



DIGITAL BRANDING AND SOCIAL MEDIA PROMOTION TRAINING FOR THE DEVELOPMENT OF BANYUROTO TOURISM VILLAGE BASED ON DATA, COMMUNITY, AND LOCAL WISDOM

Silvina Rosita Yulianti¹, Andreas Rony Wijaya², Muhammad Bayu Nirwana³, Kiki Ferawati⁴, Hasih Pratiwi⁵, Respatiwan⁶, Sri Sulistijowati Handajani⁷, Aqila Khansa Hartanto⁸

Department of Statistics, Faculty of Mathematics and Natural Sciences, Universitas Sebelas Maret, Surakarta, Indonesia ^{1,2,3,4,5,6,7,8}

e-mail: silvinarosita@staff.uns.ac.id

Diterima: 01/08/2026; Direvisi: 05/08/2026; Diterbitkan: 31/8/2026

ABSTRACT

Digital technology has shifted tourism promotion toward internet and social media channels, yet many Indonesian tourism villages cannot use those channels consistently. Banyuroto Village, Sawangan Subdistrict, Magelang Regency, has highland landscapes, an access point to the Mount Merbabu hiking route, and micro-enterprise products, but no unified destination brand, fragmented visitor information, and uneven digital content skills among residents. This community engagement program, carried out on 2 June 2026, aimed to build and optimize the promotion of Banyuroto Tourism Village through participatory, community-based training and continuous mentoring, particularly for the younger generation. The program was implemented in five stages, from partner coordination and baseline measurement to integrated destination branding and tourism information standardization, hands-on content-creation practice, and evaluation, delivering three core materials on tourism branding, WhatsApp Business, and TikTok. Effectiveness was assessed through paired questionnaires completed by the same 16 participants and analyzed using the exact McNemar, Wilcoxon signed-rank, and Kruskal-Wallis tests. At baseline, only 37.50% understood destination branding and 25.00% had ever created promotional content, although all were already active social media users. After the training, understanding rose to 100%, a change produced by ten discordant pairs that all moved in the positive direction ($p = 0.002$), while mean confidence in creating promotional content gained a full point, from 2.94 to 3.94, with a large effect size ($p = 0.019$, $r = 0.59$). All participants could use the WhatsApp message template, 93.75% planned to apply the skills, and evaluation scores did not differ across hamlets ($p = 0.406$), showing that the capacity gained was distributed rather than concentrated. Integrating branding, information standardization, accessible platforms, and data literacy in one community-based model therefore converts awareness into applied promotional skill and supports SDG 4, SDG 8 and SDG 17.

Keywords: *Content Creation, Micro-Enterprise, Participatory Empowerment, Rural Destination, User-Generated Content*

ABSTRAK

Perkembangan teknologi digital telah menggeser promosi pariwisata ke kanal berbasis internet dan media sosial, namun banyak desa wisata di Indonesia belum mampu memanfaatkannya secara konsisten. Desa Banyuroto, Kecamatan Sawangan, Kabupaten Magelang, memiliki lanskap dataran tinggi, akses jalur pendakian Gunung Merbabu, dan produk usaha mikro, tetapi belum memiliki destination branding yang terpadu, informasi wisatanya terpencar, dan keterampilan warga dalam membuat konten digital belum merata. Kegiatan pengabdian ini,



