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Generative AI-Assisted Marketing Capabilities among Tourism MSMEs in Mandalika: A Community Training and Mentoring Program

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Abstract
Micro, small, and medium enterprises in Mandalika tourism area, Central Lombok, face intensifying competition as the destination attracts more domestic and international visitors, yet many business owners still rely on informal and irregular marketing and have limited experience with generative artificial intelligence. This community service program aimed to strengthen the entrepreneurial marketing capability of tourism micro, small, and medium enterprises through training and mentoring based on generative artificial intelligence. The program was conducted from 17 to 19 May 2026 and involved 15 business owners from six business types, selected purposively. It combined participatory workshops, hands-on practice, and individual mentoring, and was evaluated with a one-group pre-test and post-test design), a knowledge test, a capability questionnaire covering five dimensions, and a four-week follow-up. Data were analyzed descriptively and with the Wilcoxon signed-rank test. The mean knowledge score rose from 43.7 to 82.0, and the mean entrepreneurial marketing capability score rose from 2.48 to 4.05 on a five-point scale ($p < .001$, $r = .88$), with the largest gains in content innovation and resource leveraging. At the four-week follow-up, participants self-reported more regular marketing practices: 13 of 15 (86.7%) posted at least three times per week, 12 (80.0%) held a documented content plan, and 13 (86.7%) offered English product descriptions. Participants also detected inaccurate machine-generated output and corrected it through verification. These observed capability gains suggest that generative artificial intelligence, when combined with an entrepreneurial marketing mindset and human verification, resource-limited tourism enterprises improve their marketing capability. Because the study had no comparison group and did not measure sales or revenue, effects on business competitiveness remain untested. Continued mentoring and controlled evaluation are recommended.

Keywords: entrepreneurial marketing, generative artificial intelligence, tourism enterprises, marketing capability, mandalika

Introduction

Tourism is widely regarded as a strategic sector for regional economic growth in Indonesia, and the Mandalika Special Economic Zone in Central Lombok has been positioned as one of the country's priority tourism destinations. Figures reported by the state tourism companies InJourney and ITDC indicate about 1.2 million visits to the zone in 2024, up

51.4% from 827 thousand a year earlier (InvestorTrust, 2025), and more than 1.4 million visits in 2025, with occupancy averaging about 55% (Kompas.tv, 2026). Growth of this kind raises the competitive pressure on the small enterprises that serve these visitors. Local micro, small, and medium enterprises (MSMEs), such as food stalls, craft sellers, homestays, and rental services, form the daily economic fabric of this destination. A study of the Mandalika zone reported that incentive policies supported MSME growth, access to capital, and market share, but also showed that business owners had difficulty understanding policies and administrative procedures, which led the authors to recommend more socialization and training (Kaharuddin et al., 2024). Community service programs have long worked with tourism-related communities through empowerment schemes such as tourism village development (Saepudin et al., 2022), which underlines the role of universities in building local capacity.

Initial observations and short interviews conducted by the team in April 2026 (the procedure is described under Methods) with 15 MSME actors operating in the Mandalika tourism area revealed a marketing gap that can weaken competitiveness as visitor numbers and competition grow. Although 13 of the 15 actors (86.7%) held an active social media account for their business, 10 (66.7%) posted less than once a week, 13 (86.7%) had no documented content plan, 11 (73.3%) had no Google Business Profile listing, and 12 (80.0%) offered no English product descriptions despite serving international visitors. Only three actors (20.0%) had ever used a generative artificial intelligence tool. Most owners explained that the main obstacles were limited time, uncertainty about what to write, and low confidence in producing attractive visual and written content. These conditions suggest that the problem is not merely the absence of digital channels but the absence of the capability to use them in an opportunity-seeking, customer-oriented, and resource-efficient manner.

