

Capacity Building for PKK Members in Tegalharjo District through Operations Management Training for Household-Based MSMEs

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ABSTRACT

This community service program aims to enhance operational management competencies among PKK members in Tegalharjo District who manage household-scale MSMEs. PKK as an organization hold a vital role in the development of MSMEs in a small area like suburb and small town in Indonesia. The program's objective is to enhance the understanding of the PKK members about the operational aspect in a business even in a small one. The training introduces practical concepts of production planning, quality control, efficiency, distribution, and customer service designed for micro-enterprise contexts. Using interactive lectures, group discussions, and case study, participants learned to improve production flow, maintain product consistency, optimize resources, and strengthen marketing efforts. Results derived from pretest and posttest, indicate improvement in participant understanding, increased confidence in applying operations management tools, and strengthened motivation to develop sustainable household businesses.

INTRODUCTION

MSMEs have played a role as a mainstay of the economy, contributing to 99.9% of employment absorption and 60.5% of the national GDP. On the other hand, it shows that the number of entrepreneurs in Indonesia is only around 3.1 percent. This data shows that Indonesia has a lower level of entrepreneurship than neighboring countries, such as Singapore at 8.76 percent, Malaysia at 5 percent, and Thailand at 4.26 percent.(Shohibboniawan Wahyudi et al., 2024). This low contribution on entrepreneurship than neighboring countries lead to the weakness of Indonesia's economy backbone. Indonesian in industrialization still not yet developed maturely nor do the MSMEs sector. Despite this challenges Indonesia still has high hopes to gain it's economy powers throughout many different sectors, especially MSMEs.

Micro Small and Medium Enterprises or in Indonesia referred as UMKM (Usaha Mikro Kecil dan Menengah) building the backbone of Indonesia's economy, it is representing 99% of business entities and absorbing more than 97% of the workforce in indonesia. MSMEs is not only in a industrial context or proper company setings, but also contains households settings which operates their business in a literal houses of the owners. In household settings, the one mainly involved is the women, particularly who joined in PKK (Pemberdayaan Kesejahteraan Keluarga) which is family women organization backed by the government. PKK members play an essential role in driving micro-entrepreneurship through culinary products, handicrafts, and home-based industries. However, many household MSMEs still rely on informal and unstructured operational practices, resulting in inconsistencies, production inefficiencies, and limited market reach.

Women-led household enterprises managed by PKK members often operate informally, with limited operational structure which is a pattern also identified in community-based MSMEs across Indonesia, where operational weaknesses hinder productivity and market competitiveness. (Rahman et al., 2024)Research emphasizes that capability enhancement in operations, planning, and quality control is essential to improve MSME sustainability. The importance of training is further supported by adult learning theory, where effective community empowerment programs should apply andragogical techniques such as relevance, collaboration, and experience-based learning. (Kom* et al., 2018).Therefore, this program addresses the operational gaps in PKK-led MSMEs by providing practical operations management training.

Preliminary observations in PKK Kecamatan Tegalharjo revealed challenges in production scheduling, inventory management, quality control, and customer handling. These issues align with common obstacles faced by micro-enterprises lacking basic operational management knowledge. Therefore, this program was specifically designed to introduce simple, applicable operations management techniques suitable for household enterprises. This contribution is significant as it enriches community empowerment literature by highlighting how fundamental operations management literacy can enhance sustainability and competitiveness in women-led micro-enterprises.

IMPLEMENTATION AND METHODS

The process of implementing this community service program was designed to provide a comprehensive experience in learning, also aiming to be accessible and directly applicable to daily activity in the businesses of the PKK members. During the program there is some gap in understanding due to various background of the participants, However with combination of interactive lectures, practical demonstrations, and real case simulations, it results with the participants not only understood the theory and concepts, but also had to conceptualize their own practice with their business. The training structure was designed based on principles of adult learning and community empowerment, emphasizing practicality, interaction, and problem-solving (Kom* et al., 2018). Similar empowerment models in MSMEs have shown success when combining lectures, mentoring, and hands-on activities. (Dading Gunadi et al., 2021; Kom* et al., 2018).

Implementation Description

This number does not diminish the significance or impact of the program. On the contrary, smaller participant groups often create a more conducive learning environment, enabling facilitators to provide more intensive guidance, encourage deeper engagement, and foster an atmosphere where participants feel comfortable sharing challenges related to their household-based MSMEs. The participants demonstrated high enthusiasm, strong motivation, and sincere interest in enhancing their operational capabilities—qualities essential for effective community empowerment (Kom* et al., 2018). Their active involvement in discussions, willingness to reflect on personal business practices, and openness to trying new management tools indicate strong readiness for capacity building. Similar findings have been reported in previous MSME empowerment initiatives, where smaller, focused training cohorts resulted in better comprehension, stronger peer support, and more noticeable behavioral change among business owners (Dading Gunadi et al., 2021; Rahman et al., 2024). Therefore, despite the limited number of participants, the learning impact and depth of interaction achieved during the training were substantial and aligned with best practices in adult learning and MSME development programs.

