



BERBAKTI: Jurnal Pengabdian Kepada Masyarakat

Vol. 4 No. 1, May 2026, Hal 140-151

e-ISSN 2987-033X, <https://doi.org/10.30822/berbakti.v4i1.5446>

Open Access: <https://journal.unwira.ac.id/index.php/BERBAKTI>

Digital Branding and Distribution Assistance for SoE Tangerines in the Petra Farmers' Group in South Central Timor

Engelbertus Gloria Christy Watu^{1*}, Maria Augustin Lopes Amara²,

Apryanus Fallo³, Martins Jovanko Bareto⁴, Rizky Shalsabila⁵
^{1,2,3,4,5} Widya Mandira Catholic University, Indonesia

e-mail: watuengel@gmail.com^{1*}

ARTICLE INFO

Article history:

Received: May 03, 2026

Revised: May 28, 2026

Accepted: May 30, 2026

Keywords: Digital Branding;
Brand Identity; Digital Channels;
Soe Tangerines; Farmer Groups



Copyright of the article is reserved by the authors. This article is an open-access article under the

Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

ABSTRACT

The Petra Farmers' Group, which produces SoE Tangerines, faces challenges related to inconsistent brand identity, low adoption of digital channels, and weak distribution management, resulting in suboptimal product value and competitiveness. This initiative aims to enhance the farmers' group's marketing capacity through brand identity strengthening, content planning, digital channel activation, and distribution optimization. The program was implemented with 20 participants through stages of coordination, initial diagnostics, outreach, and applied training sessions lasting 60–90 minutes, as well as pre- and post-training evaluations using a 15-item questionnaire covering three indicators: brand identity and content planning, digital channels and optimization, and distribution management. The results showed a substantial increase in knowledge, with the average proportion of correct answers rising from 16.4% (pre-training) to 89.8% (post-training); the largest increase occurred in the digital channels and optimization indicator, by 81.3 percentage points. Specifically, participants produced drafts of product uniqueness narratives and seasonal content plans, activated WhatsApp Business profile and catalog features, drafted marketplace storefronts, and prepared order and shipping documentation templates. These findings indicate that practice-based digital branding training has the potential to enhance farmers' groups' knowledge and initial marketing readiness, although the long-term impact on actual marketing performance still requires follow-up evaluation.

INTRODUCTION

A well-designed and properly implemented marketing strategy is a prerequisite for improving business performance, encompassing the strengthening of competitive positioning and the building of loyalty through positive perceptions and affections toward the brand (Kotler et al., 2025; Watu, 2025). Within the Micro, Small, and Medium Enterprises (MSME) ecosystem, the urgency of such strategies is increasing alongside market digitalization and intensified cross-regional competition, which demand consistent brand identity management and effective orchestration of digital channels. Nevertheless, the digital adoption gap remains a persistent

structural barrier. In 2020, only about 13 percent of Indonesia's 64 million MSMEs were connected to the digital ecosystem (KemenkopUKM, 2020), and although the national figure has risen to approximately 26 percent by 2024 (Komdigi, 2024), SMEs in the agricultural sector numbering around 29 million units (Kabin Indonesia, 2024) still lag significantly in the use of digital channels for marketing. This gap aligns with findings from recent service-learning and training literature that identify recurring challenges among SME operators: low consistency in brand identity including logos, colors, brand narratives, and packaging which weakens product differentiation, as well as suboptimal adoption of digital marketing channels due to limited digital literacy and content upskilling (Martina et al., 2025; Thamrin et al., 2025). Consequently, many SME operators remain stuck in conventional promotion and word-of-mouth marketing, while digital advertising features, analytics, and marketplace management have not been systematically utilized (Amaral et al., 2025; Prayag et al., 2020).

In the context of East Nusa Tenggara (NTT), SoE tangerines in South Central Timor Regency (TTS) possess strong sensory characteristics and significant economic potential; however, market access remains limited, promotional materials are not yet standardized, and digital marketing practices at the farmer group level including the Petra Farmer Group have not been coordinated (TTS, 2024). As a result, the product's value-added remains low and its competitiveness is insufficient when compared to horticultural products from other regions (Jian et al., 2021; Watu et al., 2024).

Preliminary interviews with the Petra Farmers' Group confirmed this situation. This group consists of 20 farmers who manage their land individually; one of the key respondents has been growing SoE tangerines independently since 2007. Before the project began, marketing practices were entirely conventional: direct sales at the orchard for approximately Rp25,000 per kilogram, sales to market vendors, and sales to distributors for approximately Rp400,000-Rp500,000 per box based on fruit grade. The Petra Farmers' Group does not yet have a clear product brand. SoE Keprok oranges are sold without a brand name, logo, packaging, or quality label, resulting in weak product differentiation in the market. The farmers' group also has not yet utilized digital channels such as WhatsApp Business, Instagram, and online marketplaces as marketing tools. The most common distribution challenges include poor road conditions leading to the orchards, limited transportation options oranges are generally transported by motorcycle and the lack of packaging capable of maintaining product freshness until it reaches consumers. Market reach remains limited to local markets around the orchard area and distributors who come directly. Low value-added is evident in the sale of products as raw commodities without processing, price control being in the hands of buyers, and the inability to process oranges into derivative products due to a lack of skills. The gap between production potential and conventional marketing capabilities underscores the urgency of training to strengthen brand identity and orchestrate digital channels for local horticultural actors.

