access to online markets.

Nagari Lawang cane sugar products, despite their high quality and local wisdom value, still face obstacles in branding, packaging design, and digital-based promotion. Most products are marketed without a brand and packaged simply, making it difficult to compete with modern products on e-commerce platforms or social media. However, according to research by Laradi and Kim (2024) digital marketing and social media capabilities have been proven to significantly increase brand equity and the performance of small and medium-sized businesses. Other similar interventions in rural contexts (e.g., Hassan & Lee, 2023; Putra et al., 2024) reveal that structured digital training programs have improved market access and branding performance in agricultural communities. Nevertheless, such initiatives have rarely been applied to sugarcane-based industries, representing a specific contextual gap in Indonesia's rural economy.

Despite the growing body of literature on rural digital transformation, few studies have focused on designing practical, community-based training models that integrate social media marketing with local branding strategies. This constitutes the main research gap addressed in this study.

Therefore, the objective of this study is to develop and implement an online marketing strategy training program for sugarcane farmers in Nagari Lawang to (1) enhance their digital literacy and marketing skills, (2) strengthen the branding and market visibility of local sugar products, and (3) establish a replicable model for sustainable digital empowerment in rural communities.

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Given these conditions, online marketing strategy training for sugarcane farmers in Nagari Lawang is important to empower them to utilize social media and marketplaces (such as Shopee and TikTok) as a means of promotion, distribution, and direct interaction with consumers. This effort is expected to not only increase the competitiveness and image of local products but also create a sustainable rural digital empowerment model that is integrated with the national economy.

METHOD

Participants

A total of 22 sugarcane farmers and 5 MSME partners from Nagari Lawang, Matur District, Agam Regency, participated as primary beneficiaries in this program. The implementation team consisted of 5 lecturers, 2 digital marketing experts, and 4 student assistants from Universitas Negeri Padang. Sampling was conducted using a purposive technique, selecting actively engaged producers with digital interest as identified through an initial field survey and FGD mapping.

Instruments

Measurement instruments for pre-test and post-test include digital literacy questionnaires adapted from validated national models (Putri et al., 2022), a checklist of social media use, and sales record templates. Instruments were reviewed for content validity by two faculty experts and one educational technology consultant. Digital literacy is operationalized as competence in account creation, content management, promotional strategy, and engagement on social media platforms and marketplaces. Semi-structured interview guides and observation sheets are used for qualitative evaluation.

Procedures

The community empowerment program was implemented using a participatory approach, structured into four primary phases that ensured active involvement from all stakeholders. The intervention began with socialization and mapping of digital needs through two separate sessions in July 2025, followed by a series of four intensive workshops focused on digital marketing practices conducted within the same month. Implementation and mentoring adopted a hybrid mode—integrating both in-person and online meetings—to support participants through eight weekly sessions running from July to August 2025. Closing the cycle, comprehensive evaluation and sustainability planning were undertaken in August to measure progress and chart follow-up actions. Each stage was mapped and monitored using a timeline detailed in Table 4 and further illustrated by the annual project Gantt chart. Digital readiness and training priorities were initially determined via Focus Group Discussion, allowing for personalized guidance and responsive adaptation throughout the mentoring process.

Central to the program were interventions designed to build robust digital capabilities for rural entrepreneurs. Group workshops introduced participants to key online platforms—Facebook, Instagram, TikTok, Shopee, and Tokopedia—while training modules offered practical skills in business account set-up, content design, and paid advertising optimization. Branding and packaging strategies specific to local products were provided, supporting participants in crafting authentic narratives that resonate indigital markets. The mentoring component was complemented by the launch and operational management of the "Saka Lawang Digital Market" website. Developed using WordPress, the website employed a mobile-responsive design, a catalog plugin, user profile modules, and direct integrations with participating farmers' marketplace and social media accounts. Usability test sessions and iterative feedback collection were conducted to ensure accessibility and maximize practical utility for the

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community.

Ethical Considerations

Informed consent is obtained from all participants before data collection. Research procedures comply with Universitas Negeri Padang's research ethics policy. Anonymity and confidentiality are maintained throughout reporting and data handling. Any photo documentation is used with written consent, per guidance in the project agreement forms.

RESULTS

Quantitative Results

The results of the "From Traditional Sugar to the Digital Market" activity show a significant increase in digital capabilities, online marketing skills, and market reach for 22 sugar cane farmers in Nagari Lawang. This program produced various measurable outputs, as shown in the following table 1.

