



## Household Product Innovation: Soap Education and Training as a Creative Economic Solution

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### Abstract

The creative economy is a new economic system that emphasises the utilisation of ideas, creativity, skills, and human knowledge as the primary production factors in generating added value in the production and distribution of goods and services. One promising opportunity within this framework is the development of household-scale liquid soap industries, particularly in rural communities. Such initiatives are highly feasible for homemakers and young women who are unemployed, enabling them to increase household income while contributing to local economic development. This community service program was conducted in Warabo Village, Montasik District, Aceh Besar Regency, with the primary objective of educating and training participants in the production of liquid soap and floor cleaner as potential home-based businesses. The program was carried out in several stages, including the distribution of brochures and written guidelines on the soap-making process, provision of raw materials and supporting equipment, demonstrations of soap production, introduction to packaging techniques with appropriate labelling, and basic marketing knowledge relevant to household industries. The training sessions applied a participatory approach, involving lectures, discussions, demonstrations, and hands-on practice. The results indicate that the participants, primarily homemakers and young women, gained both theoretical knowledge and practical skills in producing liquid soap. They demonstrated the ability to create the product independently and expressed a commitment to continuing production for household use and potential sales within their village. The novelty of this program lies in its holistic approach, which combines technical training with packaging, bookkeeping, and marketing strategies, distinguishing it from previous initiatives that focused solely on production skills.

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## 1. Introduction

The development of natural and human resources in Aceh Besar presents a significant opportunity for generating economically valuable products through the concept of the creative economy. The creative economy is an economic model that emphasises the role of information, creativity, and human resources

(HR) as the primary factors of production [1]–[3]. Despite this potential, small-scale and household liquid soap industries are still almost nonexistent in Aceh Besar. This gap highlights the need for programs that can empower communities to transform locally available resources and creativity into sustainable economic activities. Warabo Village, situated in Montasik District, Aceh Besar, was selected as the site for this community service program. Liquid soap is a highly valued household product due to its widespread daily use [4]–[6]. For low-income groups, particularly young women and unemployed homemakers, engaging in soap production presents an accessible opportunity to increase their household income. Entrepreneurship, in this case, is not only a matter of business but also a matter of imagination and creativity that enables individuals to transform ideas into practical, marketable products [7]–[9].

Initial surveys conducted in Warabo Village revealed that most residents had limited knowledge of how to produce liquid soap independently. However, homemakers and young women showed great enthusiasm for adopting new technologies that could be directly applied to daily life and small-scale entrepreneurial activities. Their eagerness to learn new skills, coupled with their interest in turning these skills into potential income-generating ventures, provided a strong foundation for implementing the training program. Some participants even expressed a serious commitment to pursuing soap production as a sustainable household industry. To address this need, the program provided participants with training and mentoring in soap production, specifically targeting homemakers and young women. Beyond individual skill development, the program also aimed to create broader socio-economic impacts for the village community. By enabling participants to produce their own soap and household cleaning products, the initiative not only supported household self-sufficiency but also created opportunities for new jobs and contributed to an increase in the community's per capita income. In this way, the program aligned with broader development goals that emphasise community empowerment and local economic resilience.

Soap, as a chemical product, consists of alkali metals with long-chain monocarboxylic fatty acids. The alkaline solution commonly used in hard soap is sodium hydroxide (NaOH), while potassium hydroxide (KOH) is typically used in the production of soft soap [10]–[12]. The function of soap lies in its ability to emulsify dirt, oils, and other impurities, making it an indispensable cleaning product. The basic production process, known as saponification, involves the reaction of fats or oils with an alkali, resulting in the release of glycerol as a byproduct. This fundamental process was introduced to participants to provide a scientific foundation for the practical training. Various types of oils and fats can be used in soap production, including animal fats, vegetable oils, waxes, and even fish oils. Essentially, any oil or fat can serve as the raw material for soap-making. Fats are mixtures of esters formed from alcohol and carboxylic acids such as stearic acid, oleic acid, and palmitic acid. For example, solid fats typically contain glycerol esters of palmitic acid, whereas oils, such as olive oil, contain glycerol esters of oleic acid [13]–[15]. Understanding the chemical principles behind soap-making was a crucial component of the training, as it enabled participants to appreciate both the technical and practical aspects of production.

The combination of scientific explanation and hands-on practice allowed participants to bridge theory with application. The training sessions began with lectures and discussions to introduce the basic concepts, followed by demonstrations and direct practice in mixing and producing soap. This experiential learning model ensured that participants were not only aware of the theoretical basis but also competent in executing the production process. Such integration of knowledge and practice is essential in building sustainable small-scale industries. Equally important was the inclusion of additional components such as packaging, bookkeeping, and marketing strategies in the training. Previous initiatives in similar contexts often focused solely on skill transfer in production, neglecting aspects that determine the marketability and sustainability of the products. By equipping participants with knowledge in attractive packaging design, simple household-level financial recording, and basic marketing principles, this program positioned them not just as producers but also as entrepreneurs. These added elements represent the program's novelty and its holistic approach to community empowerment.

