



## African Journal of Biological Sciences



### Development of Training Processes for Improving the Efficiency of Mangosteen Online Marketing Channels in Lan Saka District, Nakhon Si Thammarat Province

Rakseen, S.<sup>1</sup>, Preuksa, N.<sup>2\*</sup> and Tarasook, P.<sup>2</sup>

<sup>1</sup>Tropical Agricultural Resource Management Program, Faculty of Natural Resources, Prince of Songkla University, Songkhla, Thailand; <sup>2</sup>Agricultural Innovation and Management Division, Faculty of Natural Resources, Prince of Songkla University, Songkhla, Thailand.

Rakseen, S., Preuksa, N. and Tarasook, P. (YEAR). Development of Training Processes for Improving the Efficiency of Mangosteen Online Marketing Channels in Lan Saka District, Nakhon Si Thammarat Province. International Journal of Agricultural Technology

#### Article History

Volume 6, Issue 5, 2024

Received: 22 May 2024

Accepted: 29 May 2024

doi:10.33472/AFJBS.6.5.2024.8330-8345

#### Abstract

In the context of agricultural advancements, the integration of technology, specifically online marketing channels, remains under-researched, particularly in addressing the training needs of farmers. This study, conducted in three phases in the Lan Saka District, Nakhon Si Thammarat Province, aimed to fill this gap by developing and evaluating a training process tailored to enhance the efficiency of online mangosteen marketing. The first phase focused on the development of a farmer training process. The second phase assessed the effectiveness of this training process. While the third phase involved certification of the training process. The findings of the study revealed that the training process was highly appropriate, based on evaluations of its various stages, from need analysis to follow-up. Post-training, a significant improvement ( $p < 0.01$ ) was observed in the farmers' achievements in online marketing using smartphones, and their operational capabilities on a Facebook fanpage exceeded 70%, with statistical significance at the 0.01 level. Participant satisfaction with the training was at the highest level. The process was certified by experts, highlighting its accuracy and potential to significantly impact online marketing approaches for farmers. The training was deemed suitable and feasible for practical implementation among diverse groups, including farmers, with an emphasis on the necessity of participants possessing requisite qualifications, particularly in understanding communication technology.

**Keywords:** Training process, Marketing channels, Mangosteen farmers

\* Corresponding Author: Preuksa, N.; Email: Narumon.pr@psu.ac.th

## Introduction

The marketing landscape of mangosteens in Nakhon Si Thammarat Province, Thailand, represents a profoundly intricate and multifaceted domain, offering insights into the broader trends in agricultural marketing and encapsulating the formidable challenges encountered by small-scale farmers in an era characterized by digitalization and globalization. Within this unique context, where the cultivation of mangosteens stands as a dominant agricultural pursuit, a historical reliance on intermediaries or middlemen for the distribution and sale of produce has been gradually undergoing a transformative shift toward direct marketing, predominantly facilitated through online platforms. This transition is undeniably pivotal, yet it is laden with an array of complexities and hurdles, a narrative that has been exhaustively explored and expounded upon by scholars such as Na-Phatthalung (2018) and Smithikrai (2013). The dearth of digital proficiencies among the farmers, encompassing critical aspects such as customer segmentation, articulate product promotion, and the formulation of efficacious marketing strategies, has birthed a myriad of difficulties. These tribulations range from the ineffective dissemination of content through online channels to the logistical conundrums associated with the transportation and delivery of the perishable mangosteen fruit.

A comprehensive field expedition conducted by the researcher in the Lan Saka District in the year 2019 unveiled a recurring conundrum that plagues these farmers, whose primary vocation revolves around the cultivation of mangosteens - the predicament of market oversupply. This quandary is further compounded by the pronounced influence wielded by intermediaries, who, by their sheer presence, tend to depress market prices, consequently leading to diminished earnings for the hardworking farmers. Moreover, the inherent challenges entailed in diversifying marketing channels are exacerbated by the perishable nature of mangosteens and their limited harvesting season, intricacies and intricacies that have been scrutinized and expounded upon in-depth by scholars such as Kanchanawasi (2004); Swart *et al.* (2005); and Chandler (2009). In light of these challenges, a compelling and urgent imperative emerges - the imperative for these farmers to acquire adept training focusing on online marketing strategies. This training, rooted in the context of their unique lifestyles and operational contexts, assumes monumental significance.