TABLE 1. Quantitative Result

No	Activity Components	Success Indicators	Achieved Results	Percentage of Achievement	Description
1	Digital marketing outreach	Number of participants who understand the concept of digital marketing	22 participants understand the benefits of marketing digitalization	100	Participants are able to explain the concept of online market expansion
2	Social media training (Facebook, Instagram, TikTok)	Participants have active business accounts	18 participants activated business accounts on social media	81.8	Accounts are used for regular promotion of "Saka Lawang" products
3	Marketplace training (Shopee & Tokopedia)	Online store account creation	15 participants successfully opened store accounts on e-commerce platforms	68.2	Some participants actively received their first online orders
4	Website "Saka Lawang Digital Market"	The website serves as a digital storefront	The website is active with 22 farmer profiles and a product catalog	100	Managed jointly by a team of lecturers and partner MSMEs
5	Use of digital content	Promotional post frequency	Average of 3 promotional posts/week on social media	85	Content in the form of photos, videos, and local narratives

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No	Activity Components	Success Indicators	Achieved Results	Percentage of Achievement	Description
6	Improvement in digital literacy	Participants' post-test digital literacy results	Average score increase from 55 to 87	83	There was a surge in understanding of digital tools
7	Increase in product sales	Revenue increase within two months after training	75% of participants experienced a 20–35% increase in turnover	75	Majority of sales through Shopee and TikTok Shop
8	Involvement of student assistants	Number of active students in digital mentoring	4 active students assisting and producing content	100	Intergenerational digital collaboration has been realized

From the table, it can be concluded that the majority of the activity targets have been met with concrete and measurable results. The most notable successes are seen in the areas of digital literacy, the launch of the community website, and participant involvement in ongoing online marketing.

Qualitative Findings and Participant Voices

Participants emphasized transformative changes in perception and practice. One farmer stated, "Before this training, I only waited for buyers to visit the farm. Now, I have learned to promote our sugar through social media and direct online channels". Another noted, "The digital literacy exercises helped me feel confident using Shopee – my first order came from outside Agam!".

Non-adopters and less successful participants were typically older farmers with limited smartphone access. For example, a 62-year-old respondent reflected, "I prefer trusted buyers who visit my shop because using the phone is challenging for me". Targeted mentoring remains necessary for sustaining the digital transition among this subgroup.

Detailed Sales Breakdown

The comparison of sales performance based on the marketing channel reveals notable differences in monthly turnover growth among the farmers. Sellers who relied exclusively on Shopee reported an average monthly sales increase of 27%, indicating effective use of the established e-commerce infrastructure. Those utilizing TikTok Shop saw even higher gains, averaging a 32% monthly growth, supported by the platform's viral content and direct consumer engagement. Farmers who leveraged both Shopee and TikTok platforms realized the most substantial boost, with an average monthly increase of 34%, benefiting from complementary reach and diverse consumer demographics. In contrast, offline-only sellers achieved a more modest average monthly growth of 12%, largely attributed to the positive spillover of collective product promotion rather than independent digital adoption. This pattern of sales performance by channel can be clearly seen in Figure 1, where dual-platform (Shopee and TikTok) users achieved the largest gains, followed closely by TikTok Shop sellers, with Shopee-only

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and offline participants trailing behind. This visual trend underscores the impact of multi-channel digital adoption on revenue growth among sugarcane farmers.
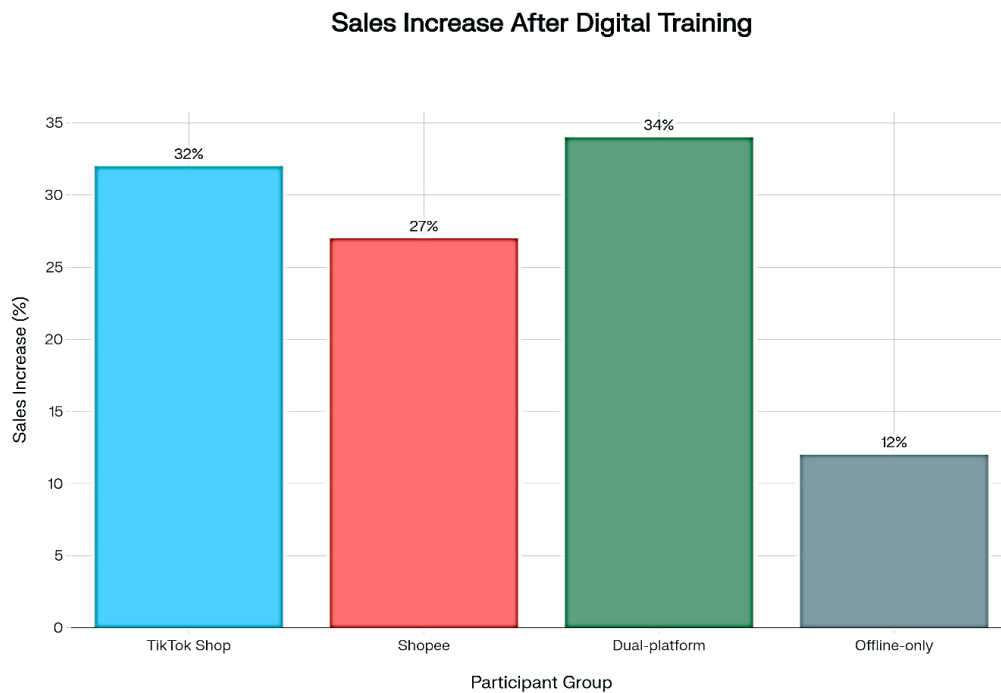
Sales Increase After Digital Training