In summary, the introduction of liquid soap-making as a community-based industry in Warabo Village addressed both a practical need and an economic opportunity. The program was built upon the community's enthusiasm, creativity, and willingness to learn, while also providing structured training

and ongoing mentoring. By combining technical knowledge with entrepreneurial skills, the initiative fostered a model for sustainable micro-enterprise development in rural Aceh Besar. This program, therefore, serves as a valuable example of how the creative economy can be realised at the grassroots level, promoting both household income generation and community resilience.

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## **2. Methodology**

Referring to the results of the initial field survey, two main issues in the implementation of the program that need to be addressed are the lack of community interest in producing daily necessities, even though these products can be made using simple and low-cost methods, and the limited knowledge among community members regarding the production process of such items, for example, floor cleaners and soap. Therefore, the production of floor cleaners and soap is considered a suitable initiative to foster the development of small-scale industries in the village. The target group of this skills development activity is primarily homemakers and young people, both male and female, so that they can enhance their economic value and eventually establish these practices as potential side businesses in the future. This skills enhancement program is carried out in several stages, including preparation, socialisation and mentoring, implementation, evaluation, and assistance. The delivery of training materials is conducted through lectures and discussions, the distribution of brochures, demonstrations, and hands-on practice in a workshop setting. The lecture method is used to explain the basic theory related to floor and soap cleaners, production methods, the tools and materials required, and the procedures for preparing equipment and raw materials. The demonstration method is applied to showcase the process of producing floor cleaners and soap [15]. The discussion method is used to address various problems encountered, both among participants and with the facilitator team. Before the demonstration session, participants are provided with basic theoretical knowledge regarding the production process of floor cleaners and soap. Meanwhile, the mentoring stage is conducted throughout the program to ensure community understanding of the production process. Finally, the assistance phase is carried out by university students during the remainder of their community service period in the village.

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## **3. Result & Discussion**

The implementation of the community service program was carried out by the entire service team, with the assistance of students from Abulyatama University, who were then undertaking their community service program (CSP) in the village. This collaboration provided both academic enrichment for the students and practical benefits for the local community. The sequence of activities began with the preparation stage, which included identifying prospective beneficiaries who were interested in starting small-scale household liquid soap businesses, as well as conducting initial socialisation with them. During this stage, information was shared about the production processes of liquid soap and floor cleaners, alongside the preparation of necessary tools and materials for the demonstration and subsequent production activities. The preparation phase also emphasised building awareness among participants regarding the economic potential of household cleaning products. By engaging with the beneficiaries early, the program created a foundation of shared understanding, fostering active participation and ensuring that the community was well-prepared for the upcoming hands-on training. This stage played a crucial role in aligning the expectations of participants with the program's goals, thereby setting the stage for effective learning and practice.

The implementation stage began with introductory sessions and the delivery of training materials by the service team. These sessions were followed by discussions and interactive question-and-answer segments, which allowed participants to clarify their understanding and engage more deeply with the subject matter. The highlight of the implementation phase was the live demonstration of liquid soap production, conducted directly in front of participants under the guidance and supervision of the service team. This hands-on approach not only improved comprehension but also boosted participants' confidence in replicating the process independently. Following the demonstration, the evaluation and

mentoring phase was conducted. This stage focused on assessing participants' understanding of the materials, equipment, and procedural steps involved in soap and cleaner production. Open discussions and reflective questioning were used to evaluate comprehension and address any challenges encountered by the participants. Mentoring activities were conducted by the CSP students after the main demonstration, providing continuous support and reinforcing the knowledge gained during the training sessions.

Before the main training activities, preparatory actions had already taken place. These included the distribution of brochures and photocopied materials outlining the process of producing liquid soap and floor cleaners, well before the official training day. These early efforts, facilitated by the CSP students, served as pre-training exposure for the community, allowing participants to familiarise themselves with the concepts and technical requirements. Furthermore, before the formal training, the facilitators and students provided preliminary knowledge sessions to community members who showed great enthusiasm for learning, ensuring they were well-prepared for the practical sessions. Collaboration between the facilitators and local partners, particularly the Women's Community Group (WCG), was a vital element of the program. A series of follow-up discussions was conducted before the training, during which WCG members played an active role in determining several technical aspects of the implementation. They also participated in supervising the initial socialisation and dissemination of information within the community. This active involvement of local partners ensured that the program was not only well-received but also integrated into the existing social structure of the village, thereby enhancing its sustainability and long-term impact.