yang dilaksanakan pada 2 Juni 2026, bertujuan membangun dan mengoptimalkan promosi Desa Wisata Banyuroto melalui pelatihan partisipatif berbasis masyarakat dan pendampingan berkelanjutan, khususnya bagi generasi muda. Program dilaksanakan dalam lima tahap, yaitu koordinasi mitra, identifikasi kebutuhan dan pengukuran awal, pelatihan terpadu destination branding dan standardisasi informasi wisata, praktik langsung pembuatan konten, serta evaluasi, dengan tiga materi inti berupa tourism branding, WhatsApp Business, dan TikTok. Efektivitas program diukur menggunakan kuesioner berpasangan yang diisi oleh 16 peserta yang sama serta dianalisis dengan uji McNemar eksak, Wilcoxon signed-rank, dan Kruskal-Wallis. Sebelum pelatihan, hanya 37,50% peserta memahami destination branding dan 25,00% pernah membuat konten promosi, meskipun seluruhnya telah aktif menggunakan media sosial. Setelah pelatihan, pemahaman peserta mencapai 100%, yang dihasilkan oleh sepuluh pasangan diskordan yang seluruhnya berubah ke arah positif ($p = 0,002$), sementara rerata keyakinan membuat konten promosi meningkat satu poin penuh, dari 2,94 menjadi 3,94, dengan ukuran efek besar ($p = 0,019$, $r = 0,59$). Seluruh peserta mampu menggunakan templat pesan WhatsApp, 93,75% berencana menerapkan keterampilannya, dan skor evaluasi tidak berbeda antardusun ($p = 0,406$), sehingga kapasitas yang terbentuk tersebar merata dan tidak terpusat. Pengintegrasian branding, standardisasi informasi, platform yang mudah diakses, dan literasi data dalam satu model berbasis masyarakat dengan demikian mengubah kesadaran menjadi keterampilan promosi terapan serta mendukung SDG 4, SDG 8, dan SDG 17.

Kata Kunci: *Destinasi Perdesaan, Pemberdayaan Partisipatif, Pembuatan Konten, User-Generated Content, Usaha Mikro*

INTRODUCTION

Magelang Regency is one of the regencies in Central Java Province, Indonesia, and is topographically dominated by highlands forming a basin-like landscape because it is surrounded by several large mountains, namely Mount Merapi, Merbabu, Andong, Telomoyo, Sumbing, and the Menoreh Hills (Badan Pusat Statistik Kabupaten Magelang, 2024). Mount Merbabu, at approximately 3,142 meters above sea level, serves as a natural boundary with Boyolali Regency and is a protected conservation area managed through Mount Merbabu National Park. Sawangan Subdistrict lies on the western slope of Mount Merbabu and comprises fifteen villages, giving the area diverse natural resources, particularly in agriculture, horticulture, and nature- and education-based tourism development. This physical setting places the subdistrict inside a corridor of mountain destinations that already attracts hikers, campers, and agrotourism visitors throughout the year, so that neighbouring villages effectively compete for the same visitor attention.

Banyuroto Village is one of the villages in Sawangan Subdistrict and is part of the buffer zone of Mount Merbabu National Park, with an area of approximately 622.23 hectares located in the highlands (Pemerintah Desa Banyuroto, 2024). Its hilly physiography makes the village suitable for plantation and horticulture, producing vegetables such as tomatoes, chili, cabbage, onions, and mustard greens, as well as high-quality strawberries that have begun to be used for community economic empowerment through agrotourism, including strawberry picking. In addition to its strong agricultural potential, the village also possesses considerable tourism value, since its scenic highland landscape, its strategic location near the Mount Merbabu hiking route through Suwanting Hamlet, and its available camping areas provide significant opportunities for special-interest, family-oriented, and educational tourism. Village records nevertheless indicate that the local economy still rests mainly on horticulture, while tourism



services such as camping grounds, homestays, and strawberry picking are operated individually by residents without a shared management or promotion mechanism.

Studies of rural destinations converge on the view that branding and digital promotion operate as one system rather than as separate activities. Place branding in rural areas is now understood less as a promotional label and more as a governance process that builds identity, distinctiveness, and pride among residents (Jafarli & Canavari, 2025; Tian & Speelman, 2025), while social media has become the arena in which that identity is negotiated because residents, small businesses, and visitors all contribute content to it (Stylianou et al., 2025). Within that arena, short-video platforms shape tourist attitudes and travel intention through the perceived quality, creativity, and authenticity of the content itself (Liu et al., 2024; Qiu et al., 2024; Wu et al., 2023), which means that the promotional capacity of a village depends directly on who is able to produce such content. In the Indonesian context, digital promotion has been shown to support community empowerment in tourism villages (Ihsan & Elyusra, 2025), yet its effectiveness is strongly conditioned by residents' readiness to adopt and sustain digital platforms (Mutmainah et al., 2025) and by the availability of smart, data-informed destination management (Sustacha et al., 2024). Taken together, this body of work indicates that a rural destination gains little from any single intervention, because branding without content skills produces an unused identity, content skills without standardized information produce inconsistent messages, and both without local data produce promotion whose effect cannot be evaluated (Yanan et al., 2024).