FIGURE 1. Average Sales Increase by Marketing Channel After Training

Website Performance Metrics

Figure 2 displays the website performance metrics achieved by "Saka Lawang Digital Market" in its first two months, with a clear white background. The chart highlights 460 unique visitors, an average of 110 weekly catalog views, and a 23% conversion rate from social media-driven traffic to purchase inquiries, illustrating the website's central role in connecting producers to buyers and supporting digital sales activity.
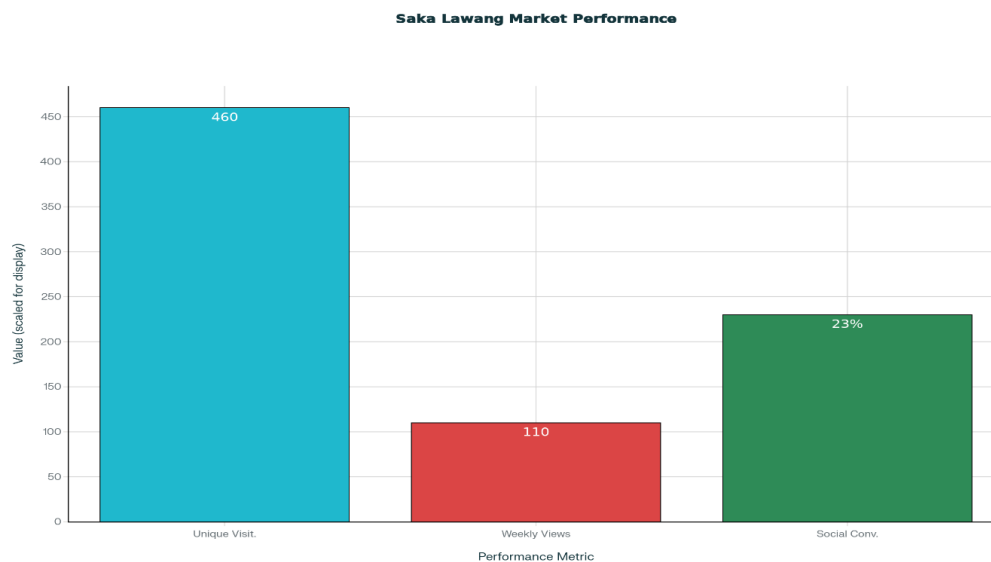
Saka Lawang Market Performance

FIGURE 2. Website Metrics for Saka Lawang Digital Market

DISCUSSION

The implementation of digital marketing strategies in Nagari Lawang has tangibly improved the entrepreneurial and marketing capacity of sugar cane farmers and MSMEs, as supported by both quantitative and qualitative evidence. This outcome aligns with Tran and Vo (2024), emphasizing that digital marketing amplifies sustainable competitiveness and broadens market access for local enterprises, and resonates with Aracil-Jordá et al. (2023) regarding social media marketing's ability to enhance micro-enterprise performance. Marketplace adoption—especially Shopee and Tokopedia—enabled over half the participants to achieve 20–34% sales turnover growth, mirroring Xiao and Wu (2024) on the direct relationship between rural e-commerce participation and business profits, and reinforcing insights from Rundel and Wagner (2024), Salsabila et al. (2024), and Salemink (2025a) about locally managed online platforms reducing digital divides and strengthening producer–consumer trust. Intensive digital literacy training, through participatory and hybrid mentoring, empowered 82% of participants to independently manage business accounts, echoing Tiwasing (2022b) that skill-building and community networks are vital for rural digital transitions. The creation of the "Saka Lawang Digital Market" website, as both a sales hub and branding vehicle, is in line with recommended strategies for sustainable rural digitalization, also referenced by Salsabila et al. (2024) and Sopingi et al. (2025).