In general, the solutions suggested in the literature include strengthening a consistent brand identity, accelerating the adoption of digital channels (WhatsApp Business, Instagram Business, and marketplaces), and improving distribution management. This approach is expected to expand market reach, increase consumer trust, and improve margins through clear differentiation and more measurable promotional processes (Ilmiah & Hariyana, 2023; Martina et al., 2025; Wardani & Lestari, 2025).

A number of community service studies have consistently shown that tiered interventions, awareness campaigns, practical training, and mentoring can enhance knowledge and readiness for the adoption of digital branding among SMEs (Ilmiah & Hariyana, 2023; Martina et al., 2025; Rifai et al., 2025; Thamrin et al., 2025). These studies produced outcomes such as visual identity updates, digital channel activation, and improved marketing literacy, although most still focused on non-horticultural processed SMEs and urban contexts, with a strong emphasis on awareness and knowledge gain rather than measuring more downstream marketing outcomes. Based on a review of recent PkM literature, studies that explicitly integrate commodity-specific place-based branding, seasonal content planning, and digital multichannel orchestration into a single intervention design for horticultural farmer groups remain limited (Hariyana, 2023; Martina et al., 2025; Rifai et al., 2025; Thamrin et al., 2025; Wardani & Lestari, 2025).

This study aims to: (i) enhance the marketing capacity of the Petra Farmers' Group by strengthening its brand identity and developing a content plan; (ii) accelerate the adoption of priority digital channels; and (iii) improve distribution governance. The rationale for these objectives stems from previous findings that strengthening brand identity and digital competencies impacts marketing knowledge and behavior; this study expands upon this by incorporating downstream performance-based indicators (reach/conversion) and follow-up mentoring to ensure sustainability (Ilmiah & Hariyana, 2023; Martina et al., 2025; Rifai et al., 2025; Thamrin et al., 2025; Wardani & Lestari, 2025). The novelty of this study lies in the integration of *place-based* horticultural branding, seasonal content planning, and the orchestration of digital distribution channels, which were tested in the context of farmer groups in TTS.

IMPLEMENTATION METHODS

The implementation method was designed to address the partners' three main challenges namely, inconsistent brand identity, low adoption of digital channels, and weak distribution management through a series of sequential steps: preparation and coordination, initial diagnostics, structured 60-90minute training sessions, and post-training evaluation. This series is aimed at measurable outcomes at the group level: increased knowledge and ready-to-implement marketing action plans (Gusmaliza et al., 2025; Salma & Kurniawan, 2026).

The preparatory phase included confirming permits with the village government, setting the activity schedule, and recruiting participants through an open invitation issued by the Chair of the Petra Farmers' Group. The participation criteria were that all active members of the Petra Farmers' Group who cultivate SoE tangerines were eligible; the team decided to invite all members so that the information shared during the training could be disseminated to every member. Of the 20 members invited, all attended (response rate 100%). Most participants sell their SoE mandarin orange harvest directly to consumers, market vendors, or distributors. The team prepared teaching materials (presentation materials, local case studies, and demonstration scenarios), documentation tools, as well as pre- and post-training knowledge assessment instruments.

The initial diagnostic phase is conducted at registration. Participants receive an explanation of the study's objectives and their rights to participate, and then complete a 10-minute pre-test. The instrument consists of 15 multiple-choice items divided into three knowledge indicators (five items each) (Watu et al., 2024): (i) strengthening brand identity and developing a content plan based on product uniqueness, with the expected output being a draft brand guide for Jeruk Keprok SoE by the Petra Farmers' Group; (ii) adoption of digital channels and optimization practices, with an output in the form of a WhatsApp Business catalog or a draft Instagram post; and (iii) distribution management, with an output in the form of an order recording format and distribution workflow. Additionally, initial marketing practices (consistent logo usage, use of WhatsApp Business, engagement on marketplaces) were documented for sample description purposes.

The outreach phase was conducted over 60-90 minutes by the PkM team and consisted of three segments aligned with the knowledge indicators. The first segment focused on brand identity: arranging visual elements (logo, colors, typography) and formulating the product story for Jeruk Keprok SoE, followed by the development of a weekly content plan. The targeted outputs included a simple draft of the brand identity guidelines (one page), sample promotional text, and a list of post templates. The second segment emphasized the adoption and optimization of digital channels. Participants demonstrated the creation of a WhatsApp Business profile (business name, catalog, quick replies, operating hours), the setup of an Instagram Business account (bio, highlights, posting schedule), and the initial steps for opening a store on a marketplace (product title, photos with a neutral background, keywords, and descriptions of specifications and prices). Each participant practiced taking product photos that met basic technical criteria and prepared one draft post. The third segment focused on distribution management. The material covered grade sorting, ventilated packaging options for fresh oranges, sales bundle arrangement, planning local delivery routes, and partnership options with couriers or collection agents. Participants prepared a logistics contact list and a daily order tracking scheme to ensure the order-to-delivery process is documented.