Entrepreneurial marketing offers a useful lens for this problem because it describes how resource-constrained firms pursue opportunities and create value through marketing that is proactive, innovative, and close to customers. A recent systematic review of 207 articles published between 2010 and 2021 concluded that the field remains heterogeneous and can be organized into entrepreneur, business, and market perspectives (Breit & Volkmann, 2024). For small tourism enterprises, strengthening such capability means strengthening the owner's ability to sense demand, craft distinctive offers, and communicate them consistently on a minimal budget. In this program the lens was made operational through five capability dimensions, which guided the design of the training modules, the capability questionnaire, and the reading of the results.

Generative artificial intelligence may help close this capability gap. Generative conversational tools can produce text, images, and ideas on demand, which creates opportunities as well as risks for practice and policy (Dwivedi et al., 2023). In marketing, such tools are used for content creation, personalization, and customer interaction, while raising challenges that call for human oversight (Kshetri et al., 2024; Peres et al., 2023). Huang and Rust (2021) argue that artificial intelligence supports marketing at the levels of research, strategy, and action, and Kotler et al. (2021) describe next-generation technology as a means of creating and communicating value more effectively. Experimental evidence shows that generative tools can shorten professional writing time while improving output quality

(Noy & Zhang, 2023), and field evidence shows productivity gains that are largest among less experienced workers (Brynjolfsson et al., 2025). Although these studies concern professional writing and customer-support work rather than owner-operated enterprises, the tasks involved (drafting text, generating ideas, and answering customers under time pressure) resemble the everyday marketing tasks of tourism micro-entrepreneurs, who often work alone with little time and no marketing staff (Alford & Jones, 2020); the finding that less experienced workers gain most is therefore especially relevant here. In hospitality and tourism, conversational models are expected to reshape service, marketing, and communication (Gursoy et al., 2023; Dwivedi et al., 2024; Rather, 2025), and a grounded-theory study in a small firm found that productivity gains were most visible in marketing, together with notable risks and limitations (Walke et al., 2025). At the same time, small firms often lag in adopting digital technologies because of skills and resource constraints (OECD, 2021).

Digital promotion training for tourism actors and MSMEs has generally concentrated on social media promotion and digital communication strategies (Citraresmana et al., 2023). University-led digital marketing projects with small tourism businesses have likewise stressed peer-to-peer knowledge sharing and the adoption and use of digital marketing (Alford & Jones, 2020), and recent community service programs in Indonesia have begun to introduce generative tools for MSME content creation, including a program in Sengkol Village, Central Lombok, that combined ChatGPT-based practice with product photo editing and search engine optimization (Satriadi et al., 2026). Less attention appears to have been given to combining generative tools with an entrepreneurial marketing mindset and to the accuracy of machine-generated output, a known weakness of language models (Ji et al., 2023). Unlike the Sengkol program, which was evaluated through thematic analysis of observations, interviews, and documentation (Satriadi et al., 2026), the present program adds (a) an entrepreneurial marketing framework with five assessed dimensions, (b) individual mentoring on participants' own products, (c) an explicit routine for verifying machine-generated output, and (d) pre-test, post-test, and four-week follow-up data from the same 15 owners. This community service program therefore aimed to strengthen the entrepreneurial marketing capability of 15 tourism MSME actors in the Mandalika tourism area through generative artificial intelligence training and mentoring, and to describe changes in their knowledge, capability, and early marketing practices, without measuring business performance.

Methods

Design and Stages

The program was a participatory community service activity that combined workshops, hands-on practice, and individual mentoring. Its effects were evaluated with a one-group pre-test and post-test design, supplemented by a four-week follow-up of marketing practices. The program followed five stages: (1) needs assessment through observation and interviews, (2) design of training modules, (3) training and practice, (4) mentoring and a participant showcase, and (5) evaluation and follow-up. Because a one-group design cannot rule out testing, recall, or maturation effects, the following steps were taken to limit them: the correct answers were not disclosed after the pre-test, the order of the items was changed in the post-

test, and no test content was distributed as take-home material between the two tests. The remaining threats are discussed under limitations.