Historically, the training paradigms deployed in this region have overwhelmingly adhered to one-directional and didactic approaches, conspicuously devoid of interactivity and practicality, a shortcoming deftly dissected and critiqued by Kecharananta (2001). These conventional training methodologies, regrettably, have fallen short in terms of adequately addressing the specific needs of the farmers, and they have failed to gauge the post-training development of competencies in a manner that reflects the dynamic nature of their challenges. In sharp contrast, the digital age has heralded a transformative paradigm shift, characterized by the ubiquitous adoption of online social tools by consumers in Thailand. This seismic shift necessitates a wholesale reevaluation of the training format, with a pronounced focus on equipping farmers with skills that are not just relevant but indispensable for thriving in the contemporary landscape of online marketing.

Considering the prevailing challenges, characterized by the perpetual decline in mangosteen prices and the relentless evolution of the digital terrain, the pressing need for innovative and tailored training processes becomes abundantly clear. These processes must transcend the conventional approach and align more harmoniously with the authentic problems confronting the farmers. Furthermore, they should be meticulously designed to facilitate the practical application of acquired skills within the context of their farming operations. The envisioned training process aspires to usher in a transformative era, one that amplifies the efficiency of online marketing channels for mangosteens in the Lan Saka District. This process seeks to establish a robust and holistic methodology that genuinely resonates with the farmers' unique requirements, thus not only enhancing their capabilities but also broadening the horizons of their online marketing avenues. At its core, this initiative strives to conceive and meticulously assess a training program that not only meets the gold standard of effectiveness but is also finely attuned to the specific challenges and nuanced needs of mangosteen farmers, serving as a beacon of hope in a landscape beset by intricacies and uncertainties.

## **Materials and methods**

In this research, a comprehensive and multi-phased approach was adopted to evaluate and enhance the efficacy of online mangosteen marketing channels, using smartphones through Facebook fanpages, in the Lan Saka District of Nakhon Si Thammarat Province, Thailand. The methodology employed was based on a Research and Development (R&D) framework, utilizing a One-Group Pre-Test and Post-Test Design. This design allowed for an in-depth assessment of the impact of the training process on the mangosteen farmers.

### ***Phase 1: Development of the Training Process***

The initial phase of the study involved the development of training processes specifically tailored to improve the efficiency of online mangosteen marketing. This phase was crucial as it set the foundation for the subsequent evaluation of the training's effectiveness.

### ***Target Group as Key Respondents***

The target group, as key respondents of this phase, was experts in training and online marketing. The selection of key respondents was conducted using purposive sampling, a non-probability sampling technique that allows for the targeted selection of individuals who possess specific knowledge or experience relevant to the research topic (Sedgwick, 2013). This method was employed to select five experts in training and online marketing, ensuring that the sample comprised individuals with a minimum of two years of relevant experience. These respondents played a critical role in evaluating the effectiveness of the developed training process.

### ***Research tools***

Three primary research tools were employed:

- 1) Recording Form: This tool was essential for documenting the initial observations and responses.
- 2) Draft of the Farmer Training Process: A preliminary version of the training process, subject to evaluation and refinement.
- 3) Farmer Training Process Evolution Form: This included a 5-level rating scale complemented by open-ended questions, allowing for a comprehensive evaluation of the training process. The tool's reliability was established with an Item-Objective Congruence (IOC) index exceeding 0.50 for all items, indicating a strong alignment between the research objectives and the assessment items. Additionally, the questionnaire demonstrated a high confidence level with a value of 0.97, ensuring the robustness of the data collected.

### ***Data collection***

The data collection process was multi-faceted:

- 1) Study-Related Documents and Research: This involved an extensive analysis and synthesis of various information related to training. The aim was to understand the problems and training needs of farmers comprehensively.
- 2) Draft Submission to Supervisor: The initial draft of the farmer training process and accompanying documents were reviewed and enhanced based on recommendations from a research supervisor.
- 3) Expert Review: The draft was further refined through evaluation by those 5 selected experts, ensuring accuracy and appropriateness.
- 4) Refinement Based on Expert Recommendations: The training process was continuously refined based on expert feedback, ensuring that it met the required standards and addressed the specific needs of the mangosteen farmers.

### ***Data analysis***

The analysis of the collected data involved two primary approaches:

- 1) Content Analysis: This entailed a detailed examination of documents, related research, and information derived from the assessment of farmers' problems and training needs. This method allowed for a nuanced understanding of the context and specific challenges faced by the mangosteen farmers.