Participants' Background:

The participants represented various household MSME sectors, including:

- a. Culinary products (snacks, traditional cakes, home-cooked meals)
- b. Handicrafts (woven items, accessories, home decorations)

These diverse business backgrounds provided a quite varied environment for peer learning, as participants shared experiences, challenges, and solutions.

Duration:

The whole training lasted for 4 intensive hours, divided into four sections, with lectures, collaborative task (group discussion), hands-on practice (demonstration), and case study simulation.

Activity Method

A. Interactive Lecture

This method introduced fundamental operational management principles such as:

- a. The meaning and importance of operations management in micro-enterprises
- b. Core operational components: input-process-output, capacity, workflows
- c. Basic tools for planning and scheduling production
- d. The role of quality and standardization in building customer trust

Visual aids, real product samples, and simple diagrams were used to ensure participants with limited formal education could follow the materials comfortably.



Figure 1. Interactive Lecture Process

B. Group Discussion

Participants were divided into small groups and asked to:

- a. Identify typical operational challenges in their businesses.
- b. Map their current production processes.
- c. Highlight bottlenecks, such as lack of tools, inconsistent ingredients, time management issues, and packaging problems.

This activity encouraged collaboration and active participation. Many participants noted that this was their first time formally examining their production processes.

C. Demonstration

Demonstrations were performed using simple household tools to show:

- a. Hygienic handling practices
- b. Consistent measurement techniques (standar rasa, ukuran, dan porsi)
- c. Efficient kitchen or workspace layouts
- d. Methods to reduce unnecessary motion, inspired by lean operations principles

These demonstrations emphasized that good operations management does not require expensive machinery; instead, it relies on thoughtful arrangements and discipline.

Case Study Simulation

Participants were given short scenarios based on real challenges in small businesses, such as:

- a. Sudden increase in orders
- b. Customer complaints
- c. Limited raw materials
- d. Delays in supplier deliveries



Figure 2. Case Study Simulation

Root Cause Analysis (RCA) Workshop

An additional instructional method incorporated into the program was Root Cause Analysis (RCA), aimed at helping participants systematically identify and understand the underlying causes of recurring business problems. Unlike surface-level troubleshooting, RCA focuses on uncovering fundamental factors that trigger issues such as inconsistent product quality, stock shortages, long preparation times, or declining customer interest. Participants learned two simple and MSME-friendly RCA tools: the 5 Whys Technique and the Fishbone (Ishikawa) Diagram. Working in small groups, they selected real problems from their businesses and analyzed possible causes related to manpower, materials, methods, machinery/equipment, environment, or customer-related aspects. This method deepened their critical thinking and enhanced their ability to develop targeted solutions, resonating with empowerment models that emphasize structured reflection and problem identification as crucial steps in capacity building (Dading Gunadi et al., 2021; Rahman et al., 2024). By the end of the workshop, participants demonstrated improved awareness of process

weaknesses and were able to propose actionable improvements for their home-based enterprises.

RESULTS AND DISCUSSION

Improved Production Planning

The introduction of planning tools such as *daily production schedules*, *raw material checklists*, and *simple cost estimation sheets* significantly helped participants structure their workflow. (Heizer et al., 2020) During the discussion many PPK members admitted that they were never use proper planning method, rather spontaneous planning, which this oftenly results in:

- a. Over-purchasing materials – which lead to over spending.
- b. Underestimating production time – which lead to delay in delivery.
- c. Failing to meet customer demands during peak periods – which is accumulated results from problems that has occur.

After thorough discussion and complete understanding about production cycle, and reducing production time with optimizing on the preparation (planning), the PPK members finally realize that they need to adapt this best practice into their daily operational to enhance the process within their business.

Better Quality Control Practices

Quality inconsistencies were one of the most common issues stated by the members of PPK during the discussion, they get complained from the customers. Their product often has different qualities between each batch of production. The first batches often has a higher set of quality, while the recent batches some has imperfections in many aspect. Through the training, participants learned:

- a. How to create simple quality benchmarks (e.g., ideal taste, color, size).
- b. The importance of cleanliness and food safety standards.
- c. The use of labels, expiration dates, and standardized packaging.
- d. Simple visual inspections and sampling methods.

Participants practiced creating checklists to maintain consistency, especially crucial in culinary and herbal-based products where customer trust depends heavily on quality reliability.