Needs assessment. The baseline figures in the Introduction cover five marketing indicators (an active social media account, posting frequency, a documented content plan, a Google Business Profile listing, and English product descriptions), prior use of generative artificial intelligence, and the obstacles that owners described. The observations and short structured interviews were carried out by the program team at each business site in April 2026. The interview guide covered social media use, marketing routines, prior use of generative artificial intelligence, and perceived obstacles; it was administered in Indonesian, and answers were recorded by the interviewer on a standard form. An indicator was recorded as present only if it could be seen during the visit, for example an active account with recent posts, a listing found on Google Maps, or a written content plan shown by the owner.

Location, Time, and Participants

The activity took place in the Mandalika tourism area (around Mandalika Beach), Central Lombok Regency, West Nusa Tenggara, on 17–19 May 2026 (three days, approximately seven hours per day). Participants were selected through purposive sampling with the help of local community leaders. Community leaders nominated enterprises operating in the area; the team contacted the owners in person, checked the three inclusion criteria below, and enrolled those who met them and agreed to attend all sessions. The six business types reflect the main sectors serving visitors in the area. Community leaders nominated 24 enterprises; 19 met the inclusion criteria, 4 of these declined because of scheduling conflicts, and 15 were enrolled. The inclusion criteria were operating a business in the area for at least one year, owning a smartphone with internet access, and committing to attend all sessions. These criteria favored enterprises that were already digitally connected and able to commit three days, so participants may be better placed than the most digitally excluded or time-constrained businesses; the implications for access and reach are discussed under limitations. The 15 selected actors represented six business types: culinary, woven crafts and souvenirs, homestay, cafe and beverages, vehicle and equipment rental, and tour and experience services.

Tools and Materials

The facilitators used a conversational generative artificial intelligence assistant for text, an artificial intelligence-assisted graphic design application, and a video-editing application with automatic captioning. Participants used the applications on their own smartphones, with the facilitators demonstrating on laptops. The conversational assistant was ChatGPT (GPT-4o mini, free tier), the graphic design application was Canva (free plan, with its AI image tools), and the video-editing application was CapCut (free version, with automatic captions); all were used between 17 and 19 May 2026 on participants' own accounts. Participants also used WhatsApp Business, Instagram, and Google Business Profile. Equipment comprised participants' own smartphones, facilitator laptops, a projector, and a portable internet hotspot. Printed module books and a prompt template card were distributed to every participant.

The training content was organized into five modules (Table 1). Each module followed a "demonstrate–practice–review" sequence in which participants worked on their own products, so that every session produced a usable marketing output.

Approximately 21 contact hours were scheduled over the three days. The schedule combined facilitated workshops and hands-on practice with individual mentoring on Day 3, the participant showcase, and the pre-test, post-test, and satisfaction survey. Workshops and hands-on practice took about 12.5 hours, individual mentoring 4.5 hours (about 18 minutes per participant), the showcase 1.5 hours, the tests and satisfaction survey 1.5 hours, and breaks about 1 hour. The five capability dimensions guided the module design: opportunity recognition and customer intensity were addressed mainly in Module 1 (customer insight and the customer profile); content innovation in Modules 2 and 3 (prompt writing, storytelling, and visual or video content); resource leveraging in Modules 2 to 4 (low-cost tools and channel setup); and value creation in Modules 3 and 5 (bilingual product stories, the content calendar, and the mini campaign).

Practice tasks were adapted to the type of business. Service-based businesses and sellers of physical products have different customer journeys. Service businesses practiced describing the experience, the itinerary or room, what is included, and the booking steps, whereas product sellers practiced product photography, ingredient or material stories, and ordering and delivery information. Initial prompt: "Write a description of my homestay." The output was generic and had no local details. Revised prompt: "Write a friendly Instagram caption of about 60 words, in Indonesian and English, for a four-room homestay five minutes from Kuta Beach with breakfast, Wi-Fi, and motorbike rental; do not mention prices or facilities that are not listed." Mentor feedback: check the breakfast hours, avoid claiming a beachfront location, and add the WhatsApp booking number. The final caption was posted after these corrections.