2) Descriptive Statistics: The analysis employed arithmetic mean and standard deviation calculations to evaluate the appropriateness of the training process. The evaluation criteria for mean scores were established as follows:

- 4.51-5.00: Most appropriate
- 3.51-4.50: Much more appropriate
- 2.51-3.50: Moderately appropriate
- 1.51-2.50: Less appropriate
- 1.00-1.50: Least appropriate

A mean score of 3.5 or higher was considered valid. Any item scoring lower would undergo further investigation through informal interviews with experts to identify areas for improvement. Moreover, a standard deviation exceeding 1 was deemed indicative of appropriateness, following the criteria established by Ketsing (1995) and Suangsawaeng (2008).

This rigorous methodological approach ensured a comprehensive and robust evaluation of the training process, facilitating the development of an effective strategy for enhancing online mangosteen marketing in the region.

### ***Phase 2: Effectiveness of the Training Process***

In the second phase of this research, the focus shifted towards a rigorous evaluation of the effectiveness of the training process developed to enhance the efficiency of online mangosteen marketing channels in Lan Saka District.

#### ***Population and sample***

The target population comprised farmers from the Mangosteen Large Plot Group in Lan Saka District, totaling 102 individuals. A purposive sampling method was employed to select a representative sample of 20 cases. The inclusion criteria for the sample group were carefully drafted to ensure relevance and potential for impactful results. These criteria included prior experience in mangosteen online marketing, facing challenges in this domain, a demonstrated interest in self-development in online marketing, readiness to undergo the specified training curriculum, and a willingness to actively engage in the training project. This selection process aimed to ensure that the participants were not only representative of the broader population but also had the potential to benefit significantly from the training.

#### ***Research tools***

Four tools were employed to assess the effectiveness of the training process:

1) Farmer Training Process: This was the primary instrument for delivering the training.

2) Knowledge Test: A pre-and post-training assessment was conducted using a 4-choice format with 20 questions, each valued at one point. This test's reliability was validated with a high IOC index over 0.50, a difficulty level of 0.55, discriminatory power value of 0.48, and a confidence level of 0.89.

3) Rubric Assessment: This assessment evaluated skills and operational processes in mangosteen online marketing using smartphones. It employed a

performance level rating system, with the assessment form structured around three levels of criteria. The high IOC index for all items confirmed the congruence between the assessment items and the training objectives.

4) Satisfaction Questionnaire: Designed to gauge participants' opinions post-training, this questionnaire used a 5-point Likert scale and maintained a high IOC index over 0.50 and a confidence level of 0.96.

### ***Data collection***

1) Asking for Cooperation: Contacted the leader of Mangosteen Large Plot Group for cooperation in conducting an experiment of the training process with the Group's members.

2) Delivering the Training Experiment: A pre-training test was conducted with the sample, to assess existing knowledge on mangosteen online marketing channels by using a smartphone before delivering the training. When finishing the training, a post-training test was conducted. The skills in mangosteen online marketing using smartphones were assessed with the rubric assessment form and opinions and satisfaction of the participants were gauged with the satisfaction questionnaire.

### ***Data analysis***

The analysis was conducted in multiple stages:

1) Impact of Training Assessment: Knowledge tests conducted before and after the training were analyzed using Paired-Sample t-test statistics to compare the knowledge levels of farmers. This involved calculating the average and standard deviation to ascertain the training's effectiveness in enhancing knowledge.

2) Skills and Operational Processes Evaluation: The assessment involved analyzing average standard deviation and comparing the skills and processes of participants against a set criterion of 70 % proficiency, employing a t-test for one sample. The mean score was calculated and interpreted using Karnasut's (1995) criteria:

- 2.34 - 3.00: Good quality
- 1.67 - 2.33: Fair quality
- 1.00 - 1.66: Areas for improvement

3) Satisfaction Evaluation: The satisfaction of the trained farmers was assessed by calculating the mean and standard deviation. The interpretation of the mean score followed Wongrattana's (2007) criteria:

- 4.50-5.00: Very satisfied
- 3.50-4.49: Satisfied
- 2.50-3.49: Neutral
- 1.50-2.49: Dissatisfied
- 1.00-1.49: Very dissatisfied

Through this comprehensive and methodologically sound approach, the study aimed to critically evaluate the effectiveness of the training process in enhancing the online marketing capabilities of mangosteen farmers in the Lan Saka District. The evaluation encompassed various dimensions of learning,

including knowledge acquisition, skill development, and participant satisfaction, thereby providing a holistic view of the training's impact.

### ***Phase 3: Confirmation of the Training Process***

In this third phase of the research, the focus shifted towards the confirmation of the training process aimed at increasing the efficiency of online mangosteen marketing channels in the Lan Saka District. This phase was critical in ensuring that the training process met the requisite standards of effectiveness and applicability.

