

Economic Empowerment through Small-Scale Herbal Liquid Soap Industry Development at Hurriyatul Amiin Islamic Boarding School, Bogor

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ABSTRACT

Pesantren Hurriyatul Amiin, located in Parung, Bogor Regency, is an Islamic boarding school that educates underprivileged students from economically disadvantaged backgrounds. Currently, the pesantren accommodates approximately 30 students who study free of charge. Educational and operational support is provided by the pesantren management and donors. This community service activity aims to empower the pesantren's economy through training and mentoring in developing a small-scale herbal liquid soap industry. The activities consist of: (1) entrepreneurship training for the pesantren management and students; (2) practical training in herbal liquid soap production; and (3) mentoring in preparing production facilities and conducting small-scale industrial production trials. The methods include presentations, discussions, entrepreneurship simulations, practical laboratory soap production, and guidance in building the production room. The results show that the management and students have improved their cognitive and psychomotor skills related to entrepreneurship and herbal soap production. The provision of machinery, equipment, and raw materials facilitated the mentoring process and enabled a 5-liter small-scale production trial. This community service activity has fostered optimism among the pesantren management to sustain continuous production and ensure the financial benefits support pesantren operational costs.

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INTRODUCTION

Islamic boarding schools (pesantren) are traditional Islamic educational institutions that play a significant role in Indonesian society, encompassing education, social, religious preaching, and community empowerment. In the educational realm, pesantren primarily focus on teaching Islamic sciences such as the Qur'an, Tauhid, Hadith, Fiqh, Tasawwuf, and Arabic language. Through these teachings, students (santri) are expected to develop deep and comprehensive religious understanding to become devout Muslims capable of applying religious teachings in daily life.

Besides education, pesantren serve as centers for social activities by raising social awareness among santri and the surrounding community. Religious leaders (kyai) and santri are often respected figures providing advice, guidance, and solutions to social issues.

Another key role of pesantren is community empowerment. According to Wijaya et al. (2020), community empowerment refers to efforts aimed at enhancing the capacity, independence, and participation of communities in managing resources, making decisions, and overcoming problems. Mardikanto et al. (2015) further state that empowered communities can identify and solve problems, take initiatives in economic, social, and cultural development, and have fair access to resources and opportunities.

To realize community empowerment, many pesantren collaborate with surrounding communities by teaching economic skills and entrepreneurship, establishing business units such as agriculture, livestock, crafts, or trade involving santri and local residents as a means to achieve economic independence and support pesantren operations (Qomar, 2005).

Modernization and rapid technological advances require pesantren to adapt. To survive, pesantren must innovate in curriculum, teaching methods, and their various roles (Azra, 1996). Firmansyah et al. (2020) explain that although pesantren are characterized by in-depth Islamic studies, the changing social context has shifted education and empowerment strategies. Muttaqin (2011) suggests pesantren can be economic drivers in communities due to two reasons: (1) santri are highly committed to their faith, fostering strong work ethics, and (2) Islamic teachings stimulate awareness of life realities and the environment as economic motivators. These form the basis for optimism that pesantren can nurture young entrepreneurs with Islamic values.

To ensure sustainability, pesantren need economic independence and steady funding sources for operational and developmental activities. Generally, operational funding comes from irregular donations, endowments, and other non-binding sources, though some pesantren (modern ones) receive steady income from santri contributions (Syahputra et al., 2022). Consequently, many pesantren engage in community economic development programs such as cooperatives, micro, small, and medium enterprises (MSMEs), and empowerment of farmers and fishermen.

Pesantren Hurriyatul Amiin, located in Parung, Bogor, is a free pesantren for underprivileged students specializing in Qur'an memorization. Established in 2016, it currently educates approximately 30 santri from various regions. To support educational and operational activities, the pesantren management and donors provide assistance. With increasing operational needs, the pesantren seeks to develop its economic potential through collaboration with the community in productive economic activities expected to support pesantren finances. The goal is to achieve economic self-sufficiency to meet operational and developmental needs.

Soap is a daily necessity. With growing population and health awareness, soap demand is expected to rise. According to Sari et al. (2010), soap is produced through saponification—the hydrolysis of fatty acids by alkali (NaOH). Soaps are available as solids or liquids (Nurcahya et al., 2021). This community

empowerment program through training and mentoring the development of a small-scale herbal liquid soap industry at Pesantren Hurriyatul Amiin is intended as a learning module and practical activity for santri, and as a potential income source supporting operational and developmental costs of the pesantren.