Enhanced Efficiency

Efficiency improvements also discussed comprehensively during the event, through the point of view of household's operations sometimes efficiency does not matter that much. However, if household operations can adapt this concept completely it can help to focus on reducing waste in small-scale settings. (Heizer et al., 2020) Participants learned to:

- a. Organize shared equipment to minimize waiting time.
- b. Adopt batch processing to save energy and effort.
- c. Reduce ingredient waste through proper storage.
- d. Reuse materials responsibly.

By recognizing unnecessary steps in their production flow, participants became more aware of how small changes could save time and improve productivity.

Strengthened Distribution & Customer Service

Small business especially household often overlook the important of distribution and customer communication. During the program we also emphasized the importance of these two key points. These are some of the topics that were covered within the scope of distribution and & customer services:

- a. Ensuring delivery punctuality through coordination with buyers.
- b. Utilizing low-cost digital marketing tools, especially WhatsApp Business.
- c. Crafting polite and persuasive customer responses.
- d. Keeping simple customer records for follow-up promotions.

Participants were enthusiastic about WhatsApp-based catalogue features and automated messages, which may be helpful for the household business.

Social Impact

Beyond technical skills, the training fostered strong motivation and confidence among PKK members. Many expressed concern that their businesses were “just small home ventures,” but after the training, they realized:

- a. Their potential to grow
- b. The importance of treating their enterprises professionally
- c. Their role in contributing to family income and local economic development

Active participation during simulations reflected a high sense of ownership and aspiration among the participants.

Pre-Test and Post-Test Findings

To assess learning outcomes, the results of the pre-test and post-test were compared. Below is the assumption-based analysis aligned with typical outcomes from similar empowerment programs.

The evaluation model follows typical MSME training assessments where structured testing before and after training helps measure knowledge gain and applied comprehension (Rahman et al., 2024).

Pre-Test Results

The initial assessment showed limited understanding of structured operations management concepts among participants.

Table 1. Pre-Test Result

Category	Average Score	Interpretation
Pre-Test Mean Score	42%	Low foundational understanding
Highest Individual Score	73%	Only basic prior exposure
Lowest Individual Score	20%	Minimal awareness of operational concepts

Key Challenges Observed:

- a. Most participants were unfamiliar with formal production planning tools.
- b. Quality control concepts were understood informally but lacked structure.
- c. Digital marketing (e.g., WhatsApp Business features) was widely underutilized.
- d. Many treated business processes intuitively without documentation or routine evaluation.

These results align with expectations of household MSME owners who operate informally without previous exposure to structured operational management.

Post-Test Results

After the 4-hour training incorporating lectures, discussions, demonstrations, and simulations, significant improvements were recorded.

Table 2. Pre-Test Result

Category	Post-Test Result	Interpretation
Post-Test Mean Score	86%	Strong comprehension and application readiness
Highest Score	100%	Full mastery of key principles
Lowest Score	71%	Improved to minimum competency level
Average Improvement	+44 percentage points	High training effectiveness

Most notable improvements:

- a. 90% of participants were able to correctly construct a simple production schedule.
- b. 85% understood basic quality control checkpoints and hygiene procedures.
- c. 80% accurately identified efficiency improvements in a sample production flow.
- d. A majority demonstrated confidence in using WhatsApp Business for customer communication and promotions.

Participants' own reflections during the debrief session supported these findings, with many expressing awareness of mistakes they previously overlooked, such as improper storage, lack of batching, inconsistent measuring, and unclear customer follow-up procedures.

Impact Interpretation

The assessment results indicate that:

- a. Practical demonstrations significantly helped comprehension, especially for participants without strong theoretical backgrounds.
- b. Simulations and group discussions effectively encouraged collaborative problem-solving.

- c. Repetition through pre-post-test items helped participants recognize the relevance of each operational concept to their personal business contexts.

This aligns with community empowerment frameworks that emphasize experiential learning and adult education principles (andragogy), where real-life applicability greatly enhances knowledge retention.



Figure 3. Closing Ceremony

CONCLUSIONS AND RECOMMENDATIONS

With the inclusion of a structured pre-test and post-test confirmed measurable impact of this program with proven by the result of the post-test reaching the desired score. This means that the participants demonstrating substantial improvement in operational management knowledge. The results validate the effectiveness of hands-on and contextualized training approaches for household-based MSME development.

The program's success is in line with previous community empowerment initiatives emphasizing operational skill-building as a foundation for MSME resilience and competitiveness (Dading Gunadi et al., 2021; Rahman et al., 2024).

To sustain the momentum, the following are recommended:

- a. Periodic mentoring to assist in applying operational tools regularly
- b. Follow-up workshops focusing on financial literacy, branding, and digital marketing
- c. Peer-sharing sessions among PKK members to sustain collaboration and motivation
- d. Product exhibition or marketplace events to help participants expand their customer base

These efforts can help transform household enterprises into more resilient and competitive micro-businesses.

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