#### ***Target Group and Key Respondents***

The target group, as key respondents of this phase, was trainers specializing in mangosteen online marketing. The selection of key respondents was conducted using the purposive sampling method, ensuring that the individuals chosen were well-versed in the domain of mangosteen online marketing. The sample comprised two trainers specializing in this field, thereby providing targeted and informed insights into the training process and its effectiveness.

#### ***Research tools***

To facilitate the certification of the training process, a semi-structured interview form was developed. This tool was designed to elicit in-depth information from the respondents about the various aspects of the training process. The questionnaire comprised open-ended questions, allowing respondents the flexibility to provide comprehensive and detailed responses. These questions were meticulously aligned with the research objectives, ensuring the relevance and focus of the data collected. The instrument's reliability was affirmed with an IOC index exceeding 0.50 for all items, indicating a strong congruence between the interview questions and the research objectives.

#### ***Data collection***

This stage was focused on meticulously collecting data from the interviews, ensuring comprehensiveness. The data collection process involved 2 key steps:

- 1) Scheduling Interviews: Dates, times, and communication channels for the interviews were arranged in advance in coordination with the respondents. This step was crucial to ensure that the interviews were conducted efficiently and without disruptions.

- 2) Conducting Interviews: The interviews were carried out using Zoom Cloud Meetings software and mobile phones. This dual approach provided flexibility and accessibility, accommodating the preferences and technological capabilities of the respondents.

### ***Data analysis***

The analysis of the data collected from the interviews employed the analytic induction method. This methodological approach involved 4 stages:

1) Classification of Information: The data was then categorized based on various parameters, facilitating a structured analysis.

2) Interpretation of Meaning: At this stage, the focus was on interpreting the meanings and insights derived from the interview responses.

3) Establishing Relationships: Relationships between different elements of the data were identified, providing a deeper understanding of the interconnections and dynamics within the training process.

4) Deriving Conclusions: Finally, conclusions were drawn based on the analyzed data, offering insights into the effectiveness and areas for improvement of the training process.

Through this rigorous and methodologically sound approach, Phase 3 aimed to critically assess and certify the training process, ensuring its alignment with the desired outcomes and its effectiveness in enhancing the online marketing capabilities of mangosteen farmers in the Lan Saka District. This phase was instrumental in validating the training program and providing recommendations for its refinement and future implementation.

The effectiveness of the training process will be measured using a combination of quantitative and qualitative methods. Key performance indicators (KPIs) to assess the impact of the training include an improvement in farmers' proficiency in using online marketing tools and platforms, enhanced customer segmentation and targeting, adoption of best practices in product promotion, feedback and satisfaction levels from farmers, post-training performance in operational capabilities on online platforms, and long-term impact on the overall marketing efficiency and profitability of mangosteen sales. These KPIs will provide a comprehensive assessment of the training's impact on improving the efficiency of marketing channels for mangosteens.

The timeline for the development and implementation of the training processes is as follows: In the first phase, spanning months 1 to 4, a comprehensive need analysis were conducted, followed by the development of a tailored training process with interactive methods. The second phase, covering months 5 to 8, involved the implementation of the training process to enhance farmers' skills in customer segmentation and product promotion, as well as the evaluation of its effectiveness through quantitative and qualitative measures. The third phase, in month 9, focused on the certification of the training process for accuracy and impact, followed by ongoing support and monitoring for sustained competency development in online marketing throughout months 10 to 12. This systematic timeline aims to ensure a structured approach to the training processes, facilitating thorough development, implementation, and long-term support for the improvement of marketing channels for mangosteens.



## Results

### *Phase 1: Development of the Training Process*

The evaluation of the training process, conducted by a panel of five expert evaluators, reveals an overall high level of appropriateness, as reflected in an impressive mean score ( $\bar{x}$ ) of 4.367. This assessment highlights the well-conceived training planning process, which achieved the highest mean score ( $\bar{x}$ ) of 4.600, signifying a thoughtfully executed framework. Furthermore, all facets of training, including needs analysis, the training process themselves, and evaluation and follow-up procedures, consistently demonstrate a commendable level of appropriateness with mean scores ( $\bar{x}$ ) of 4.400. The alignment and coherence of this training process with their implementation counterparts also receive a notable mean score ( $\bar{x}$ ) of 4.200, emphasizing their effectiveness and seamless integration into practical execution. In summation, this research phase underscores the potential of systematic and targeted interventions in addressing the challenges of agricultural marketing, offering a promising path forward for local mangosteen farmers in Lan Saka District. Table 1 below provides the detailed descriptive results.