**Figure 1:** Preparation for Soap Making Training

**Figure 1** illustrates the preparation stage of the soap-making training, where community members, including women and children, gathered in a communal hall to participate in the session. The atmosphere reflects a participatory and inclusive approach, with beneficiaries sitting together in an informal yet structured setting. The use of a projector to display key points of the training material demonstrates that visual aids were effectively integrated into the learning process, enabling participants to follow the instructions more easily. This preparation step reflects the importance of creating a conducive learning environment that encourages active participation and collective engagement. Furthermore, the figure highlights the role of local cultural and social dynamics in supporting the training program. The gathering not only served as a platform for technical knowledge transfer but also strengthened community interaction and collaboration. The presence of women, particularly mothers, as the primary participants is significant, as they are often the primary agents of household management and small-scale entrepreneurship in rural settings. By involving them in the preparatory stage, the program not only addressed economic empowerment but also promoted social cohesion, paving the way for sustainable community-based industry development.



Before the implementation, a series of follow-up discussions had been conducted between the service team and the community partners, namely the women's community group (PKK). In these discussions, the partners played an active role in determining several technical aspects of the program's execution and acted as supervisors during the initial socialisation and dissemination of information. At the final stage of the training, additional explanations were provided regarding the product packaging process to ensure that the final products would have packaging designs that are attractive to potential buyers [16]–[18].



**Figure 2:** People observe the process of mixing and stirring the soap ingredients with enthusiasm and care.

**Figure 2** depicts the practical stage of the soap-making training, where participants attentively observe the demonstration of mixing and stirring the soap ingredients. The image highlights the interactive nature of the activity, as community members directly witness the transformation of raw materials into a household product. This stage is crucial because it provides hands-on experience, allowing participants not only to understand the theoretical aspects introduced earlier but also to gain confidence in replicating the process independently. The visible enthusiasm of the audience reflects their curiosity and willingness to adopt new skills that can potentially improve their economic well-being. Additionally, the figure underscores the inclusive nature of the training, with both women and children present and actively engaged in the activity. This involvement strengthens knowledge transfer within households, ensuring that skills are not limited to individual family members but are shared across the entire family. The demonstration also promotes experiential learning, where participants can immediately connect theory with practice. Such community-based, participatory training methods are highly effective in fostering long-term sustainability of skills, as they emphasise collective learning, peer support, and shared responsibility in developing small-scale industries.

The large number of participants attending the training on floor cleaner and soap production serves as clear evidence that the community partners had effectively disseminated information about the event throughout the village. This strong participation reflects both the program's relevance to local needs and the successful collaboration between the facilitators and village stakeholders. Although some community members were unable to join the training due to their daily farming and agricultural activities, they are expected to benefit indirectly by learning the production process from those who had already participated. This approach ensures that the knowledge and skills gained during the training can be widely shared and sustained within the community. The implementation of the workshop was carefully organised and carried out following in-depth discussions with the community partners to ensure optimal results. These discussions provided opportunities to tailor the training to local contexts and needs, making it more practical and impactful for the participants. By aligning the workshop

activities with community input, the program not only enhanced participant engagement but also strengthened the sense of ownership among the local people. This collaborative planning process underscores the importance of participatory approaches in community-based training programs, ensuring that outcomes are relevant, sustainable, and contribute to long-term economic empowerment.



**Figure 3:** Soap Mixing Process

**Figure 3** illustrates the soap mixing process, a crucial stage in the overall soap-making training. This step involves carefully combining the raw ingredients to ensure that they are evenly blended and that the desired consistency is achieved. The image shows participants actively engaging in the process, using simple and accessible tools such as bowls and ladles, which emphasises the practicality of the training. The use of locally available equipment demonstrates that soap production can be carried out at the household level without requiring expensive machinery, making it a feasible entrepreneurial activity for rural communities. Furthermore, the mixing stage plays a vital role in determining the quality and effectiveness of the final product. Proper stirring ensures that the chemical reactions between the ingredients occur uniformly, resulting in a stable, safe, and efficient soap solution for household use. By directly involving participants in this stage, the training provided them with hands-on experience that strengthened their technical understanding and confidence in replicating the process independently. This practical exposure not only enhanced their production skills but also reinforced the program's goal of empowering communities to develop sustainable home-based industries.

To support community members who intended to market the products they produced, the facilitators also provided knowledge and training on the packaging process for floor cleaner and soap products. Packaging was introduced as an integral component of the program, ensuring that the final products would be neat, appealing, and market ready. For consumers, packaging serves not only as a container but also as a medium of communication, allowing them to understand key information about the product through the labels. The information presented on the packaging must therefore include essential details that consumers need to know before making a purchase [19]–[21]. In this regard, the partners were provided with examples of packaging tools, such as plastic bottles and containers, as well as training on designing attractive product labels. The availability of such equipment allowed participants to carry out the packaging process more efficiently, ensuring that the soap products were neatly and tightly



sealed. This not only improved the visual appeal of the products but also enhanced their durability, reducing the risk of leakage and allowing for more extended storage periods.