Table 1 Training Schedule and Modules

Day / date	Module and main activities	Expected output
Day 1, 17 May 2026	Opening and pre-test; Module 1: entrepreneurial marketing and customer insight; Module 2: generative artificial intelligence basics, prompt writing, and ethical use	Customer profile and first prompt set
Day 2, 18 May 2026	Module 3: AI-assisted product storytelling, bilingual descriptions, and visuals or short video; Module 4: channel setup (Google Business Profile and WhatsApp Business templates)	Bilingual captions, visual content, and updated channel profiles
Day 3, 19 May 2026	Module 5: content calendar and mini campaign; individual mentoring; participant showcase; post-test and satisfaction survey	Seven-day content calendar and campaign plan
16 June 2026	Four-week follow-up through WhatsApp group monitoring and a short interview	Follow-up data on marketing practices

Source: Program documentation (2026).

Instruments and Data Collection

Three instruments were used. First, a knowledge test of 20 multiple-choice items on entrepreneurial marketing, prompt writing, and the verification of generated output was scored from 0 to 100. Second, an entrepreneurial marketing capability questionnaire of 20 items (five dimensions with four items each) used a five-point Likert scale from 1 (very low) to 5 (very high). The dimensions were opportunity recognition, customer intensity, content innovation, resource leveraging, and value creation, adapted from the themes commonly discussed in the entrepreneurial marketing literature (Breit & Volkmann, 2024). Each dimension score was the mean of its four items, and the composite score was the mean of the five dimension scores. The items were written to reflect the five dimensions as described in the entrepreneurial marketing literature and phrased in everyday language for small tourism owners. Sample items (rated 1 to 5) were: opportunity recognition, "I regularly notice which products or experiences tourists ask for"; customer intensity, "I know who my main customers are and what they expect from my business"; content innovation, "I can come up with new promotion ideas that differ from my competitors"; resource leveraging, "I can produce attractive promotion content with limited time and money"; and value creation, "I can explain what makes my product or experience special to potential customers." Content validity was checked by two lecturers in entrepreneurial marketing and one tourism MSME practitioner, who rated item relevance and clarity, and the wording was revised after a trial with five owners outside the sample. Internal consistency was acceptable (Cronbach's $\alpha = .84$ at pre-test and .89 at post-test). Cronbach's alpha indicates internal consistency only and does not establish content validity. Third, a practical output checklist and a facilitator rubric recorded the content produced and its factual accuracy after human review. Because the capability questionnaire is a self-assessment, it is complemented by two demonstrated-skill indicators that do not depend on self-report: the knowledge test score and the facilitator-rated quality of the outputs produced during the program. The knowledge test and questionnaire were administered before the first session and after the last session, a satisfaction survey was completed on Day 3, and the follow-up used a short structured interview.

Data Analysis and Ethical Considerations

Data were presented descriptively as frequencies, percentages, means (*M*), and standard deviations (*SD*). Because the sample was small ($N = 15$) and normality could not be assumed, pre-test and post-test scores were compared with the Wilcoxon signed-rank test at a significance level of .05. Zero differences were to be excluded from the test, and tied absolute differences were assigned average ranks. Given the small paired sample, exact two-sided p-values are reported alongside the normal-approximation Z. Because all 15 differences were positive for every outcome ($W+ = 120$), the exact two-sided p-value is $2/32{,}768 = .00006$ irrespective of ties. The effect size was calculated as $r = Z / \sqrt{N}$, where values of about .10, .30, and .50 are conventionally read as small, medium, and large. Participation was voluntary, written informed consent was obtained, and participants were advised not to enter personal customer data or confidential business information into generative tools. The safeguards also covered visual and cultural content: participants were advised to use only photographs and design assets that they owned or had permission to use, to check the reuse

terms of any template or stock asset before posting, not to publish identifiable people without their consent, and to depict local culture respectfully and accurately.