The evaluation phase was conducted immediately following the training session. Participants took a post-test lasting approximately 10 minutes using the same instrument to generate item-by-item comparisons (Amaral et al., 2024; Mau et al., 2024). In addition, a follow-up evaluation was designed within the program’s timeframe to assess the sustainability of post-training practices. Responses were coded anonymously; physical files were kept by the team leader, while digital data was secured on password-protected devices. Analysis was descriptive at the group level: for each item, the percentage of correct answers on the pre-test and post-test was calculated, and the change was interpreted as the percentage difference. The results are reported in the results section, and their implications for the marketing practices of the Petra Farmers’ Group are discussed. Given that the program’s objective emphasizes the acquisition of core knowledge competencies for immediate implementation, inferential testing was not prioritized; the findings are positioned as a program evaluation ready for replication in similar contexts.

RESULTS AND DISCUSSION

The pre-test revealed a low knowledge base across all three indicators, with an average correct answer rate of 16.4% (Brand identity & content plan: 17.3%; Digital channels & optimization: 12.0%; Distribution management: 20.0%).

Table 1. Pre-test and Post-test Results

No	Question	Pre-test (%)	Post-test (%)	Gain (percentage points)
1	Operational meaning of <i>brand identity</i> in the context of SoE Tangerines	7	87	80
2	The main reason for brand identity consistency on packaging, WhatsApp, and Instagram	33	100	67
3	The most appropriate product narrative to highlight the uniqueness of SoE Tangerines	33	80	47
4	Weekly content plan during harvest season	13	80	67
5	Minimum elements of a one-page brand identity guide	0	87	87
6	Key WhatsApp Business features that support sales	0	100	100
7	The most informative marketplace product titles	13	93	80
8	Product photography practices that meet basic standards	27	93	66
9	Simple indicators for evaluating the effectiveness of digital promotions	20	93	73
10	First steps before trying paid advertising	0	87	87
11	Choosing the right packaging for local fresh orange delivery	40	87	47
12	Post-harvest steps that support consistent quality	27	87	60
13	Distribution arrangements that improve delivery accuracy	13	87	74
14	Sales package strategies tailored to market segments	13	93	80
15	Cost components to consider when setting shipping rates	7	93	86

The low initial scores for the Petra Farmers’ Group’s understanding of brand identity and content planning, digital channels and optimization, and distribution management are likely related to the participants’ characteristics: most are over 41 years old and have only completed elementary and junior high school, resulting in very limited exposure to digital branding concepts. Their understanding of digital channels and how to improve them is also not yet optimal because participants rarely, if ever, use social media platforms such as WhatsApp, Facebook, TikTok, and Instagram. The distribution management they employ is not yet optimal because participants do

not understand the importance of safe packaging, consistent quality, market segmentation, and the cost components that must be calculated

This pattern indicates a clear need to strengthen brand identity consistency, digital channel literacy (particularly the use of WhatsApp Business features, marketplace storefronts, and basic metrics), and the discipline of tracking sent messages. These findings align with SME mentoring reports that described similar weaknesses prior to the implementation of digital marketing branding interventions (Hariyana, 2023; Martina et al., 2025; Nugraha & Nugraha, 2025; Rifai et al., 2025; Thamrin et al., 2025; Wardani & Lestari, 2025).

Digital channel optimization efforts are aimed at introducing participants to and familiarizing them with the most accessible, cost-effective channels that align with the characteristics of the farmer group, namely WhatsApp Business, Instagram Business, and online marketplaces. WhatsApp Business is positioned as the primary channel for order communication and product catalog presentation; Instagram Business as a medium to build product visibility and highlight the unique story of SoE Keprok Oranges; and marketplaces as an additional channel to expand market access beyond the local network. The main outputs of this phase are the WhatsApp Business catalog and draft Instagram posts for The WhatsApp Business catalog includes product names, photos, fruit grades (A: large and uniform; B: medium, good quality for consumption; C: suitable for consumption, less uniform appearance), units of sale, prices, descriptions of advantages, order contact information, and shipping details. The grading system helps potential buyers understand quality variations and facilitates transparent pricing. Meanwhile, the Instagram post draft combines product photos, a narrative highlighting the unique origin and the characteristic sweet-and-sour flavor of SoE Keprok Oranges, information on health benefits, a call to action, ordering contact information, and promotional hashtags, so that the content serves not only as a sales platform but also as a means of building brand identity and emotional appeal for consumers.

The optimization process involves five steps: (1) selecting clear and appealing product photos; (2) writing informative descriptions that include origin, grade, price, unit of measurement, and ordering instructions; (3) using relevant keywords and hashtags, such as SoE Tangerines, TTS local products, and NTT horticulture; (4) setting up quick reply messages on WhatsApp Business for common questions (price, stock, pickup location, delivery schedule); and (5) recording interactions with potential buyers as a basis for a simple evaluation of market interest.