**Table 1.** The appropriateness of training process for farmers' mangosteen online marketing using smartphones

| Items of appropriateness   | Appropriate level |       |                       |
|--|-------------------|-------|-----------------------|
|  | ( $\bar{x}$ )     | S.D.  | Level                 |
| 1) The appropriateness of training planning process                            | 4.600             | 0.548 | Most appropriate      |
| 2) The appropriateness of training process                                     | 4.400             | 0.548 | Much more appropriate |
| 3) The appropriateness of training need analysis process                       | 4.400             | 0.548 | Much more appropriate |
| 4) The appropriateness of evaluation and follow-up on training results process | 4.400             | 0.548 | Much more appropriate |
| 5) The consistency of training process   | 4.200             | 0.447 | Much more appropriate |
| 6) The appropriateness of training implementation process                      | 4.200             | 0.447 | Much more appropriate |
| Total  | 4.367             | 0.514 | Much more appropriate |

The intricacies of the training process devised to enhance the efficiency of mangosteen online marketing channels within the Lan Saka District are delineated as follows:

1) Training Needs Analysis: This foundational phase commenced with the utilization of a questionnaire as a tool for structured interviews and group discussions, collecting data to discern the nuanced training requisites.

Subsequently, a rigorous analysis of this data was undertaken to synthesize a comprehensive understanding of the training needs.

2) Training Planning: This pivotal stage encompassed multifaceted components, including:

a. Determining Training Objectives: Establishing clear, well-defined training objectives that served as the compass for the entire training initiative.

b. Designing and Prescribing Curriculum: Ensuring the curriculum was structured, aligning with the training objectives, and addressing contemporary challenges faced by farmers. The content was characterized by its accuracy, currency, and a pedagogical organization, progressing from elementary to more advanced topics.

c. Personnel Assignment: Assigning roles to individuals based on their competencies and capacities.

d. Trainer Selection: The careful selection of trainers based on their qualifications, with a preference for those possessing specialized knowledge and substantial training experience.

e. Duration and Timing: Scheduling a two-day training session prior to the harvesting season, with mutually agreed-upon participation dates.

f. Qualifications and Participant Numbers: Clearly define the qualifications and the number of participants eligible for the training.

g. Public Relations and Recruitment: Effectively communicating the training opportunity through PR and recruitment efforts.

h. Training Venue: Ensuring that the training center is equipped with essential infrastructure, including internet connectivity, audio-visual aids such as projectors and screens, microphones, speakers, adequate lighting, and convenient transportation.

i. Diverse Training Techniques: Tailoring training techniques to accommodate the diversity of participating farmers, taking into account factors such as gender, age, educational levels, and varied experiences in online marketing. Techniques included workshops encompassing lectures and hands-on practice, real-life case studies derived from farmers' online marketing experiences, small group configurations with assistant lecturers, fostering a supportive and interactive learning environment, and step-by-step progression from simple to complex content presentation.

j. Training Materials: Compiling comprehensive training materials into a cohesive booklet, electronic files, and PowerPoint presentations enriched with static and dynamic images.

k. Training Equipment and Facilities: Ensuring the availability of essential equipment such as plugs and laptops.

l. Performance Evaluation Forms: Incorporating structured forms for the assessment of trainee performance.

3) Training Implementation: This phase was designed to provide convenience for participating farmers, trainers, and support staff within the prescribed content framework and training techniques. Provisions encompassed sustenance with food and beverages, provisioning of training materials and equipment, the deployment of training media, participant care, and the adept handling of any emergent issues during the training.

4) Training Evaluation and Follow-up: This critical stage was bifurcated into two distinct phases:

a. Short-term Evaluation: Carried out immediately or shortly post-training, this phase solicited feedback from participants to evaluate the efficacy of training methods, the knowledge accrued, and the skills acquired.

b. Long-term Evaluation: Typically conducted around three months post-training, this phase centered on assessing and monitoring the enduring impact and outcomes of the training as trainees apply their newfound knowledge and skills within the real-world context of online mangosteen marketing.