These conditions are clearly visible in Banyuroto, where four concrete gaps were identified through preliminary observation and discussion with village stakeholders. First, the village had not yet developed a consistent and recognizable destination brand, so that its natural attractions, hiking routes, camping areas, and local products were promoted separately without a unified narrative, clear key messages, or coherent visual identity. Second, essential visitor information, including routes, locations, available facilities, service fees, booking contacts, operating hours, and guidelines related to cleanliness and safety, remained fragmented and was communicated informally through personal contacts. Third, levels of digital literacy and marketing communication skills varied considerably among local residents, micro-enterprise owners, and tourism managers, so that promotional activity depended on a small number of individuals. Fourth, the village's tourism potential had not been transformed into well-defined and marketable tourism products, while the absence of a basic data-management system made it impossible to monitor and evaluate the effectiveness of promotional activities. The baseline measurement reported in this article confirms the scale of that gap, since only 37.50% of participants understood destination branding and only 25.00% had ever produced promotional content even though all of them were already active social media users.

Community engagement programs in Indonesian tourism villages have responded to similar problems, but usually through a single entry point. Some have concentrated on social media marketing practice for rural destinations (Juliana et al., 2023), others on social media as a digital marketing tool for micro, small, and medium enterprises (Agustina et al., 2023) or on the use of *WhatsApp Business* to raise customer engagement and service responsiveness (Sayudin et al., 2024), while a third group has emphasized local community empowerment as the precondition for the digital transformation of rural tourism (Lapuz, 2023). What these programs share is a partial coverage of the promotion cycle, and the literature on community participation shows that partial interventions tend to leave benefits concentrated among the few residents who already possess the missing capability (Gohori & Merwe, 2021). A program that



trains content skills but leaves tourism information unstandardized, or that standardizes information but never establishes a data record, therefore reproduces the very fragmentation it was intended to remove. This is the gap that the present program addresses.

The novelty of this program lies in treating these elements as one package rather than as separate trainings. Different from previous activities that generally focused only on social media training or on digital promotion in isolation, this program integrated destination branding, tourism information standardization, the use of *WhatsApp Business*, *TikTok* content production, and the strengthening of data literacy within a single community-based mentoring model. The integration is further grounded in local wisdom, because the branding narrative and the content produced were drawn from the village's own highland horticulture, strawberry agrotourism, and Merbabu hiking identity rather than from generic destination templates, an approach consistent with evidence that local wisdom strengthens the economic resilience of tourism villages (Husen et al., 2025; Lubis et al., 2025). Positioning residents, and particularly the younger generation, as the main actors of promotion follows the principle that community-based rural tourism becomes sustainable only when residents themselves drive the collaboration (Suyatna et al., 2024).

Higher-education institutions have a strategic role in bridging this gap through community engagement. Through an integrated program themed “Development of Banyuroto Tourism Village Based on Data, Community, and Local Wisdom,” this activity sought to strengthen community capacity in managing tourism information, developing destination branding, and improving data literacy so that promotion becomes effective and sustainable. Accordingly, the objectives of the program were to build official social media channels for the village, to train residents in producing local-wisdom-based digital content, to standardize tourism information into ready-to-use promotional tools, and to provide community-based mentoring in social media and simple data management. These objectives are aligned with Sustainable Development Goal 4 on quality education, Goal 8 on decent work and economic growth, and Goal 17 on partnerships for the goals.

METHOD

This community engagement program was carried out using a participatory, community-based approach combined with a learning-by-doing method and continuous mentoring, so that the resulting outputs could be applied directly by residents. The activity was conducted by the Statistical Modelling and Big Data Analytics Research Group of the Department of Statistics, Faculty of Mathematics and Natural Sciences, Universitas Sebelas Maret. The main training was held on Tuesday, 2 June 2026, at the Banyuroto Village Meeting Hall, Sawangan Subdistrict, Magelang Regency, and was attended by residents and village officials, with a focus on the younger generation as prospective managers of the village's digital promotion. Mentoring was designed to continue after the training to ensure that promotional practices were sustained.