Results

Characteristics of the Participants

Table 2 summarizes the participants. Women made up a little more than half of the group, most participants had a high school or diploma-level education, and the businesses were relatively young. Digital presence was common, but practices that support systematic marketing were rare at baseline.

Table 2 Characteristics of Participating MSME Actors (N = 15)

Characteristic	n	%
Gender: female / male	9 / 6	60.0 / 40.0
Age in years, *M* (*SD*); range	37.9 (8.1); 24–52	–
Education: senior high school	7	46.7
Education: diploma	3	20.0
Education: bachelor's degree	5	33.3
Business age in years, *M* (*SD*); range	5.7 (4.7); 1–14	–
Business type: culinary	4	26.7
Business type: woven crafts and souvenirs	3	20.0
Business type: homestay	2	13.3
Business type: cafe and beverages	2	13.3
Business type: vehicle and equipment rental	2	13.3
Business type: tour and experience services	2	13.3
Had used a generative artificial intelligence tool before the program	3	20.0

Source: Primary data, 2026.

Changes in Knowledge and Entrepreneurial Marketing Capability

All 15 participants improved their knowledge score and their composite capability score between the pre-test and post-test. The Wilcoxon signed-rank test indicated significant differences for the knowledge test, the composite capability score, and each of the five capability dimensions, all with large effect sizes (Table 3). The test statistics are identical across outcomes ($Z = 3.41$, exact $p = .00006$, $r = .88$) by construction rather than by coincidence: every participant improved on every outcome, so all 15 signed ranks were positive ($W+ = 120$, the maximum possible for $n = 15$), which gives the same Z, p, and r whatever the size of the gains. The statistics therefore show the consistency of direction, whereas the magnitude of change is conveyed by the means and standard deviations in Table 3. The pattern across dimensions is shown in Figure 1: content innovation and resource leveraging showed the largest absolute gains (+1.87 and +1.82 points), whereas customer intensity showed the smallest (+1.22 points). Figure 1 restates the means in Table 3 and adds no new data.

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Table 3 Pre-Test and Post-Test Scores and Wilcoxon Signed-Rank Test Results (N = 15)

Variable	Pre-test *M* (*SD*)	Post-test *M* (*SD*)	*Z*	*p*	*r*
Knowledge test (0–100)	43.7 (9.4)	82.0 (11.4)	3.41	< .001	.88
Opportunity recognition (1–5)	2.53 (0.34)	4.05 (0.46)	3.41	< .001	.88
Customer intensity (1–5)	2.62 (0.38)	3.83 (0.45)	3.41	< .001	.88
Content innovation (1–5)	2.35 (0.40)	4.22 (0.46)	3.41	< .001	.88
Resource leveraging (1–5)	2.40 (0.36)	4.22 (0.51)	3.41	< .001	.88
Value creation (1–5)	2.48 (0.31)	3.92 (0.40)	3.41	< .001	.88
Composite capability (1–5)	**2.48 (0.27)**	**4.05 (0.23)**	**3.41**	**< .001**	**.88**

Note. Z is based on the normal approximation; $r = Z / \sqrt{N}$. All 15 participants improved on every variable. Because all differences were positive (W+ = 120), the exact two-sided p-value is .00006 for every row, which is why Z, p, and r are identical across rows. *Source:* Primary data, 2026.