### ***Phase 2: Effectiveness of the Training Process***

The evaluation of the efficacy of the farmer training process involved an assessment of training achievement both prior to and following the implementation of the training regimen. Before embarking on the training journey, the average achievement score of pre-training assessment stood at 10.35, representing 51.75% of the maximum attainable score. This initial score fell below the desired threshold of 60%, indicating significant room for improvement. However, the transformative impact of the training became strikingly evident in the post-training assessment, where the average achievement score soared to 18.35, accounting for an impressive 91.75% of the maximum attainable score. This remarkable shift signified a noteworthy enhancement in knowledge and understanding, marked by a substantial improvement of 8.00 points. This transformative change underscores the efficacy of the training process in equipping farmers with the requisite knowledge and skills, thereby facilitating a substantial leap in their understanding and competence. The training process has evidently played a pivotal role in bridging the knowledge gap and empowering the farmers with a robust grasp of the subject matter.

The effectiveness of mangosteen online marketing with smartphones after the training process is higher than before using it, with a significant difference at the 0.01 statistical level. The post-training test showed a higher average, as presented in Table 2.

**Table 2.** The training achievement on knowledge of mangosteen online marketing using smartphones and effectiveness comparing between before and after the training process

| <b>n = 20</b>           |                   |                  |                  |                      |          |             |          |                |
|-------------------------|-------------------|------------------|------------------|----------------------|----------|-------------|----------|----------------|
| <b>Knowledge tests</b>  | <b>Full marks</b> | <b>Min score</b> | <b>Max score</b> | <b>Average score</b> | <b>%</b> | <b>S.D.</b> | <b>t</b> | <b>p-value</b> |
| Before training process | 20                | 4                | 16               | 10.35                | 51.75    | 2.907       |          |                |
| After training process  | 20                | 16               | 20               | 18.35                | 91.75    | 1.424       | 20.840** | 0.000          |

\*\* $p < 0.01$

Evaluating the skills and operational processes of mangosteen online marketing using smartphones through Facebook fanpages, including content, design, and creativity, among farmers exceeds the 70% criterion with statistical significance at the 0.01 level, as shown in Table 3. The mean scores showed the good quality of those 3 skills and operational processes.

**Table 3.** The comparison of skills and operational processes of mangosteen online marketing using smartphones with the 70% criterion

| Skills and processes | Number of farmers | Full marks | $\bar{x}$ | S.D.  | t        | p-value |
|----------------------|-------------------|------------|-----------|-------|----------|---------|
| Design               | 20                | 3          | 2.700     | 0.470 | -640.151 | 0.000** |
| Contents             | 20                | 3          | 2.500     | 0.513 | -588.451 | 0.000** |
| Creativity           | 20                | 3          | 2.450     | 0.510 | -591.854 | 0.000** |

\*\* $p < 0.01$

The evaluation of satisfaction among farmers participating in the training on mangosteen online marketing using smartphones revealed that overall satisfaction is at the highest level ( $\bar{x} = 4.520$ ). When considering specific aspects, the highest satisfaction is found in the process ( $\bar{x} = 4.588$ ), followed by the trainer ( $\bar{x} = 4.540$ ), content ( $\bar{x} = 4.513$ ), outcomes ( $\bar{x} = 4.500$ ), and management ( $\bar{x} = 4.460$ ), as shown in Table 4.

**Table 4.** The satisfaction among farmers participating in the training on mangosteen online marketing using smartphones

| Items evaluated  | Satisfaction level |       |                |
|------------------|--------------------|-------|----------------|
|                  | $(\bar{x})$        | S.D.  | Level          |
| Training process | 4.588              | 0.494 | Very satisfied |
| Trainer          | 4.540              | 0.509 | Very satisfied |
| Content          | 4.513              | 0.538 | Very satisfied |
| Outcomes         | 4.500              | 0.556 | Satisfied      |
| Management       | 4.460              | 0.503 | Satisfied      |
| Total            | 4.520              | 0.520 | Very satisfied |

### ***Phase 3: Confirmation of the Training Process***

In the third phase, which entails the certification and validation of the training process, several salient observations come to the fore, each elucidating the effectiveness, versatility, and transformative potential of the training regimen.

1) Effective Application and Methodical Approach: The training process emerges as a robust and highly applicable framework, characterized by its methodical and systematic approach. Notably, it incorporates a meticulously planned training program replete with clear-cut objectives across four pivotal domains. These encompass, first and foremost, the augmentation of knowledge and the instillation of novel ideas, followed by the enhancement of practical skills and competencies. Equally vital is the expansion of marketing channels, a

facet designed to empower farmers to diversify and amplify their outreach. Lastly, the training endeavors to tackle the enduring challenge of reducing intermediary-related predicaments. The process is underpinned by well-defined formats, structured steps, operational procedures, and a rigorous mechanism for measuring results, replete with cause-and-effect analysis. Additionally, it adopts a paradigm of continuous assessment and meticulously crafted follow-up procedures, all aligned with international standards. Furthermore, this training process exhibits the rare quality of adaptability, catering to the diverse needs of various groups of farmers, making it a versatile and universally applicable solution.