The implementation was organized into five stages. The first stage was preparation and partner coordination, in which the team coordinated with village officials and community drivers, including the tourism awareness group (*Kelompok Sadar Wisata*), the youth organization (*Karang Taruna*), and micro-enterprise representatives, to agree on objectives, target participants, schedule, location, and roles. A brief mapping of tourism potential and resident services, such as homestays, food stalls, motorcycle-taxi services, guides, and micro-enterprises, was carried out together with an inventory of the main promotional obstacles. The



results of this mapping became the basis for designing training materials that matched the actual conditions of the village rather than a generic curriculum. This stage also secured the commitment of the village administration to continue mentoring after the main training.

The second stage was needs identification and baseline data collection through group discussions, simple field observation, and a pre-activity questionnaire. The third stage was integrated training on destination branding and tourism information standardization, in which branding material covering the determination of key messages, short narratives, and simple visual identity was delivered in a directly applied format. At the same time, tourism information was standardized into ready-to-use tools such as *WhatsApp* message templates, price and service formats, an official contact list, and a checklist of mandatory information for promotion. The fourth stage was hands-on practice, in which participants produced promotional content for the village's attractions and flagship products, and the fifth stage was evaluation through a post-activity questionnaire and direct observation.

The training delivered three core materials, namely tourism branding, the use of *WhatsApp Business*, and the use of *TikTok* for tourism promotion. Program effectiveness was assessed using a paired pre-activity and post-activity questionnaire design complemented by direct observation, in which the same 16 participants completed both instruments and responses were matched by respondent identity so that individual changes could be analyzed directly. The pre-activity questionnaire measured baseline knowledge, experience, readiness, and expectations, while the post-activity questionnaire measured understanding after the training and participants' assessment of the activity. The data were analyzed using descriptive statistics and frequency analysis, Pearson and Spearman item-total correlations for validity, Cronbach's alpha for reliability, the Shapiro-Wilk test for normality, the Wilcoxon signed-rank test for paired ordinal (Likert) items, the exact McNemar test for paired dichotomous items, and the Kruskal-Wallis test to compare total scores across hamlets. Nonparametric procedures were prioritized because the sample was small and the items were ordinal, while qualitative observations were used to interpret participation and the adoption of the promotional practices introduced.

The success of the program was measured against indicators derived directly from its objectives. The objective of developing destination branding was considered achieved if at least 80% of participants reported understanding the basic concepts of branding and digital tourism promotion after the training, with the change tested statistically against the baseline. The objective of standardizing tourism information was considered achieved if all participants were able to use the *WhatsApp* message template to disseminate tourism information. The objective of building content-creation capacity was considered achieved if every participant produced at least one promotional item during the practice session and if the mean confidence score increased significantly. The objective of establishing community-based promotion was considered achieved if at least 80% of participants planned to apply the acquired skills and if total evaluation scores did not differ significantly across hamlets, which would indicate that the capacity gained was distributed across the community rather than concentrated in one group.

RESULT AND DISCUSSION

Results

Implementation Of The Community Engagement Program

The Statistical Modelling and Big Data Analytics Research Group conducted a community engagement program in the form of training on the development of Banyuroto Tourism Village

based on data, community, and local wisdom for residents and village officials. The training was carried out on Tuesday, 2 June 2026, at the Banyuroto Village Meeting Hall and was attended by 16 participants from three hamlets together with village officials. The event opened with remarks from the head of the research group and from the Banyuroto Village administration, represented by the village secretary, after which the team administered the pre-activity questionnaire. The main training was then delivered by a lecturer from the Department of Statistics assisted by two students, followed by independent practice, a discussion session, and the post-activity evaluation questionnaire. Documentation of the delivery of the material and of the mentoring during hands-on practice is presented in Figure 1.



