

## IMPLEMENTATION OF A SOAP MIXER MACHINE AND DIGITAL ACCOUNTING AT THE USWAH HASANAH TAHFIZH SCHOOL

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### Article Info:

Received: 2025-08-13

Revised: 2025-09-15

Accepted: 2025-10-17

Volume: 4

Numbers: 3

Pages: 218 - 225

### Keywords:

Appropriate  
Technology, Green  
Cleaning, Accounting  
Digitalisation,  
Accurate

### Abstract:

This PKM activity was carried out by the UMB team with the Ma'had Tahfizh Uswah Hasanah, located in Ciledug, Tangerang City. Along with the growth in the number of students, which currently reaches 120 students, the Islamic boarding school has developed internal business units, namely a student laundry unit and a minimarket. The first problem is that, to this day, the laundry soap needs have depended on external parties and the use of conventional detergents containing synthetic chemicals such as ABS (alky benzene sulphonate), a harsh surfactant that is non-biodegradable, thus potentially polluting the water (Suryani & Fitria, 2020). The second problem is that the boarding school does not yet have an integrated accounting application system to record and manage financial transactions. To address these two problems, the PKM team provided appropriate technology, namely a soap mixer machine with green cleaning raw materials. The second was accounting digitalisation in the form of Accurate Desktop, to ensure accurate and transparent financial records. The results of the activity showed an improvement in the knowledge and skills of the pesantren staff and students, both in producing green cleaners and in implementing accounting digitalisation. Thus, this activity contributed to increasing economic independence, operational efficiency, and environmental awareness at Ma'had Tahfizh Uswah Hasanah.

## INTRODUCTION

Ma'had Tahfizh Uswah Hasanah is a private Islamic educational institution managed under the Uswah Hasanah Foundation. Uswah Hasanah Foundation was established on September 20th, 2014, based on Notarial Deed No. 70 issued by Notary Wahyu Indriani Saptyaningsih, S.H., and approved by the Ministry of Law and Human Rights through Decree No. AHU-06516.50.10.2014 dated September 23rd, 2014, with a total of nine founding members. Subsequently, an amendment was made under Decree No. AHU-0011473.AH.01.12.2018, dated July 5th, 2018, increasing the number of members to twelve. Ma'had Tahfizh Uswah Hasanah is located in Jl. Raden Fatah No. 144, South Sudimara, Ciledug District, Tangerang City, Banten Province.

The Uswah Hasanah Tahfizh Center was founded by the Uswah Hasanah Foundation on August 7, 2016, under the name Rumah Tahfizh Uswah Hasanah. It sits on its own land of approximately 6,000 m<sup>2</sup> and initially only educated 14 students. In 2020, the I'dad Lughoh program, a high school-level program focusing on Arabic, was launched with a starting number of 10 students. Alhamdulillah, by Allah's permission, the Uswah Hasanah Tahfizh Center currently educates 120 students, comprising 74 junior high school students and 46 senior high school students. Over time, the school has continued to expand its campus, including the construction of a 3-story dormitory, a



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Muslimah building, and a building planned to house an integrated Islamic elementary school. Currently, the Uswah Hasanah Tahfizh Center has six campuses.

As it continues to grow, the Uswah Hasanah Tahfizh Islamic Boarding School (Ma'had Tahfizh Uswah Hasanah) continues to improve its facilities for its students. One such facility is the establishment of a laundry unit within the boarding school, a situation previously handled by a third party outside the boarding school. Students wash their clothes there daily. With the current number of students reaching around 120, the need for soap and cleaning products is certainly considerable. It presents an opportunity for other business units within the boarding school to sell soap to the laundry unit. Synthetic chemical cleaning agents have been used for laundry. While beneficial as cleaners, they also have negative impacts on the health of users and the environment. The type of detergent commonly used in households contains ABS (Alkyl Benzene Sulfonate), a harsh detergent. This detergent is difficult for microorganisms to break down (non-biodegradable), thus causing environmental pollution (Kusumawardani, 2021). Aquatic environments contaminated with high concentrations of this type of harsh detergent waste will threaten and endanger the lives of aquatic life and the humans who consume it. The more detergent contained in the water, the greater the impact on fish survival (Isti'anah, 2017). This results in the daily detergent waste produced by households becoming hazardous waste and threatening environmental stability. Household detergent waste disposed of in water bodies can reduce the diversity of aquatic life and cause the death of several fish species, such as the giant freshwater prawn (*Macrobrachium Rosenbergii*). (Handayani, 2020).