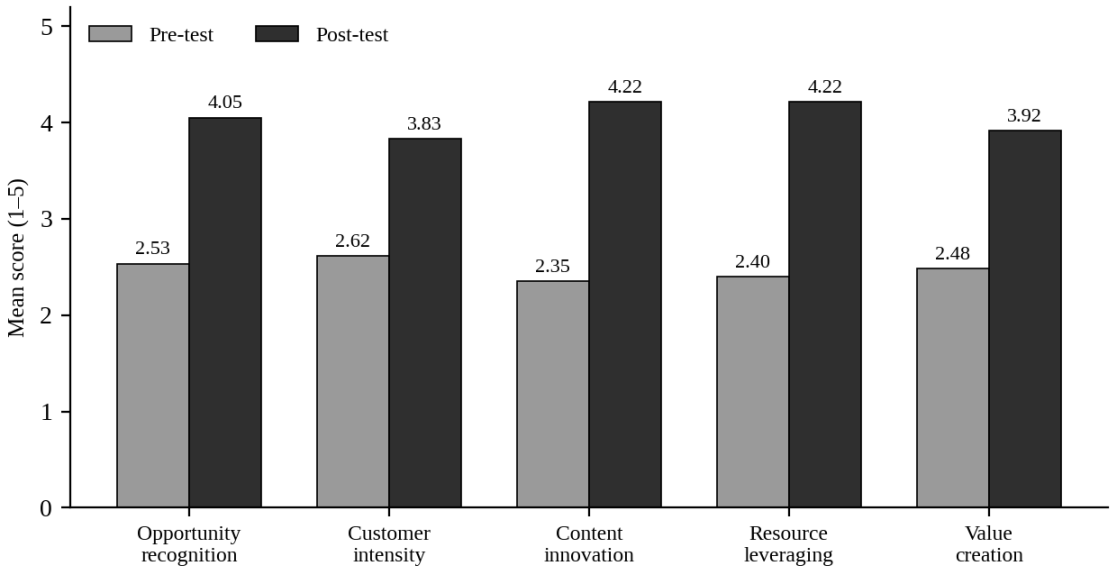


Figure 1 Mean Pre-Test and Post-Test Scores by Entrepreneurial Marketing Capability Dimension
Source: Primary data, 2026.

When the composite capability gain was examined by business type (an exploratory analysis), culinary and woven craft actors showed the largest average gains (+1.67 points each), followed by homestay and cafe actors (+1.57 each) and tour and experience actors (+1.50). Vehicle and equipment rental actors showed the smallest gain (+1.28), although their post-test composite score (3.90) was still well above their baseline (2.62). These subgroup comparisons are exploratory and descriptive only: each business type had two to four

participants (Table 2), no inferential tests were run by subgroup, and the differences in gain (+1.28 to +1.67) are small relative to the variation that so few cases can produce. They should not be read as evidence that the program worked better for some types of business. The satisfaction survey yielded a mean rating of 4.7 on a five-point scale.

Practical Outputs and Quality Review

By the end of Day 3, every participant had produced a seven-day content calendar, at least three product captions in Indonesian and English (48 captions in total), and one promotional visual or short video (15 items). After human review with the facilitator rubric, 12 of 15 participants (80.0%) had content rated "good" or "very good" for factual accuracy and brand fit. Outputs were rated on a four-point scale (1 = poor, 2 = fair, 3 = good, 4 = very good) for factual accuracy and brand fit. A rating of "good" required that no factual error remained and that the content matched the business's actual products, prices, and opening hours; "very good" additionally required a clear, distinctive, and culturally appropriate presentation of the offer. The facilitators who mentored each participant rated the outputs with the checklist, and disagreements were settled by discussion. Six participants (40.0%) encountered inaccurate machine-generated output during practice, such as wrong opening hours, product claims that did not exist, and inaccurate descriptions of local traditions. All six corrected these items using the verification checklist before publishing. Descriptions of local customs, traditions, and cultural symbols were shown to community leaders and other people familiar with local customs before they were approved for posting, and wording was corrected where it was inaccurate or inappropriate.

Box 2 shows a before-and-after example from one homestay owner. Before: "Homestay Lombok murah, hubungi kami." After: "Wake up five minutes from Kuta Beach. Our four-room homestay offers breakfast, Wi-Fi, and motorbike rental. Book via WhatsApp: [number]. / Bangun lima menit dari Pantai Kuta. Homestay kami punya empat kamar, sarapan, Wi-Fi, dan sewa motor. Pesan lewat WhatsApp: [nomor]." The revised post adds location, facilities, a call to action, and an English version, and its facts were checked with the verification checklist before posting.