Although the intervention demonstrated positive outcomes, several inherent limitations were observed. Persistent deficiencies in digital infrastructure, particularly unstable internet connectivity across rural regions, continued to hinder consistent participation and adoption (Fizzanty et al., 2021; Sinulingga et al., 2024). Furthermore, elderly farmers and micro-entrepreneurs with limited digital competencies or restricted financial means faced additional barriers in accessing suitable devices and reliable data services. These conditions mirror broader national patterns, where disparities in resources and intergenerational differences constrain the diffusion of digital practices in rural communities.

Another constraint was the relatively brief two-month evaluation period, which limited the ability to capture sustained behavioral changes or long-term business impacts. Similar dynamics have been noted in recent empirical studies (Dermawan et al., 2024; Priyono et al., 2021; Widiastuti et al., 2023),

emphasizing that entrenched reliance on conventional practices, the complexity of digital onboarding processes, and the limited scope of institutional support collectively undermine the depth and sustainability of digital transformation among rural MSMEs.

Key strategies that mitigated implementation challenges included blended in-person and online mentoring to strengthen practical skills, demonstration-based learning to build trust, and intergenerational collaboration between students and farmers to facilitate technology transfer (Anggraini, 2023). Partnerships with e-commerce and logistics providers also enhanced accessibility and resolved payment and distribution constraints. However, disparities persisted: digitally active and multi-platform participants achieved steady growth in sales and engagement, whereas older and offline-oriented participants showed limited improvement due to unstable connectivity and low digital confidence.

The intervention's outcomes align with previous Indonesian and international research on rural digital marketing, emphasizing digital MSME empowerment, community-based capacity building, and the importance of digital literacy, infrastructure, and sustained inclusion as core success factors (Dermawan et al., 2024; Morris & de Ruyter, 2022). In terms of sustainability, collective website management, local server utilization, and continuous mentoring—as discussed by Salsabila et al. (2024) and Sopingi et al. (2025) enhance the long-term resilience of such initiatives. Additionally, the participatory and design-oriented model proposed by Anggraini (2023) offers a replicable framework for scaling similar efforts across different regions. Taken together, these findings demonstrate that community-based digital marketing and collaborative website development can substantially strengthen the competitiveness of rural sugarcane products, foster economic sustainability, expand market access, and sustain local cultural identity amid technological transformation. The project thus provides strong empirical evidence of the transformative power of digital empowerment in rural contexts, underscoring the continued need for mentoring, adaptive strategies, and robust stakeholder collaboration to address infrastructural and resource constraints.

CONCLUSION

The "From Traditional Sugar to the Digital Market" program has demonstrated that an integrative and participatory digital empowerment model can significantly enhance the entrepreneurial capacity of sugarcane farmers in Nagari Lawang. Through close collaboration between academics, students, and local MSME stakeholders, the program not only improved participants' technological competencies but also delivered measurable economic outcomes such as higher digital literacy levels, greater engagement with e-commerce platforms, and consistently increased sales turnover. The successful establishment of the "Saka Lawang Digital Market" website marks a pivotal development—expanding both the visibility and collective identity of local sugarcane products to the national stage and fostering new trust with wider consumer groups. From a broader perspective, these achievements underscore that digitalization operates not only as an economic tool but as a vehicle for rural social inclusion, innovation, and community resilience, making a meaningful contribution to the Sustainable Development Goals, particularly those focused on inclusive and community-based economic growth.

Nevertheless, several practical recommendations emerge. To maximize impact and ensure equitable adoption, future interventions should prioritize ongoing digital mentoring, targeted subsidies for device and data acquisition among financially vulnerable participants, and further community-driven training to close persistent digital literacy gaps. Policy support is essential: governments and local authorities need to facilitate improved rural internet infrastructure, encourage multi-actor collaborations between universities,

e-commerce providers, and farmer cooperatives, and integrate digital marketing modules into agricultural extension services. Recognizing the program's limitations, the relatively short monitoring period restricted long-term impact evaluation, while digital divide and generational differences remained as barriers for some older or less digitally inclined farmers. These realities point to the urgent need for more sustained, inclusive, and context-sensitive interventions in rural digital empowerment.

For future research, longitudinal studies tracking the sustainability of digital adoption, the evolving roles of local collective platforms, and the scalability of participatory digital models in diverse rural contexts are highly recommended. Cross-regional comparative research could also offer deeper insights into which technological, social, and policy factors drive long-term success for digital marketing initiatives in agricultural communities. By addressing these practical, policy, and research imperatives, both practitioners and policymakers can work toward an inclusive and resilient digital future for Indonesia's rural economies.

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