Green cleaning refers to cleaning methods that use products and techniques with ingredients that are harmless to the environment and human health (EPA Safer Choice & Green Seal). The following presents photos of Ma'had and student laundry activities:



**Figure 1.** Ma'had Tahfizh Uswah Hasanah



**Figure 2.** Laundry activities at the Ma'had Tahfizh Uswah Hasanah

As Ma'had Tahfizh Uswah Hasanah continues to grow, it has also opened a minimarket business unit. This business unit requires a separate accounting system from the educational accounting system at the Islamic boarding school. By creating a dedicated accounting system for this business unit, accounting records can be easily recorded, and financial reporting can be more accurate and reliable, thus fulfilling the characteristics of financial reporting: relevance, reliability, comparability, and timeliness (Kieso, 2017). The following is a picture of the business units at Ma'had Tahfizh Uswah Hasanah.



**Figure 3.** Minimarket at Ma'had Tahfizh Uswah Hasanah

The financial report of the Islamic boarding school foundation is presented annually based on the Hijri or Gregorian year (Dewi Kirowati, 2021). The Islamic Boarding School Accounting Guidelines stipulate that the complete financial reports that must be prepared by Islamic boarding schools are financial reports, activity reports, cash flow reports, and notes to the financial reports (Suherman, 2019). Islamic boarding school accounting is a process of preparing general financial reports to produce financial information by taking into account the characteristics and nature of Islamic boarding schools (Rozaidin, 2020). Based on the problems outlined above, we intend to conduct a community service activity with the topic "PKM: Implementation of a Soap Mixer Machine and Digital Accounting at the Uswah Hasanah Islamic Boarding School (Ma'had Tahfizh Uswah Hasanah), South Sudimara, Ciledug, Tangerang City, Banten."

**Partner Problems:** Based on the situational analysis outlined above, the partner problems are stated as follows:



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1. The Uswah Hasanah Islamic Boarding School has a laundry unit that washes the clothes of all students. It naturally requires a significant amount of soap, which is currently purchased externally at a high total cost, and the soap is not environmentally friendly. This dependence on purchasing soap and other cleaning products from external sources is due to the non-environmentally friendly materials.
2. There is no accounting application system to record transactions and financial reporting at the Islamic boarding school's existing or future business units, which are based on the production of environmentally friendly cleaning products.

Based on the above problems, the UMB PKM team proposes the following solutions: solution to problem 1:

1. Provision of a Soap Making Machine. As a solution to overcome dependence on purchased soap from outside, Islamic boarding schools are being provided with soap-making machines. This machine will enable them to produce their own soap, whether for laundry, floor cleaning, or dishwashing. It will allow them to reduce their monthly costs for purchasing soap from outside. Furthermore, they will be provided with environmentally friendly soap ingredients. These ingredients can be natural, such as coconut oil, baking soda, or other organic materials that are harmless to the environment and human health. By using environmentally friendly ingredients, Islamic boarding schools not only save money but also contribute to sustainability and environmental preservation.
2. Cost Efficiency and Sustainability. By producing their own soap, Islamic boarding schools can significantly reduce their monthly expenses for purchasing cleaning products from outside. They also support the principle of sustainability, which is crucial for maintaining the surrounding ecosystem. These savings can be allocated to other, more pressing needs, such as developing Islamic boarding school facilities or improving the quality of education.
3. Training and Counseling. To ensure the successful use of soap-making machines and environmentally friendly materials, training was conducted for Islamic boarding school administrators and students. This training covered the correct methods of soap-making and the importance of choosing safe and environmentally friendly materials for health and sustainability. This approach is expected to improve students' entrepreneurial competencies, foster awareness of the importance of cleanliness and environmental preservation, and foster independent and innovative character (Puji, Choiriah, Setiyawati, 2025).

Solution to problem 2, namely:

1. Accounting Digitalization for Financial Transaction Recording. Islamic boarding schools will be provided with Accurate software, a desktop version of Accurate, an offline accounting software that can be installed on a local computer and offers comprehensive features. By using Accurate software, the Ma'had Tahfizh Uswah Hasanah will more easily create integrated financial reports, such as Profit and Loss Statements, Balance Sheets, and Cash Flow Statements. It will reduce the time required to prepare financial reports and increase the accuracy of the resulting reports.
2. Islamic boarding schools will also receive training on how to operate the system. This training will ensure that financial managers and staff involved in recording transactions can use the system effectively.
3. Improving Financial Management Efficiency. With accounting software, the financial management of Ma'had Tahfizh Uswah Hasanah will be more efficient and structured. Every recorded transaction can be immediately monitored, and financial reports can be generated more



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quickly and accurately. Islamic boarding school managers can also more easily monitor business unit finances, enabling them to make more informed business decisions.

4. Improving Transparency and Accountability. With a more structured system, the finances of the Ma'had Tahfizh Uswah Hasanhah Islamic Boarding School will become more transparent. More streamlined transaction recording will ensure that all financial activities are accountable, both to internal and external parties (such as donors or those who support the school).

Overall, with these solutions, the Ma'had Tahfizh Uswah Hasanhah Islamic Boarding School can reduce its dependence on external soap purchases and improve its financial management, leading to greater efficiency and transparency. Implementing these solutions also supports the sustainable development of the Islamic boarding school, both economically, environmentally, and managerially.