Figure 1. Participants of the Petra Farmers' Group practicing WhatsApp Business catalog setup during a digital channel demonstration session

In addition to digital outputs, participants were introduced to a simple order recording format and distribution workflow. The order recording format includes the order date, buyer's identification and contact information, delivery address, fruit grade, quantity and unit price, total price, payment method and status, shipping date, mode of transportation, order status, and special notes. The distribution workflow consists of order receipt, stock confirmation, sorting by grade, weighing and packaging, payment confirmation, shipping, receipt confirmation, and recording of complaints or feedback. These two tools help farmer groups organize the ordering and shipping

processes in a documented manner, so that the marketing workflow no longer relies entirely on verbal communication or individual memory.

These responses demonstrate a high level of retention of the material in the realm of practical skills and indicate an initial readiness to adopt brand identity standards and digital channel-based promotional procedures. This engagement pattern is consistent with findings from brand identity training and digital mentoring that emphasize an applied curriculum with hands-on sessions as a catalyst for adopting new marketing behaviors (Fauzi et al., 2026; Hariyana, 2023; Martina et al., 2025; Rifai et al., 2025; Thamrin et al., 2025; Wardani & Lestari, 2025).

Participants' responses to the educational activities were measured in two ways: the achievement of practical outcomes per participant and participants' verbal feedback at the end of the session. Data on the achievement of outcomes are presented in Table 2

Table 2. Achievement of Practical Outcomes per Participant

Outcome	Number of successful participants	Percentage (n=20)
Creating a WhatsApp Business profile	17	85
Drafting Instagram content	16	80
Taking product photos according to basic standards	20	100
Understanding order recording formats	20	100%

From the table, the simplest and most technical learning outcomes namely, taking product photos and understanding the order recording format were achieved by all participants (100%). Meanwhile, the learning outcomes requiring more steps and intermediate digital skills creating a WhatsApp Business profile and drafting Instagram content were achieved by 85% and 80% of the participants, respectively. The three participants who were unable to create a WhatsApp Business profile and the four who were unable to draft content faced technical challenges due to limitations with their phones and internet connections during the session; these participants were provided with written guidelines to complete independently after the activity.

In addition to the data on the achievement of learning outcomes, participants' verbal feedback at the end of the session indicated a positive reception of the material presented. Petra, the head of the Farmers' Group, stated, *"I'm pleased and happy; now I have a better understanding of how to market our oranges so that more people know about them."* This response reflects that the activity not only increased knowledge but also built participants' motivation to start applying digital channels and brand identity in their daily marketing practices. Nevertheless, this initial motivation needs to be supported by ongoing mentoring to ensure that the implementation of the outcomes does not stop once the activity concludes.

The post-test recorded a substantial improvement with an average correct answer rate of 89.8%, or an increase of 73.3 percentage points compared to pre-intervention; the increase was consistent across all indicators (Brand identity & content plan: 86.7%, up 69.4 points; Digital channels & optimization: 93.3%, up 81.3 points; Distribution management: 89.3%, an increase of 69.3 points). Complete data per item is presented in Table 1.

Table 3. Pre-test and Post-test Results for Each Indicator

Indicator	Pre-test (%)	Post-test (%)	Gain
Brand identity and content plan	17.3	86.7	69.4
Digital channels and optimization	12.0	93.3	81.3
Distribution management	20.0	89.3	69.3
Overall average	16.4	89.8	73.4

Among the three indicators, the highest increase was observed in the digital channels and optimization indicator, at 81.3 percentage points. Meanwhile, the brand identity and content planning indicator increased by 69.4 percentage points, while distribution management increased by 69.3 percentage points. This difference indicates that all aspects of the intervention led to a

significant increase in knowledge, but the digital channel materials appeared to be easier for participants to understand. This is likely related to the nature of the materials, which are demonstrative, concrete, and provide immediate feedback. Participants could immediately see the results of their practice, such as WhatsApp Business profiles, product catalogs, draft posts, keywords, and quick reply messages. Conversely, brand identity and distribution materials require a more complex thought process and adjustments. Brand identity demands the ability to formulate narratives, select visual elements, and develop a consistent content plan, while distribution management relates to operational practices, infrastructure conditions, packaging availability, and support from external parties such as couriers, merchants, or distributors.

The pattern of improvement at the item level also reveals variations in the difficulty of the material. For the brand identity and content plan indicators, participants showed significant improvement in their understanding of the basic elements of brand identity, particularly the operational meaning of brand identity and the essential elements of a brand guide. However, performance on the product narrative and content plan items was relatively lower compared to other items. This indicates that participants are beginning to understand the importance of brand identity but still require further practice to translate that understanding into structured product narratives and content plans. Thus, the basic conceptual aspects are relatively easier to grasp, while the creative-expressive aspects still require repeated guidance.

Regarding digital channel and optimization indicators, the most notable improvement occurred in the key features of WhatsApp Business, which saw a gain of 100 percentage points. This finding reinforces the hypothesis that materials that are directly applied and whose results are easily observable tend to yield greater knowledge gains. Participants were able to directly observe the functions of the business profile, catalog, operating hours, and quick replies as communication tools with buyers. However, for items requiring strategic consideration such as initial steps before trying paid ads post-test scores remained lower compared to WhatsApp Business features. This indicates that using basic digital channel features is easier to grasp than advanced optimization planning, which requires an understanding of the target market, content readiness, promotional budgets, and ad effectiveness evaluation.