Figure 1. The training process in Banyuroto Village: (a) delivery of the promotion and branding material to participants; (b) the team mentoring participants during hands-on content-creation practice

Figure 1 shows that the activity followed a plenary-then-mentoring sequence, in which the material was delivered to the whole group and immediately applied under supervision in small groups, with every participant working on their own mobile device. Two conditions observed during the session are relevant to the results that follow. First, every participant completed the content-creation task and none left before the post-activity questionnaire was administered, so the paired data cover the full group without attrition. Second, representatives of the village administration remained present throughout the activity, which signals the institutional support on which continued mentoring depends. The four-hour structure, divided evenly between delivery and practice, gave the practice component the same weight as the material and is the design feature that made immediate application possible.

Training materials and hands-on practice

The first session consisted of the delivery of three training materials. The topic and scope of each material are presented in Table 1. Each material was allocated approximately forty minutes and was followed by a question-and-answer segment. After the delivery of the material, participants carried out hands-on practice guided directly by the team, creating promotional content with *TikTok* for the village's attractions and flagship products.

Table 1. Details of the training materials

No	Training material	Description
1	Tourism branding	How to carry out tourism branding for the village
2	WhatsApp Business	Exploring the potential of WhatsApp Business for promotion and service
3	TikTok	Introducing TikTok as a channel for tourism promotion

Table 1 shows that the materials were sequenced from concept to channel, so that branding was established as the message before the two platforms used to carry it were introduced, which prevented the platforms from being taught as isolated technical skills. The practice session confirmed that this sequence was workable, since every participant produced at least one promotional item, either a short TikTok video or a set of WhatsApp Business message templates. The content produced clustered around the village's existing assets, namely strawberry picking, the camping ground, the Mount Merbabu hiking access point through Suwanting Hamlet, and the flagship horticultural products, which indicates that participants applied the branding concept to local wisdom rather than to generic themes. Because these works were retained by the participants, the training produced usable promotional material and not only understanding.

Baseline Conditions Before The Training

The pre-activity questionnaire was completed by the same individuals who later completed the post-activity questionnaire, originating from three hamlets, namely Banyuroto (43.75%), Garon (31.25%), and Kenayan (25.00%). Most participants were members of the general public (87.50%), and the remainder consisted of a micro-enterprise actor and a documentation officer. Data on participants' knowledge, experience, and readiness before the training are presented in Table 2. The instrument recorded seven dichotomous aspects, each answered with yes or no.

Table 2. Participants' baseline knowledge, experience, and readiness before the training (n = 16)

Aspect	Yes (%)	No (%)
Understanding of digital tourism promotion	62.50	37.50
Actively using social media	100.00	0.00
Ever created promotional content	25.00	75.00
Understanding of destination branding	37.50	62.50
Ever attended digital/promotional training	18.75	81.25
Perceived economic benefit of tourism	50.00	50.00
Willing to be involved after the training	93.75	6.25

Table 2 reveals a consistent gap between access and capability. Participation in social media was universal, yet only a quarter of participants had ever produced promotional content and fewer than one in five had ever attended digital or promotional training, which indicates that residents were consumers rather than producers of digital content. A second pattern



separates general from specific knowledge, since understanding of digital tourism promotion was almost twice as common as understanding of destination branding, so the more technical the concept, the fewer the residents who mastered it. A third pattern concerns motivation, because willingness to be involved after the training was the highest-scoring item while perceived economic benefit of tourism divided the group evenly, showing that readiness to act was not yet supported by conviction that tourism is economically worthwhile. The five-point readiness items reinforce the same profile, as expectation of the training's benefit recorded the highest mean and understanding the benefit of tourism data recording the lowest, with the overall baseline score reaching only about 57% of the maximum. The key finding of the baseline is therefore that the obstacle was neither access to technology nor willingness to participate, but the absence of production skills, branding concepts, and data awareness.

Paired Changes In Participants' Knowledge And Response After The Training

Because the same 16 participants completed both questionnaires, individual changes could be measured directly. Data on participants' evaluation responses after the training are presented in Table 3. The instrument recorded four dichotomous aspects covering understanding, ability, intention, and the need for follow-up. All responses were matched to the corresponding pre-activity answers of the same respondent.