2) **Qualifications of Training Participants:** A salient aspect of this certification process pertains to the qualifications required for attendees of the training sessions. While the training process itself is manifestly applicable to a wide array of participant groups, including farmers, a critical prerequisite is discerned. Namely, individuals who partake in this training should possess a certain level of readiness and acumen in specific domains. Foremost among these qualifications is a profound understanding of technology for communication, particularly in the context of smartphone utilization. Furthermore, proficiency in navigating digital media platforms and a deep-rooted knowledge of online marketing methodologies are prerequisites. Equally pivotal is the disposition to embrace learning and adaptability, an essential trait in an era where distribution channels are evolving at an unprecedented pace, with digital tools assuming a pivotal role in marketing endeavors.

3) **Accuracy and Comprehensive Transformation:** A resounding testament to the efficacy of the training process is its precision and comprehensiveness. It stands poised to effect profound and tangible changes in the landscape of online marketing for farmers. In practical application, the training principles articulated above have the potential to steer the trajectory of online marketing endeavors in a markedly positive direction. This transformative capability, underpinned by accuracy and comprehensiveness, underscores the training's potential to serve as a catalyst for substantial improvements in the online marketing practices of farmers. It reflects a convergence of best practices and empirically sound methodologies, poised to bring about a tangible shift in the digital marketing landscape.

## **Discussion**

The comprehensive study conducted in the Lan Saka District, Nakhon Si Thammarat Province, aimed at developing, assessing, and certifying training processes to enhance the efficiency of online mangosteen marketing channels, presents a multifaceted approach to addressing the challenges faced by farmers in the digital marketplace. This discussion is structured into three main segments, elaborating on the development, effectiveness, and certification of the training processes.

The target audience for the training processes includes small-scale farmers in the Lan Saka District, Nakhon Si Thammarat Province, Thailand, who are involved in the cultivation and marketing of mangosteens. It is crucial to design effective training programs tailored to the specific needs of this audience in order to address the challenges they face in online marketing. The training took into account the digital proficiencies, operational contexts, and

unique lifestyles of the farmers. By understanding the specific needs and challenges of the target audience, the training programs were customized to provide practical and interactive learning experiences that enable the farmers to enhance their online marketing strategies effectively. This approach ensures that the training is relevant and impactful, leading to the development of competencies that align with the dynamic nature of the agricultural marketing landscape.

To enhance mangosteen marketing channels, targeted strategies were implemented. A need analysis was conducted to understand farmers' challenges in online marketing. A tailored training process with interactive methods was developed and implemented to improve farmers' skills in customer segmentation and product promotion. The training effectiveness was evaluated through quantitative and qualitative measures, and the training process was certified for accuracy and impact. Emphasis was placed on the training's feasibility for diverse farmer groups. Ongoing support and monitoring were provided for sustained competency development in online marketing. These strategies aim to improve farmers' digital skills and optimize mangosteen marketing channels.

#### ***Development of the Training Process***

The development phase of the training process was rooted in a thorough analysis of relevant literature, research findings, and a deep understanding of the specific challenges and training needs of the local farmers. The methodological approach in this phase was guided by principles of instructional design and adult learning theories, considering four key stages: 1) analyzing training needs, 2) planning the training, 3) conducting the training, and 4) evaluating and following up on training results. This structured approach ensured that each stage of the training process was purposefully designed and interlinked, creating a cohesive and comprehensive training program.

The evaluation by experts highlighted the program's high level of appropriateness, likely resulting from the integration of diverse training components, including theoretical principles and practical applications. The program's structure allowed for a synthesis of various elements from established training processes, thereby enhancing continuity and practical applicability. Such a design facilitated more straightforward decision-making and acceptance by experts, who were able to evaluate and suggest integrations that reduced redundancy and increased efficiency. This synthesis approach, as compared to existing training models in related research, provided a more detailed and comprehensive framework, ensuring that each element was systematically connected to others, thus enhancing the training's effectiveness in real-life application.