Regarding the distribution governance indicator, knowledge improvement was also significant, but some items revealed distinct challenges. The item on packaging for short-distance delivery showed the lowest gain, at 47 percentage points. This does not mean the material was not understood, but rather that the initial score for this item was already the highest compared to the others. This indicates that participants already have practical experience in selecting packaging informally, although it is not yet fully in line with packaging principles that maintain product quality and freshness. Meanwhile, the items on sales package strategies and shipping cost components showed high post-test scores, at 93% each. These findings suggest that participants relatively easily grasp distribution aspects directly related to pricing calculations and buyer segmentation, but still require guidance on operational aspects such as sorting, packaging, and shipping arrangements.

The two items with the lowest scores product narrative and close-up packaging reveal two distinct types of challenges. The product narrative reflects creative-expressive challenges. Participants actually already possessed prior knowledge about the uniqueness of SoE Keprok Oranges, but were not yet accustomed to formulating it into a brief, engaging, and consistent product narrative for promotional purposes. Meanwhile, the close-up packaging item indicates an adaptive challenge. Participants had established operational habits based on daily experience, but these habits needed to be adapted to safer packaging standards that align with consumer needs. Therefore, follow-up activities should focus on two distinct strategies: repeated exercises in crafting product narratives and content plans for brand identity, and demonstrations comparing old and new packaging methods for distribution. Achieving optimal results in both areas through a single awareness session is challenging, necessitating ongoing guidance to ensure that increased knowledge evolves into more consistent marketing practices.

This increase is consistent with previous evidence that a multi-tiered intervention comprising awareness-raising, practical training, and mentoring effectively accelerates digital

branding literacy and drives changes in marketing practices (Hariyana, 2023; Martina et al., 2025; Nugraha & Nugraha, 2025; Rifai et al., 2025; Thamrin et al., 2025; Wardani & Lestari, 2025).

There was a significant increase in knowledge across all three indicators, from an average of 16.4% to 89.8%, followed by the development of several practical outputs that farmer groups can use in their marketing activities. Regarding brand identity, participants were able to draft brand identity guidelines for SoE Tangerines that included the product name, primary color palette, a narrative highlighting the product's uniqueness, and examples of promotional text. The narrative of the product's uniqueness for emphasizes the origin of the fruit from TTS Regency, its distinctive sweet-tart flavor profile, and the freshness of the fruit picked directly from the orchard. Product differentiation based on grade is also included in the guidelines: Grade A for large, uniform-sized fruit; Grade B for medium-sized fruit with good eating quality; and Grade C for fruit that is still suitable for consumption but has a less uniform appearance. This differentiation helps farmer groups present product information more clearly and supports more transparent pricing.

In terms of digital channels, participants began setting up the basic features of WhatsApp Business, particularly the business profile, product catalog, and quick reply messages. The product catalog includes photos, product names, fruit grades, prices, units of sale, descriptions of key features, ordering contact information, and shipping details. Quick reply messages were created to answer common questions from potential buyers, such as pricing, stock availability, pickup locations, and delivery schedules. Additionally, participants drafted Instagram posts that combined product photos, unique narratives, benefit information, calls to action, ordering contact information, and relevant hashtags, such as Jeruk Keprok SoE, TTS local products, and NTT horticulture. Marketplaces were also introduced as an additional channel to expand marketing reach beyond local networks.

In terms of distribution management, participants developed a simple order-tracking form that includes the order date, buyer's identification and contact information, delivery address, fruit grade, order quantity, unit price, total price, payment method and status, shipping date, mode of transportation, order status, and special notes. Participants also mapped out the distribution workflow, starting from order receipt, stock confirmation, sorting by grade, weighing and packaging, payment confirmation, shipment, delivery confirmation, to the recording of buyer complaints or feedback. This output helps farmer groups organize the ordering and shipping processes in a more documented manner.

Participants' engagement was evident in their active involvement in developing deliverables, their willingness to independently use the basic features of WhatsApp Business, and their ability to draft Instagram posts with guidance from the PkM team. Recording interactions with potential buyers during the practical phase also served as an early indicator of participants' readiness to interpret market responses to products marketed through digital channels. With the availability of brand identity guidelines, a WhatsApp Business catalog, Instagram post drafts, order recording formats, and distribution workflows, the farmer groups have the basic tools to shift their marketing approach from direct sales and verbal communication toward a more documented, visual marketing strategy that has the potential to reach buyers beyond the local market. However, the continued use of these outputs remains dependent on the farming groups' consistency in applying the formats and channels that have been introduced. This pattern aligns with findings from SME mentoring programs that position branding and digital channels as instruments with the potential to strengthen buyer trust, process regularity, and readiness for market expansion (Fauzi et al., 2026; Hariyana, 2023; Martina et al., 2025; Rifai et al., 2025; Thamrin et al., 2025; Wardani & Lestari, 2025).