Table 3. Participants' evaluation responses after the training (n = 16)

Aspect	Yes (%)	No (%)
Understood branding and digital promotion	100.00	0.00
Able to use the WhatsApp message template	100.00	0.00
Plan to apply the acquired skills	93.75	6.25
Consider follow-up activities necessary	100.00	0.00

Table 3 shows a uniform response on the two capability items and a near-uniform response on intention. Understanding of branding and digital promotion and the ability to use the WhatsApp message template were reported by every participant, whereas the intention to apply the skills was the only item that did not reach full agreement, and the need for follow-up activities was endorsed unanimously. The pattern indicates that the training removed the knowledge barrier completely while leaving a small residual gap in personal commitment, and that participants themselves regarded the activity as a first stage rather than a complete intervention. The results of the paired statistical tests on these changes are summarized in Table 4. The change in understanding was produced entirely by participants who moved from no to yes, since all ten discordant pairs shifted in the positive direction and none in the negative direction, which is what makes the improvement significant under the exact McNemar test. Confidence in creating promotional content gained a full point on average and improved for ten of the sixteen participants, remained unchanged for five, and declined for only one, yielding a significant result with a large effect size (Wilcoxon signed-rank test, $W = 7.0$, $r = 0.59$). The distribution behind this mean is presented in Figure 2.

Table 4. Paired comparison of participants' conditions before and after the training (n = 16)

Indicator	Before	After	Test	p
Understanding of branding and digital promotion (% Yes)	37.50	100.00	Exact McNemar	0.002
Confidence in creating content (mean, scale 1–5)	2.94	3.94	Wilcoxon signed-rank	0.019

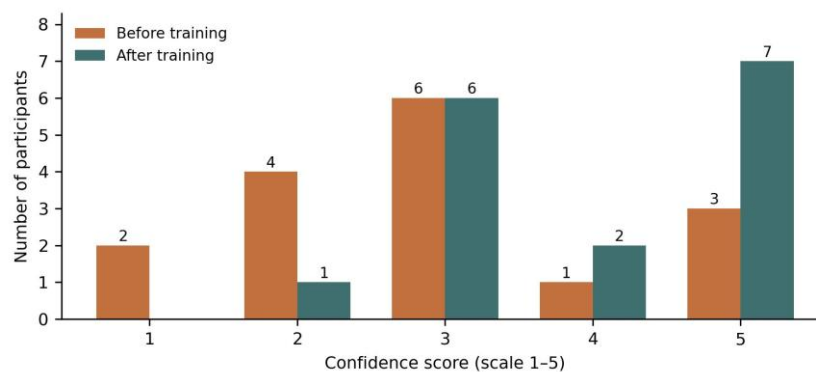


Figure 2. Distribution of participants' confidence in creating promotional content before and after the training (n = 16)

Figure 2 shows that the gain came from a shift of the entire distribution rather than from a few high scorers, since the concentration of responses moved from the middle of the scale to its upper end and the lowest categories were almost emptied after the training. This is the distributional counterpart of the mean gain reported above and explains why the effect size is large despite the small sample. Participants also rated six aspects of the activity on a five-point scale, and the mean rating of each aspect is presented in Figure 3. The six items covered the quality of the committee's service, the benefit of the training, the adequacy of the allocated time, the clarity of the material, the suitability of the platforms introduced, and confidence in creating content. The mean total evaluation score reached 25.12 of a maximum of 30 (SD = 4.97), or approximately 84% of the maximum.