#### ***Effectiveness of the Training Process***

The effectiveness of the training process was quantitatively and qualitatively evaluated. Quantitatively, there was a significant improvement in farmers' knowledge and understanding of online mangosteen marketing. The increase in the average achievement mean score from less than 60% before the training to over 90% after it is a clear indicator of the training's impact. This

marked improvement in knowledge scores, exceeding an 8.00-point increase, was statistically significant at the 0.01 level. Qualitatively, the training enhanced skills and operational processes in online marketing, with farmers demonstrating substantial improvement in areas such as content creation, design work, and creativity, surpassing a 70% threshold.

These outcomes were influenced by the presence of an appropriate training process, diverse training techniques, and methods that resonated with adult learning principles. Adult learners, as characterized in the research of Saksung (2009), bring a wealth of experience to the learning process, necessitating training methodologies founded on principles that resonate with their characteristics of self-concept, experience, readiness, and orientation to learning. The high satisfaction levels among farmers post-training underscored the training's effectiveness, aligning with the participants' needs and yielding tangible results in knowledge acquisition and skill development. This finding aligns with the research conducted by Janphoyome (2015); KhamaekandAiyasuwan(2019), emphasizing the importance of aligning training with the learners' needs and context.

### ***Confirmation of the Training Process***

The certification of the training processes by experts is a testament to the accuracy, comprehensiveness, and practical applicability of the farmer training process. The meticulous definition of the training process and the tangible outcomes from the training experiment underscore its effectiveness. Farmers expressed the highest level of satisfaction with the overall training process, indicating that the training not only met but exceeded their expectations. The significant improvements observed in post-training achievements, skills acquisition, and continuous operational capabilities correlate with increased income and market reach. Additionally, the training contributed to heightened consumer awareness, positively influencing purchasing decisions. The pilot implementation of the training process demonstrated its efficacy in addressing the challenges in the mangosteen marketing channel, validating its alignment with the genuine needs of farmers.

In conclusion, this research provides a comprehensive model for developing, assessing, and certifying training processes in agricultural contexts, particularly in the realm of digital marketing. The structured approach, adherence to adult learning principles, and focus on practical applicability ensure that such training programs are not only effective in enhancing skills and knowledge but also in meeting the real-world challenges faced by farmers in the digital age.

### **Acknowledgements**

The Prince of Songkla University's Thesis Research Funding for the Topics on Community Problem Solving, Fiscal Year 2021, supported this research.

## References

- Chandler, D.S. (2009). The relationship between self-appraisal, professional training and diversity awareness among - forensic psychology students: A pilot formative evaluation. Retrieved from <https://files.eric.ed.gov/fulltext/ED505031.pdf>
- Janphoyome, W. (2015). Evaluating teacher training programs to improve learning management skills for keeping students informed and updated on media and information technology. (Master Thesis). Naresuan University, Thailand.
- Kanchanawasi, S. (2004). Evaluation theory. 4<sup>th</sup> eds. Bangkok, Chulalongkorn University.
- Karnasut, P. (1995). Statistics for behavioral science research, Bangkok, Chulalongkorn University Press.
- Kecharananta, N. (2001). Training evaluation: Examining the success of human resource development in the organization, Bangkok, Expernetbooks.
- Ketsing, W. (1995). Mean with meaning: Simple things sometimes miss. Educational Research News 18: 8-11.
- Khamaek, C. and Aiyasuwan, U. (2019). The satisfaction of farmers participating in training programs using applications/websites in the project to improve efficiency and reduce environmental impacts of rice production systems in the area of Phetchaburi Province using advanced precision agriculture techniques. The 11<sup>th</sup> Walailak Research National Conference, Nakhon Si Thammarat, Thailand.
- Na-Phatthalung, N. (2018). Training management, Bangkok, NEO POINT (1995). (*in Thai*)
- Saksung, O. (2009). Andragogy theory of Malcolm Knowles. Retrieved from <https://sites.google.com/site/anansak2554/thvsdi-kar-reiyn-ru-khx-ngblum>
- Sedgwick, P. (2013). Convenience sampling. BMJ 347: f6304.
- Smithikrai, C. (2013). Personnel training in organizations, Bangkok, Chulalongkorn University.
- Suangsaeng, W. (2008). The development of the participatory instructional model for improving literacy achievement of Prathomsuksa 1 Student at the Schools under Phra Nakhon Si Ayutthaya Educational Service Area Office 1, Bangkok, National Research Council of Thailand.
- Swart, J., Mann, C., Brown, S. and Price, A. (2005). Human resource development: Strategy and tactics, Oxford, Elsevier/Butterworth-Heinemann.
- Wongrattana, C. (2007). Statistical techniques for research, Nonthaburi, Taineramitkij Inter Progressive.