The results of the relevant Proposing Team's service are (G A Arwati, 2023) conducting community service on the production of environmentally friendly cleaners/green cleaners, the results stated that: the production of environmentally friendly cleaners/green cleaners increased the efficiency of the Islamic boarding school and improved the health of the students as well as increased welfare for teachers obtained from the sale of environmentally friendly cleaning products/green cleaners. (I Gusti Ayu Arwati, 2020) Conducting community service on Overcoming Obstacles in the Development of IKRT/UMK Through the Application of Timely Technology, the results state that (1) appropriate technology can be used in the production process. (2) Improving the quality of green cleaning product formulations and (3) governance management and marketing strategies. Moreover, can realize IKRT Suradita, which is more effective and efficient and has sustainable competitiveness.

## METHODS

The role of partners is crucial to the smooth running of the project. Coordination and understanding are required from both parties: the implementation team and the partner, the Ma'had Tahfizh Uswah Hasanhah, located in the South Sudimara sub-district, Ciledug district, Tangerang, Banten. Partners follow the PKM Team's guidance and participate in learning, training, outreach, and the implementation of environmentally friendly liquid soap production and digital accounting using Accurate software. After completing a series of activities, the team evaluates the partners. The evaluation process includes:

1. Partners' ability to understand the liquid soap production module using a soap mixer, along with the sequence and composition of environmentally friendly raw materials used. It includes calculating the cost of production and determining the selling price.
2. Partners are expected to be able to implement environmentally friendly soap production, market their products, and operate Accurate software to generate accurate and transparent financial reports.
3. Partners are expected to be able to sustainably produce environmentally friendly liquid soap and continue to operate Accurate software without any system issues.
4. Analyze and evaluate shortcomings and obstacles during the PKM activity process, including the production of environmentally friendly liquid soap and the production of accurate and reliable financial reports through the implementation of Accurate software.
5. Develop environmentally friendly soap products, for example, by increasing the variety of soap products or selling them with a refill system to achieve lower and more competitive prices.



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## RESULTS AND DISCUSSION

On October 7, 2025, the PKM Team and resource persons attended the PKM location, the Ma'had Tahfizh Uswah Hasanah Islamic boarding school in South Sudimara Village, Tangerang. The PKM activity began with a ceremonial opening by the PKM chair and madir of Ma'had Tahfizh Uswah Hasanah, as well as the handover of a liquid soap mixer and training materials.

The PKM Team and resource persons then presented training materials on making environmentally friendly liquid soap, and then practiced the training with the participants, consisting of Islamic boarding school staff and students.



Figure 4. Opening of the implementation of PKM

The soap-making training began with the installation of a soap mixer machine and a UV disinfectant device. Water quality was checked using a TDS device to measure the total amount of dissolved solids in water, such as minerals, salts, and metals, to determine the quality and purity of the water. Another tool was a pH meter to determine whether the solution was acidic (pH below 7), basic (pH above 7), or neutral (pH 7). The test results of both devices showed that the water quality at the Islamic boarding school was quite suitable for use in producing liquid soap.



Figure 5. Training in making liquid soap

The total production of liquid soap was 220 liters, consisting of 40 liters for each type of soap: detergent, bath soap, dish soap, floor cleaner, fabric freshener, and 20 liters for hand soap. It was packaged in 200 Jerry cans for liquid soap and 40 pump bottles for hand soap. Approximately 70% of the production was sold directly (sold internally within the Ma'had).



**Figure 6.** Results of environmentally friendly liquid soap production

Next, the PKM team and resource persons provided training for the accounting and finance staff of the Ma'had, specifically on implementing Accurate Accounting software. The training began with installing the software and creating a chart of accounts based on transactions for both the Ma'had and the laundry and minimarket business units, which are separate from the Ma'had's finance department. The next step was data input based on existing transactions and documents.

The final training provided information on the output of Accurate software, namely the forms and functions of the financial reports it produces.



**Figure 7.** Accounting software training

## CONCLUSION

The Community Service Program (PKM) activities at the Ma'had Tahfizh Uswah Hasanah in South Sudimara Village, Ciledug, Tangerang City, were held on October 7, 2025. The targets set at the beginning of the PKM program were also achieved:

1. Availability of one soap mixer machine.
2. Training in making environmentally friendly liquid soap.
3. 100% increase in the skills of the Ma'had administrators, ustadz, and students in mastering soap-making techniques so they can produce and sell soap.
4. Development of Accurate Accounting Software.
5. Training in creating accurate and transparent financial reports using Accurate Accounting Software. Meningkatnya 100% kemampuan bagian akuntansi untuk dapat melakukan pencatatan financial transactions and reporting and the implementation of Accurate Accounting Software.

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