METHOD

This community service activity aimed at economic empowerment of Pesantren Hurriyatul Amiin through training, mentoring, and development of a small-scale herbal liquid soap industry was funded by the Community Partnership Program (PKM) grant from the Directorate of Research and Community Service (DRPM), Directorate General of Higher Education, Ministry of Education, Culture, Research, and Technology in 2024. The series of activities carried out included:

1. **Preparation:** Initial activities involved a site survey at the pesantren and planning of the soap production building, discussions with pesantren management regarding activity plans and schedules, among others.
2. **Training Implementation:** A two-day training was conducted, covering soft skills related to the basics and spirit of entrepreneurship, business potential and opportunities, business startup and management (human resources, production, product marketing), as well as business analysis and project feasibility. This was held on October 10, 2024, at Pesantren Hurriyatul Amiin, Bogor. On the second day, October 11, 2024, practical training on herbal liquid soap production was conducted at the Chemical Engineering Laboratory, Institut Teknologi Indonesia, South Tangerang City.
3. **Liquid Soap Production Mentoring:** This involved preparation of the mini factory area (production room, raw material and equipment storage, liquid soap product storage), procurement of production equipment and factory necessities, followed by mentoring the liquid soap production process from raw material preparation to packaging. This mentoring was conducted over two weeks.

RESULT AND DISCUSSION

1. Entrepreneurship Training at the Pesantren

Field observations identified three key reasons why entrepreneurship understanding and implementation are essential within the pesantren environment:

- a. The pesantren can provide additional skills to santri beyond Islamic education. Santri equipped with entrepreneurial knowledge and skills will be better prepared to start their own businesses after graduation and reintegrate into society.
- b. Entrepreneurship can help pesantren achieve economic independence, reducing reliance on donations or external aid. Financial autonomy will empower pesantren to better sustain educational and developmental activities.
- c. Pesantren can develop pesantren-based enterprises that create job opportunities for the surrounding community, benefiting both pesantren and the local economy by expanding employment opportunities.

The entrepreneurship training was conducted over one full day at Pesantren Hurriyatul Amiin, Bogor, attended by 20 participants, including 15 santri (junior and senior high school levels) and 5 pesantren

administrators (**Figure 1**). The training methods included lectures, group discussions, case studies, and business simulations. The material covered:

- Introduction to entrepreneurship: entrepreneurial spirit, roles and functions of entrepreneurs in society, and characteristics of successful entrepreneurs.
- Identification of pesantren business opportunities: strategic environmental analysis, case studies of successful pesantren businesses.
- Business idea development: creative and innovative processes, brainstorming sessions.
- Business planning: importance, steps, and practice in preparing simple business plans.
- Financial analysis: business financial systems and feasibility analysis.
- Product marketing and branding: marketing mix (4P), branding concepts, and digital marketing.

Evaluation results showed significant improvement in participants' cognitive understanding of entrepreneurship concepts and psychomotor skills in group discussions aimed at generating business ideas aligned with pesantren potentials and opportunities. Participants actively engaged in discussions and simulations.

Entrepreneurship within pesantren settings refers to initiatives aimed at fostering an economic growth environment, skill development, and community empowerment around pesantren (Haidari, 2004). Economic ventures developed by pesantren serve as supplementary income sources to support operational and developmental costs. Integrating entrepreneurship in pesantren is expected to enhance pesantren roles in community economic development, job creation, and producing graduates equipped not only with religious knowledge but also entrepreneurial competencies beneficial after graduation.



(a)



(b)

FIGURE 1. (a) Entrepreneurship Training (Lecture); (b) Entrepreneurship Training (Participant Discussion)

2. Practice of Liquid Soap Making

Liquid soap has become an increasingly popular choice among consumers for daily hygiene needs, both for body and hand washing. The preference for liquid soap over bar soap is due to several factors:

- Hygiene:** Liquid soap is considered more hygienic since bar soap used by multiple people can lead to cross-contamination.
- Ease of Use:** Liquid soap is easier to use, especially with dispensers designed to provide the right amount, reducing waste and enhancing practicality.

- iii. **Gentle and Varied Formulation:** Liquid soaps often contain additives such as moisturizers, vitamins, and fragrances, making them suitable for various skin types. They better maintain skin moisture compared to bar soaps.
- iv. **Attractive and Practical Packaging:** Liquid soaps are available in convenient packaging sizes for home use or travel.

The practical training on liquid soap making was conducted in a full-day session at the Chemical Engineering Laboratory, Institut Teknologi Indonesia, Serpong, Tangerang Selatan. The session involved 20 participants comprising santri and pesantren managers (Figure 2). The training began with theoretical knowledge, including:

- Human skin physiology relevant to soap contact.
- Types of soaps: bar, liquid, paper, and transparent soaps.
- Ingredients of liquid soap and their functions.
- Quality standards according to Indonesian National Standards (SNI) for bath soap (SNI 06-4085-1996) and facial soap (SNI 16-4380-1996).
- Additional ingredients such as softeners, preservatives, moisturizers, and fragrances.