The results of this activity show a substantial increase in knowledge across all three indicators, with an average gain of 73.3 points (from 16.4% on the pre-test to 89.8% on the post-test). This increase aligns with the findings of several previous Community Service studies

indicating that tiered interventions can significantly enhance digital marketing knowledge. Oktiani and Maryanti (2025) reported a 72% increase in knowledge among agricultural SMEs following marketplace-based digital marketing training. Thamrin et al. (2025) found a score increase from 45/100 to 82/100 in community-based communication and branding training. Imiah & Hariyana (2023) demonstrate that quick wins such as logo/label updates and the opening of promotional channels enhance the visibility and promotional readiness of MSMEs. Martina et al. (2025) confirm that practice-based brand identity training yields measurable outcomes in the form of logos and content templates. Although the direction of improvement is consistent, the magnitude of the gain in this activity (73.3 points) is significantly higher compared to Rifai et al. (2025), who reported a knowledge gain of 32.5% (from 58% to 89%). This difference is likely due to a significantly different pre-test baseline: this activity started at 16.4%, whereas Rifai et al. (2025) began at 58%. A lower baseline allows for much greater room for improvement, as participants with almost no prior exposure tend to absorb new material more dramatically, and nearly all the content is new rather than repetition or correction of misconceptions. Additionally, the participants in this activity were horticultural farmers in rural NTT who had never been exposed to WhatsApp Business features or brand identity concepts, whereas the participants in the study by Rifai et al. (2025) were urban nugget SME operators who already had some experience selling digitally, albeit limited. However, it should be noted that this comparison is indicative due to differences in commodity context, participant characteristics, and measurement instruments across studies. Most previous studies also emphasized awareness and knowledge gain without measuring practical outcomes per participant. This activity addresses that gap by providing data on the achievement of outcomes: 85% successfully created a WhatsApp Business profile, 80% drafted Instagram content, and 100% understood the order recording format.

Among the three indicators, digital channels recorded the highest gain (81.3 points), surpassing brand identity (69.4 points) and distribution (69.3 points), which were nearly identical. Three factors are believed to have contributed to these results. First, the digital channel material is immediately actionable and provides instant feedback, allowing participants to see results in the form of an active WhatsApp Business profile, an organized catalog, and functional quick messages within minutes. This aligns with adult learning principles emphasizing that hands-on experience and immediate feedback reinforce knowledge retention (Endah et al., 2025; Saptanno et al., 2024; Wardani & Lestari, 2025). Second, the lowest pre-test score for the digital channel (12.0%) indicates that participants had almost no prior exposure to the taught features, meaning nearly all the knowledge gained was new, and the intervention's impact appeared more dramatic. Third, the two items with the highest gains across the entire instrument WhatsApp Business features (gain 100) and steps before paid advertising (gain 87) both fall under the digital channel indicator, suggesting that the most concrete and procedural material yields the greatest improvement. Conversely, brand identity and distribution contain items that require creativity (product narrative, gain 47) or adaptation of habits (packaging, gain 47), which necessitate a learning process longer than a single educational session. This pattern is consistent across every indicator: conceptual understanding items "why" tend to have lower gains than procedural application items "how" that are practiced directly, because the pre-test scores for conceptual items are higher. Regarding brand identity, the reason for consistency (No. 2) reached 100% on the post-test, but product narrative (No. 3) and content plan (No. 4) only reached 80%. In distribution, pricing and segmentation strategies (No. 14, 15) reached 93%, but operational aspects (packaging, sorting, delivery schedules) only reached 87%. This pattern underscores that the gap between understanding and practical application is a major challenge across all indicators, not just in distribution.

As a fresh horticultural product, SoE tangerines have characteristics that distinguish them from processed or manufactured products, and these characteristics influence the effectiveness of the digital marketing strategies implemented. First, the product is seasonal, so digital content must be designed adaptively based on the harvest calendar; it cannot rely on routine posts throughout the year. This finding is reflected in the harvest season content plan score (No. 4), which only reached 80% on the post-test, suggesting that seasonal content planning still requires repeated practice. Second, fresh products have a limited shelf life (perishability), so the speed of response

to orders is a critical factor orders must be immediately followed by sorting, packaging, and shipping before quality deteriorates. This characteristic explains why the WhatsApp Business quick reply feature received a perfect score (100%) on the post-test: participants realized that response speed is directly linked to the risk of product damage. Third, product quality is not entirely uniform size, color, and ripeness levels vary between fruits making grade differentiation crucial for price transparency and buyer expectations. Fourth, distribution depends on limited transportation infrastructure in the TTS region, so the reach of digital markets is not necessarily matched by delivery capabilities. These limitations make it difficult to fully simulate distribution logistics in training, as they involve external variables (couriers, transport schedules, distance, product damage during shipping) that are beyond participants' control. These four characteristics underscore that digital marketing for fresh horticultural products cannot adopt the same model as non-perishable products (Puspita et al., 2025; Rokhayati et al., 2026), and the design of PkM interventions must account for the gap between the ability to sell digitally and the ability to fulfill orders logistically. These differences in the commodity context also explain why the distribution gain in this activity (69.3 points) is relatively lower than the digital channel gain (81.3 points): the distribution of fresh horticultural products involves local logistical constraints that do not exist for processed products, making it difficult to fully simulate distribution scenarios in closed-room training.