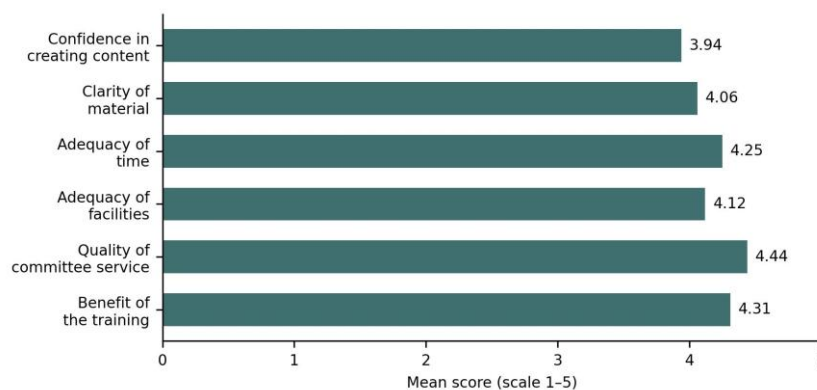


Figure 3. Mean participant ratings of the evaluation items after the training (scale 1–5)

Figure 3 shows a clear ordering in which the aspects controlled by the organizing team were rated highest while the aspect that depends on the participants themselves was rated lowest. Service quality, benefit, and time adequacy formed the top group, whereas confidence in creating content remained at the bottom of the six aspects even though it had risen significantly during the activity. Because no aspect fell below a mean of 3.90, this ordering reflects relative rather than absolute weakness. The key finding is that participants judged the delivery of the activity more favourably than they judged their own readiness, which identifies content-creation confidence as the specific aspect that requires continued mentoring rather than repeated delivery of the same material.

Instrument Quality And Equity Of Response

The quality of the instruments was examined through validity, reliability, normality, and group-difference analyses. All six post-activity evaluation items were valid based on both Pearson and Spearman item-total correlations, with significance values below 0.01, and the evaluation instrument was highly reliable, with a Cronbach's alpha of 0.901. Because the total evaluation score departed from normality (Shapiro-Wilk, $p = 0.005$), nonparametric procedures were used for group comparisons. The Kruskal-Wallis test showed no significant difference in total scores across the three hamlets, either at baseline ($p = 0.983$) or in the post-activity evaluation ($p = 0.406$), indicating that the positive response was shared uniformly rather than concentrated in a particular group. For the baseline instrument, the Spearman item-total correlations supported most items, while its lower internal consistency reflected the fact that the five items intentionally measured several distinct constructs, namely readiness, perceived structure, data-recording understanding, and expectation; the baseline items were therefore interpreted descriptively rather than as a single composite scale.

Discussion

The paired results indicate that the program produced a measurable shift from limited baseline capability toward practical readiness for community-based digital promotion. Because the same participants were measured before and after the training, the significant McNemar and Wilcoxon results can be attributed to individual-level change rather than to differences in group composition. The movement from a baseline in which only 37.50% of participants understood destination branding to a situation in which all of them reported such understanding, together with the significant one-point gain in content-creation confidence, reflects the transition from awareness to applied skill that a learning-by-doing design is intended to produce. The fact that the weakest baseline item was understanding the benefit of tourism data recording, and that confidence remained the lowest-rated aspect even after the training, nevertheless shows that the change achieved was real but not yet complete. These findings reinforce evidence that digital promotion and social media work as instruments of community empowerment in tourism villages only when residents are equipped to use them consistently (Ihsan & Elyusra, 2025; Lapuz, 2023).

The improvement is best explained by the way branding and social media were treated as one mechanism rather than as two separate topics. Recent work on rural place branding argues that a brand is built through the repeated participation of residents and small businesses rather than through a logo or a slogan alone (Jafarli & Canavari, 2025; Stylianou et al., 2025; Tian & Speelman, 2025), which is why the branding session in this program ended in a set of key messages that participants themselves then had to express in content. The choice of



WhatsApp Business and *TikTok* follows the finding that accessible platforms are the most effective digital marketing tools available to micro, small, and medium enterprises (Agustina et al., 2023; Sayudin et al., 2024), and that the quality, creativity, and authenticity of short videos are what actually move tourist attitudes and travel intention (Liu et al., 2024; Qiu et al., 2024; Wu et al., 2023; Yin et al., 2024). Because both platforms require only a mobile phone, the capacity created by the training does not depend on equipment that the village does not possess. This also explains why every participant was able to use the message template immediately, whereas confidence in producing original video content improved more gradually.