Participants then performed group practical work to produce liquid soap. Under supervision, participants correctly followed the production steps, resulting in a product of acceptable quality (Figure 3). Soap making involved understanding the chemical theory of saponification and acquiring practical skills in measuring, mixing, and processing ingredients into ready-to-use liquid soap.

Key aspects during the practice included:

- **Preparation of Materials and Equipment:** Main ingredients were sodium lauryl sulfate (SLS) as the cleansing agent, distilled water as solvent, salt (NaCl) as viscosity stabilizer, and additives such as colorants, preservatives, fragrance, and glycerin as moisturizer. Equipment included beakers, thermometers, stirrers, and measuring tools.
- **Production Process:**
 - Measuring and initial mixing: Distilled water was heated to approximately 50°C, then SLS was gradually added with continuous stirring until fully dissolved, creating a clear base solution.
 - Addition of additives: Salt was added carefully to adjust viscosity; moisturizers like glycerin were included to maintain skin moisture.
 - pH adjustment: The soap's pH was adjusted to 5.5–7 using citric acid or alkaline solutions.
 - Final mixing and cooling: The mixture was stirred until homogeneous and cooled before adding fragrance to preserve aroma integrity.
- **Packaging:** Finished soap was packaged in clean, sterile plastic bottles suitable for use and storage.
- **Safety Measures:** Participants used personal protective equipment (gloves, masks, goggles) due to potential irritants like SLS.



FIGURE 2. Introductory Explanation on the Theory of Liquid Soap Production



FIGURE 3. (a) End Product of Liquid Soap; (b) Participants and Organizing Team of the Liquid Soap Making Practical Training

3. Assistance in Liquid Soap Production

The final stage of this community service activity was the hands-on assistance in liquid soap production at the pesantren, consisting of:

- a. **Production Room Preparation:** A production room of size 4 x 7 m² was designated at the pesantren site to serve as a mini factory, including storage for raw materials, machinery, equipment, and the soap production process (Figure 5).
- b. **Provision of Equipment and Materials:** Production machines, raw materials, and facility furniture (tables, racks, etc.) were delivered to the pesantren (Figure 4).
- c. **Production Assistance:** The ITI team guided the pesantren managers and santri through the entire production process, from raw material preparation to packaging, with a production capacity of 5 liters per batch (Figure 6).



FIGURE 4. Handover of Liquid Soap Production Tools and Materials by ITI Lecturer Team to Hurriyatul Amiin Islamic Boarding School, Bogor



FIGURE 5. Selected Equipment and Raw Materials Used in Liquid Soap Production



FIGURE 6. Technical Assistance for 5-Liter Capacity Liquid Soap Production

CONCLUSION AND SUGGESTIONS

Conclusion

The community service activity funded by the 2024 Community Partnership Program (PKM) grant from the Directorate of Research and Community Service (DRPM), Directorate General of Higher Education, Ministry of Education, Culture, Research, and Technology, entitled “Economic Empowerment Through the Development of Small-Scale Herbal Liquid Soap Industry at Hurriyatul Amiin Pesantren, Bogor,” has been successfully implemented. This activity included entrepreneurship training for the pesantren community, theoretical and practical training on herbal liquid soap production, and production mentoring which involved preparing the production room, procurement of machinery, supporting equipment, raw materials, and assistance during a trial production with a capacity of 5 liters. The results show that the pesantren management was very enthusiastic and found the activity highly beneficial for developing the pesantren’s productive economic activities. Additionally, the training equipped the students with entrepreneurial skills

useful for their future after graduation. Continued mentoring from the ITI team is necessary to support production, marketing, and to maintain the continuity and sustainability of the herbal liquid soap business at the pesantren.

Suggestions

The PKM grant from the Directorate of DRPM, Directorate General of Higher Education, Ministry of Education, Culture, Research, and Technology, provides a valuable and realistic solution that empowers the partners involved. Therefore, ongoing mentoring and development programs are recommended to ensure sustainable production and business operations, so the benefits can reach a wider community.

Suggestions for future sustainability include:

- i. Mentoring for scaling up production to industrial levels with consistent product quality standards.
- ii. Assistance in obtaining product distribution and trade permits to enable legal and broad market access for the herbal liquid soap.
- iii. Building marketing networks targeting pesantren communities in Bogor specifically, and pesantren networks more broadly across the country.
- iv. Developing product variations based on the uniqueness of each pesantren, such as goat milk soap, herbal plant extracts, and other local natural ingredients.

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Final Verdict: Accept with Minor Revisions

This article provides a **highly relevant, well-documented, and actionable case study** in pesantren-based community economic empowerment. It integrates skill-building, production setup, and entrepreneurship training in a replicable way. With a few edits to enhance clarity, add minor quantitative evidence, and polish references, it would be **ready for publication**.