This study has limitations because the evaluation was conducted immediately after the training, so it cannot yet demonstrate the long-term sustainability of digital marketing practices. Additionally, the impact on sales, market reach, and customer loyalty has not been measured. Therefore, follow-up programs need to conduct monitoring after one to three months to assess the consistency of digital channel usage and changes in marketing performance. Another limitation that must be acknowledged is the relatively small number of participants (n=20) from a single farmer group, so the results cannot be generalized to the context of other farmer groups without replication. The single-group design without a control group also does not allow for a definitive causal attribution to the increase in knowledge; it cannot be concluded that the increase was entirely caused by the intervention without comparing it to a group that did not receive training. Additionally, three participants were unable to create a WhatsApp Business profile and four participants were unable to draft Instagram content due to technical constraints (limited mobile phones and internet connectivity), indicating that digital infrastructure factors remain structural barriers beyond the control of educational activities. The pre/post-test instruments, which only measured cognitive knowledge, also did not capture changes in motor skills (e.g., photography skills) and attitudes (e.g., confidence in using digital channels) separately, leaving the picture of the activity's impact incomplete.

Necessary follow-up actions. Based on the results and limitations of the activity, several follow-up actions need to be taken to ensure a sustainable impact. First, periodic mentoring should be conducted one to three months after the activity to monitor the consistent use of digital channels, help participants overcome technical challenges, and provide feedback on uploaded content. Second, aspects requiring creativity and adaptation of habits specifically product narratives (gain 47) and packaging selection (gain 47) need to be addressed through repeated individual mentoring, not merely group sessions. For product narratives, mentoring in the form of repeated writing exercises with feedback from the PkM team is necessary so that participants can formulate structured product stories. For packaging, a direct comparison demonstration between the old methods (sacks, baskets) and the new methods (segmented cardboard, ventilated packaging) needs to be conducted so that participants can see for themselves the difference in product protection during shipping. Third, real-world distribution simulations should be conducted as follow-up activities, such as through test orders with local couriers, to bridge the gap between distribution knowledge (post-test 89.3%) and the implementation of logistics that rely on external parties. Fourth, monitoring should include real-world marketing performance indicators, such as the number of orders via WhatsApp Business, the geographic reach of buyers, and customer complaint rates, to measure whether increased knowledge translates into changes in business practices and performance. Fifth, for participants facing digital infrastructure constraints, device-sharing schemes or the use of communal digital facilities should be considered as

temporary solutions to ensure that device limitations do not become permanent barriers. Sixth, replicating the model among other horticultural commodity farmer groups in NTT is necessary, incorporating a control group and a pre-test/post-test control group design to strengthen the validity of the findings and enable broader generalization.

CONCLUSION

The marketing capacity-building initiative substantially improved the Petra Farmers' Group's knowledge and initial marketing readiness, as shown by the increase in the average correct answer rate from 16.4% before training to 89.8% after training. The highest gain occurred in digital channels and optimization, followed by brand identity and content planning, and distribution management. The program also produced practical outcomes, including WhatsApp Business profiles, Instagram content drafts, order recording formats, draft brand identity guidelines, a grade-based product catalog, and a documented distribution workflow. These findings indicate that a tiered intervention consisting of outreach, hands-on training, and evaluation is effective in strengthening digital marketing knowledge among horticultural farmer groups with low baseline capacity. However, the seasonal, perishable, and logistics-dependent nature of fresh horticultural products shows that distribution cannot be fully improved through a single training session. Therefore, follow-up mentoring, post-intervention evaluation, replication with other farmer groups, and the involvement of village policymakers are needed to ensure sustainability, strengthen implementation, and address infrastructure-related distribution barriers.

ACKNOWLEDGMENTS

The author would like to thank the Research and Community Service Institute (LPPM) of Widya Mandira Catholic University for the 2025 community service grant that funded this activity.

REFERENCES

- Amaral, M. A. L., Sepriano, S., & Putri, E. A. R. (2025). *Marketing Management Monograph: Consumer Behavior toward Lontar Packaging*.
- Amaral, M. A. L., Watu, E. G. C., Sinlae, A. A. J., & Man, S. (2024). *Assistance in product development and marketing of the tourism potential of Kuanheun village*. 8 (September), 2168–2174.
- Endah, K., Setianingsih, W., Supriatman, R. D., & Suryana, D. A. (2025). Strengthening the *Safari: Indonesian Journal of Community Service*, 5(4), 229–241.
- Fauzi, Khairunnisa, Kurniasih, M., Ardiansyah, A., & Windreis, C. (2026). Training on Local Product Branding for Rural Youth via Digital Platforms. *Journal of Community Service and Educational Research*, 4(3), 15057–15066.
- Gusmaliza, D., Aminah, S., & Anggraini, I. (2025). Social Media-Based Digital Marketing Training for Strengthening. *Journal Altifani Research and Community Service*, 5 (3), 306–312. <https://doi.org/10.59395/altifani.v5i3.714>
- Ilmiah, I., & Hariyana, N. (2023). Mentoring and Product Branding Implementation as a Marketing Strategy for the “Rempeyek Mak Sri” MSME. *Jurnal Pengabdian Kepada Masyarakat Nusantara*, 4 (3 SE-Articles), 1627–1634.
- Jian, Y., Lin, J., & Zhou, Z. (2021). The role of travel constraints in shaping nostalgia, destination attachment, and revisit intentions and the moderating effect of prevention regulatory focus. *Journal of Destination Marketing & Management*, 19 , 100516. <https://doi.org/10.1016/J.JDMM.2020.100516>
- Kabin Indonesia. (2024). *Indonesian MSMEs*. Kadin.Id.
- Ministry of Cooperatives and SMEs. (2020). *10 million SMEs targeted to go digital this year*.
- Komdigi. (2024). *A Decade of Digital Transformation of SMEs Driving National Economic Growth*.
- Kotler, P., Keller, K. L., Chernev, A., & Limited, P. E. (2025). *Marketing Management -- Global Edition*. Pearson Education, Limited.