Follow-Up of Marketing Practices

Four weeks after the program, all 15 participants were reached for follow-up. Table 4 compares baseline conditions with the follow-up. Most marketing practices that were rare at baseline had become common, and participants reported spending less time on each post while receiving more customer inquiries through messaging channels. These follow-up indicators were self-reported and descriptive. Where participants shared their accounts, posting frequency and the Google Business Profile listing were checked against dated posts and the public listing at follow-up; inquiry counts and time per post rest on participants' own records and recall. A customer inquiry is defined here as a first message from a distinct customer asking about a product, price, availability, or booking through any channel within one calendar week; repeat messages from the same customer and the same inquiry arriving through several channels were counted once. The baseline value covers the week before the program and the follow-up value the fourth week after it.

Table 4 Marketing Practices at Baseline and at Four-Week Follow-Up (N = 15)

Indicator	Baseline	Follow-up
Posted at least three times per week, *n* (%)	2 (13.3)	13 (86.7)
Had a documented content plan, *n* (%)	2 (13.3)	12 (80.0)
Had a Google Business Profile listing, *n* (%)	4 (26.7)	12 (80.0)
Offered English product descriptions, *n* (%)	3 (20.0)	13 (86.7)
Time to produce one post in minutes, *M* (*SD*)	61.4 (15.1)	25.3 (7.0)
Customer inquiries per week, *M* (*SD*)	5.6 (1.5)	9.3 (2.7)

Note. Indicators are self-reported by participants. *Source:* Primary data, 2026.

Discussion

The improvement that appeared across all capability dimensions is consistent with the view that generative tools act as a capability amplifier for people who lack professional marketing skills. Experimental and field studies report that such tools help most where users are less experienced and tasks involve drafting and ideation (Brynjolfsson et al., 2025; Noy & Zhang, 2023). The business owners in this program had little prior exposure to the tools, and a guided "demonstrate–practice–review" format let them turn that low baseline into concrete outputs within three days. The reduction in production time and the steady posting rhythm at follow-up are also in line with the grounded evidence that productivity gains from generative tools are especially visible in marketing work within small firms (Walke et al., 2025).

Viewed through an entrepreneurial marketing lens, the uneven pattern of gains is informative. Content innovation and resource leveraging improved most, which is plausible because generative tools lower the cost of producing creative material and let owners do more with the same time and budget. Customer intensity improved least. Part of this pattern probably reflects the program design: customer insight was taught only in Module 1 on Day 1, alongside the introduction to generative tools, and its expected output was a customer profile rather than repeated practice with real customers (Table 1), whereas content innovation and resource leveraging were practiced on Days 2 and 3 on participants' own products. Customer intensity also started from a higher baseline than content innovation and resource leveraging (2.62 versus 2.35 and 2.40), leaving somewhat less room for gain. In addition, understanding customers depends on real interaction and local knowledge that a language model cannot supply, which echoes the argument that artificial intelligence supports marketing at several levels but still relies on human judgment for relational and contextual tasks (Huang & Rust, 2021). It also fits the entrepreneur, business, and market perspectives identified in the literature, because the program mainly strengthened the entrepreneur and business sides and only partly the market side (Breit & Volkmann, 2024). Future mentoring should therefore pair tools with simple routines for collecting customer feedback, such as asking guests for reviews and tracking recurring questions.