For Banyuroto specifically, the outcome addresses the fragmentation identified at the start of the program. Standardized message templates, a single official contact list, and an agreed set of key messages mean that visitor information no longer depends on which resident a prospective visitor happens to contact, a condition that best-practice studies of Indonesian rural destination marketing identify as necessary before promotion can be scaled (Juliana et al., 2023). By positioning residents, and particularly the younger generation, as the main actors of promotion, the program also widens the distribution of tourism's economic benefits among food-stall owners, homestay providers, guides, and micro-enterprise groups, in keeping with the principles of community-based rural tourism (Suyatna et al., 2024). This matters because partial participation is the mechanism through which community-based tourism projects most often fail to deliver shared benefits (Gohori & Merwe, 2021). The village therefore moves from a situation in which promotion was an individual initiative toward one in which it is a collective and repeatable practice.

The data component of the program carries a longer-term function than the promotional component. Destination management informed by systematically recorded data has been shown to strengthen brand equity and perceived quality in rural destinations (Sustacha et al., 2024), and without such records a village cannot establish whether a change in visitor numbers follows from its own promotional effort. This is precisely the weakest point in the baseline profile, since understanding the benefit of tourism data recording recorded the lowest mean of all readiness items, which indicates that data literacy requires a longer intervention than platform skills. Local wisdom performed the complementary role of supplying the content itself, because the branding narrative was built from the village's highland horticulture, strawberry agrotourism, and Merbabu hiking identity rather than from a generic template, and studies of Indonesian tourism villages consistently associate this grounding with stronger local economic resilience and more durable visitor interest (Husen et al., 2025; Lapuz, 2023; Yanan et al., 2024). Data and local wisdom therefore operate as the two ends of the same model, in which local wisdom determines what is promoted and data determines whether the promotion works.

The sustainability of these results depends on conditions that extend beyond the training day. Evidence from Indonesian tourism villages indicates that digital transformation is sustained by the readiness and continued involvement of residents rather than by the intensity of a single activity (Mutmainah et al., 2025), so the commitment of all participants to follow-up activities and the presence of the village administration throughout the session are meaningful indicators of sustainability. Replication in other villages appears feasible because the model requires only a mobile phone, a set of templates, and a mentoring relationship with an institution, and because integrated approaches to sustainable tourism village development have been implemented successfully under comparable rural conditions in Indonesia (Ardani et al., 2025). The main limitation of this activity is that it measured immediate change in a single



group of 16 participants without a control group and without a follow-up measurement, so the durability of the gain still has to be established. Continued mentoring and the adoption of a minimal data system to monitor promotional effectiveness over time therefore define the direction of the next stage of the engagement.

CONCLUSION

This community engagement program strengthened the promotion of Banyuroto Tourism Village through participatory training and continuous mentoring focused on destination branding and digital promotion. Among 16 participants, understanding of branding and digital tourism promotion increased from 37.50% to 100% (exact McNemar test, $p = 0.002$), while confidence in creating promotional content increased from 2.94 to 3.94 (Wilcoxon signed-rank test, $p = 0.019$). All participants successfully used the WhatsApp message template, and 93.75% planned to apply the acquired skills. The evaluation instrument showed high reliability, with no differences across hamlets, indicating that all four success indicators were achieved. These findings suggest that integrating branding, standardized information, accessible digital platforms, and data literacy can strengthen practical promotional skills while supporting SDG 4 and SDG 17.

The findings are limited by the single-group design, small sample size, absence of a control group, and lack of follow-up measurement, which prevent conclusions about the long-term sustainability of the outcomes. Continued mentoring, development of marketable tourism products with standardized service and pricing information, and a simple data system for monitoring visitors, inquiries, and content performance are therefore recommended. Future programs should advance from introductory training toward content development and data-based promotional evaluation. This activity was supported by the *Pengabdian kepada Masyarakat Hibah Grup Riset* (PKM HGR-UNS), funded through Non-APBN 2026 under grant number 463/UN27.22/PT.01.03/2026. The authors thank Universitas Sebelas Maret, the Banyuroto Village administration, and all participants. Generative AI tools were used for language editing and manuscript clarity; all AI-assisted content was reviewed and verified by the authors, who take full responsibility for the final article.

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