- Martina, D. A., Kurdaningsih, D. M., & Trimamah, T. (2025). Brand Identity Training as a Strengthening of Digital Marketing Promotion for SMEs in Demak Regency, Central Java. *UNDIKMA Community Service Journal*, 6 (2 SE-Articles), 383–394. <https://doi.org/10.33394/jpu.v6i2.14759>
- Mau, I. T. B., Wutun, M. B. M. G., Lejap, H. H. T., Seran, A. M. I., Burin, S. N. B., Watu, E. G. C., Irianto, E. D. A., & Amaral, M. A. L. (2024). Family financial management in daily life: a practical approach for farmers and livestock breeders. *Journal of Community Empowerment Learning (JP2M)*, 5 (2 SE-Articles), 393–401. <https://doi.org/10.33474/jp2m.v5i2.21934>
- Nugraha, D., & Nugraha, N. (2025). Training on The Digitalization of Local Product Marketing To Enhance The Competitiveness of Smes in Cipakem Village. *Journal Of Sentra Abdimas*, 1(1), 52–60.
- Oktiani, A., & Maryanti, S. (2025). Digital Marketing and Branding Training for MSME Products to Strengthen the Local Creative Economy in Selebung Village, Central Lombok Regency. *Bhinneka Publishing*, 4(2), 1450–1456.
- Prayag, G., Gannon, M., Muskat, B., & Taheri, B. (2020). A Serious Leisure Perspective of Culinary Tourism Co-Creation: The Influence of Prior Knowledge, Physical Environment, and Service Quality. *International Journal of Contemporary Hospitality Management*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/ijchm-10-2019-0897>
- Puspita, D., Syahri, R., & Putrawansyah, F. (2025). Social Media-Based Digital Marketing Training To Strengthen The Capacity Of The Sehase I Farmers' Group. *Fordicate Journal Of Community Service (Informatics Engineering Dedication)*, 4(2), 75–81.
- Rifai, A., Wardani, H. W., & Andini, P. (2025). *Digital Transformation of MSMEs: Branding Strategies and Marketplace Optimization for Nugget Business Owners*. 3(1), 35–40.
- Rokhayati, I., Purnomo, S. D., Zumaeroh, Oktavianto, A. N., Purwati, A., Irvani, R., Pasha, M., & Ariesta, A. I. (2026). Strengthening Branding and Marketing Digitalization as Strategies to Enhance the Competitiveness of SMEs in the Tunas Mulia Women's Group, Tamksogra Village. *Journal of Community Extension and Empowerment (JPPM)*, 05(01), 256–269.
- Salma, T. D., & Kurniawan, M. F. (2026). Strengthening Digital Branding for SMEs Through Content Training and Mentoring. *Journal of*, 5(1), 634–642.
- Saptenno, F., Laitupa, A., Jani, & Tuasuun, S. (2024). The Impact of Digital Marketing Training on Sales of Local Products in the Rural Village of Larike. *Journal of Community News*, 2(4), 259–267.
- Thamrin, H., Saraswati, E., & Handoko, A. I. (2025). *Development of Local Community Communication: Marketing Strategies and Branding for MSMEs in Sirah Pulau Padang Subdistrict, Ogan Komering Ilir Regency*. 14(1), 31–40.
- TTS, B. K. (2024). *A Strategic Study of the Government's Role in Enhancing the Market Value of Soe Tangerines*.
- Wardani, D. K., & Lestari, D. (2025). The Pressure, The Opportunity, and The Understanding of Tri Pantangan Tamansiswa (Tamansiswa's Three Constraints) on Student Academic Cheating. *Journal of Educational Research and Development*, 9 (1 SE-Articles), 136–146. <https://doi.org/10.23887/jppp.v9i1.87582>
- Watu, E. G. C. (2025). Optimizing Cultural Contact and Memorable Tourist Experiences to Enhance Destination Image and Marketing Mix at Oe. *Aksioma*, 4(1), 48–57.
- Watu, E. G. C., Amaral, M. A. L., & Adrianus, J. S. (2024). Financially Savvy Farmers: Financial Literacy Training for Farming Families. *Journal of Research Innovation and Community Service*, 4 (2), 232–239. <https://doi.org/10.53621/jppmas.v4i2.361>