In addition to technical training, the community also received guidance on basic financial record-keeping practices suitable for small-scale household businesses. Simple bookkeeping methods were introduced to help participants track costs, revenues, and profits systematically. Furthermore, the facilitators introduced the fundamental principles of effective marketing strategies, equipping the participants with the skills necessary to promote their products in local markets. This holistic approach, combining technical skills with business knowledge, was designed to empower the community not only to produce but also to sustain and expand their small-scale entrepreneurial activities.



**Figure 4:** Soap Ready to be Packaged

**Figure 4** shows the participants of the training program gathered after completing the soap-making process, with the finished soap products placed in front of them, ready for packaging. This stage represents the culmination of the entire training activity, where theoretical knowledge and practical demonstrations come together in the form of tangible products. The collective photo not only documents the outcomes of the workshop but also symbolises the sense of accomplishment and community spirit that were fostered throughout the program. The presence of both facilitators and local participants in the figure underscores the collaborative nature of the initiative, highlighting the importance of partnerships in community-based development programs. Additionally, the image reflects the empowerment of women and community members, who are now equipped with the skills to produce household soap products. The readiness of the soap for packaging demonstrates that participants have successfully mastered the process from preparation to production and are now capable of advancing to the next entrepreneurial stage marketing their products. This achievement highlights the potential for small-scale industries to thrive within rural communities, thereby enhancing household income and fostering sustainable local economic development. The figure, therefore, not only illustrates a technical outcome but also represents the broader social and economic impacts of the training.

**Figure 5** illustrates the stage where community participants are actively engaged in the packaging process of the liquid soap products. The image shows women working together to fill and seal bottles, which reflects not only the technical application of the training but also the spirit of cooperation and collective responsibility. The activity demonstrates that the participants have successfully mastered the production cycle, from preparation and mixing to processing and the final step of packaging. This stage is crucial because packaging directly influences the quality, durability, and market appeal of the product, making it suitable for household use and potential commercialisation.

Moreover, the involvement of many women in the packaging process highlights the program's contribution to empowering local communities, particularly mothers and homemakers, as agents of small-scale entrepreneurship. By equipping them with both technical and business-oriented skills, the initiative opens opportunities for sustainable income generation. The presence of children and other family members in the activity also shows how knowledge transfer is embedded in a communal setting, reinforcing intergenerational learning. Overall, this figure reflects the program's success in fostering both technical competence and community cohesion.



**Figure 5:** Soap Packaging Process by Community Participants

In general, the successful implementation of this program was made possible through the direct support of the village administration, the CSP students from Abulyatama University who were carrying out their community service duties in Warabo Village, and all parties who contributed to the field activities. The women's community group (WCG) of the village and the service team also agreed that this partnership should be continuously nurtured to ensure the program's sustainability in the future.

#### **4. Novelty of the Research and Community Service**

The results of this community service program reveal several novel aspects, distinct from previous studies and community empowerment initiatives. Earlier research on household product innovation and training programs has generally focused only on technical skill transfer, such as introducing soap-making techniques or other home-based production methods, without providing a comprehensive approach to sustainability. In contrast, this program not only trained participants in the production of liquid soap and floor cleaners but also integrated supporting components, including product packaging, basic bookkeeping, and introductory marketing strategies. This holistic model ensures that participants are equipped with both technical and entrepreneurial skills, enabling them to establish sustainable micro-enterprises.

Another key novelty lies in the collaborative and participatory approach applied throughout the program. While earlier initiatives often positioned the facilitators as the main drivers of activity, this program emphasised the active involvement of local partners, particularly the village WCG group, in every stage, from planning and socialisation to training and supervision. Such collaboration not only strengthened community ownership but also enhanced the likelihood of program continuity after the official activities ended. Furthermore, the integration of CSP students as facilitators and mentors created an intergenerational learning environment, bridging academic knowledge with practical community needs. This synergy between universities, village institutions, and local communities distinguishes the



program from prior efforts and highlights its contribution as a sustainable model for rural-based creative economy development.

## 5. Conclusion

The implementation of this community service program was carried out smoothly and effectively, supported by the community's enthusiasm for acquiring new knowledge and the direct assistance provided by the village administration. The program received a highly positive response from the participants, as it addressed the challenges they had long faced with practical and appropriate solutions. One of the most important aspects highlighted in this activity was the development of attractive packaging, which is considered an essential strategy for capturing consumer interest and enhancing the marketability of the products. Furthermore, participants who had received training and knowledge were able to produce liquid soap and floor cleaners independently. It is expected that they will begin to market these products within their local communities, thereby contributing to an increase in household income and supporting the growth of small-scale entrepreneurial activities in the village.

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