The tourism setting gave the program a specific direction. Bilingual descriptions were among the most visible practical changes, which suits a destination that serves international visitors and agrees with expectations that conversational models will reshape tourism

communication (Gursoy et al., 2023). The Mandalika zone has also been described as a place where policy support reaches MSMEs unevenly because owners find official procedures hard to understand, and where training and socialization are needed (Kaharuddin et al., 2024). Practical, owner-centered training of the kind delivered here is one way a university can complement such policy support. Compared with earlier digital promotion training for tourism actors that focused on social media and digital communication strategies (Citraresmana et al., 2023), this program placed more emphasis on prompt writing and on building an opportunity-seeking marketing routine, although the two designs cannot be compared directly. The closest comparison is the AI-based digital marketing training in Sengkol Village, Central Lombok, which also used a participatory format but was evaluated qualitatively (Satriadi et al., 2026); the present pre-test, post-test, and follow-up data add a quantitative description of capability change, although, like most programs of this kind, they cannot establish causal effects. University-led projects with small tourism businesses elsewhere likewise indicate that practical, peer-supported learning helps owners advance their digital marketing knowledge (Alford & Jones, 2020).

The quality review shows why human verification must be a core part of any training that introduces generative tools. Language models can produce fluent but unfaithful content (Ji et al., 2023), and for a small tourism business a wrong price, a false certification claim, or a misrepresented tradition can damage trust quickly. The fact that participants caught and corrected such errors suggests that a short verification routine is teachable even to novice users, in line with calls for human oversight and attention to the challenges of these tools (Dwivedi et al., 2023; Kshetri et al., 2024).

Several limitations should be kept in mind. The design had no comparison group, so improvements cannot be attributed to the program alone, and the pre-test and post-test were close together, which may inflate gains through short-term recall and novelty. The capability questionnaire relied on self-assessment, which is open to response bias, and the knowledge test and rated outputs give only partial evidence of demonstrated skill; no independent observation of participants' skills was used. The eligibility criteria (a smartphone with internet access and a commitment to attend all sessions) may have excluded enterprises facing the greatest digital barriers or the tightest schedules, so the findings may not extend to the least connected businesses; future programs could lower this barrier by lending devices, providing connectivity, or offering shorter sessions. The sample was small and diverse in business type, limiting generalization, and the follow-up indicators were self-reported and covered only four weeks. Sales, revenue, and customer-side outcomes were not measured. A feasible next step is to follow participants for at least three to six months, with their consent, and to record monthly customer inquiries converted into bookings or orders, monthly sales or revenue from simple records or platform exports, and online visibility indicators such as Google Business Profile views, calls, and direction requests, comparing them with a waitlist or non-participating group of similar enterprises. Larger and longer studies with comparison groups and objective performance data are needed before conclusions about competitiveness can be drawn.

Conclusion

Training and mentoring based on generative artificial intelligence, framed by an entrepreneurial marketing mindset, was associated with clear improvements in the knowledge and marketing capability of 15 tourism MSME actors in the Mandalika tourism area, particularly in content innovation and resource leveraging, and with more regular and bilingual marketing practices four weeks later. These conclusions are limited to the 15 participants and the four-week observation period; the design had no comparison group, and sales, revenue, and sustained competitive advantage were not tested. Participants were also able to detect and correct inaccurate machine-generated output, which indicates that verification skills can be built alongside tool skills.

Based on these findings, several suggestions are offered. First, mentoring should continue through monthly clinics and a community of practice so that new habits are sustained. As a proposed operational plan, the university team would facilitate one clinic every four weeks for six months and moderate the participants' WhatsApp group; community leaders would convene participants and provide the venue; and the local tourism and cooperative offices would offer facilities, connect participants with local events, and host the module on responsible use and fact-checking. Suggested milestones are: by month 1, every participant has a written content calendar for the following month; by month 3, at least 80% of participants post three or more times per week, keep a documented content plan, and offer English product descriptions; and by month 6, participants report monthly inquiry and booking counts that allow a first comparison with baseline. Second, future sessions should add simple customer-feedback routines to strengthen customer intensity. Third, local tourism and cooperative offices could adopt short modules on responsible use and fact-checking of generative tools in their MSME programs. Fourth, further community service and research should use larger samples, comparison groups, and objective indicators such as sales and online visibility, and should include local-language and cultural content so that tourism marketing remains authentic.

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