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Student Economic Empowerment Through Digital Footprint-Based Sharia Financial Literacy at SMK Muhammadiyah 2 Pekanbaru

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Abstract
Strengthening students' economic capacity through sharia financial literacy and digital financial awareness is an important step in preparing vocational school graduates to become independent young entrepreneurs. Students of SMK Muhammadiyah 2 Pekanbaru have an interest in entrepreneurship and actively use digital financial services; however, they face limitations in understanding sharia financial principles, managing digital footprints, and accessing sharia financing. This community-service program aims to improve students' sharia financial literacy, strengthen their awareness of digital footprints as alternative financial documentation, and enhance their economic empowerment and readiness to develop sharia-based businesses. The program used a Participatory Action Research (PAR) approach through needs assessment, sharia financial literacy workshops, digital footprint training, group mentoring, evaluation, and the establishment of a Sharia Entrepreneur Club, involving 31 purposively selected students from grades XI and XII. Evaluation was conducted by comparing pre-test and post-test scores, observing students' participation, and documenting the digital financial portfolios prepared by students. The results showed an increase in the average sharia financial literacy score from 50.22 to 66.45, digital footprint awareness from 48.19 to 64.76, and economic empowerment from 47.15 to 64.00. In addition, 74.19 percent of students successfully prepared a digital financial portfolio, and one Sharia Entrepreneur Club was established. The program demonstrates that integrating sharia financial literacy with digital footprint management can strengthen students' financial awareness, entrepreneurial readiness, and potential contribution to inclusive sharia economic development.

Keywords: sharia financial literacy, digital footprint, economic empowerment, vocational students, participatory action research

Introduction

Strengthening students' economic capacity is a strategic issue in vocational education, particularly because graduates are expected not only to enter the labor market but also to create employment opportunities through entrepreneurship. In this context, students of vocational high schools occupy an important position as potential young entrepreneurs who can develop business activities based on their skills, digital literacy, and local economic opportunities. Their readiness to manage personal finances, understand sharia financial products, and utilize digital transactions responsibly can determine their ability to build sustainable economic independence after graduation (Sukoco et al., 2026).

Various community-service programs have demonstrated that training, education, and mentoring can improve financial knowledge, entrepreneurial motivation, and practical skills among young people. Interactive learning methods, such as case studies, simulations, group discussions, and financial planning exercises, have been found effective in increasing participants' understanding of financial management and investment (Ainun et al., 2025). In the long run, empowerment activities that involve students actively can help them move from being passive users of digital technology to becoming economic actors who are able to create added value from the resources available to them (Zalikha et al., 2026).

SMK Muhammadiyah 2 Pekanbaru has a strong institutional and social foundation for developing sharia-based entrepreneurship education. As part of the Muhammadiyah network, the school is connected to a broader ecosystem that includes mosques, cooperatives, Baitul Maal wat Tamwil (BMT), and other Islamic financial institutions (Masruroh, n.d.). The school also offers several vocational programs, including Computer and Network Engineering, Accounting and Financial Institutions, and Office Management and Business Services, which provide relevant foundations for students to develop business competencies (Rohmah et al., n.d.). These conditions represent an important starting point for building students' awareness of sharia finance and entrepreneurship.

From the perspective of Islamic economic development, financial literacy is not limited to understanding banking products. It also includes the ability to manage money responsibly, avoid riba, distinguish between needs and wants, practice saving, and make financial decisions based on Islamic ethical values such as amanah, qanaah, and the avoidance of israf (Rohmah et al., n.d.). Sharia financial literacy therefore connects technical financial skills with moral responsibility, enabling students to develop businesses that are not only profitable but also consistent with Islamic principles (Putri et al., 2025).

However, the national condition shows a considerable gap between Islamic financial literacy and financial inclusion. Based on the 2025 National Survey of Financial Literacy and Inclusion conducted by the Financial Services Authority, the Islamic financial literacy index reached 43.42 percent, while Islamic financial inclusion was only 13.41 percent (Rini & Fitriyanthi, 2026). This gap of approximately 30 percentage points indicates that many people understand the basic concepts of sharia finance but have not yet used sharia financial products in their daily lives (Suganda, 2025). A similar condition may also occur among vocational students, particularly those who have entrepreneurial interests but lack adequate knowledge of sharia financing.

The initial observation at SMK Muhammadiyah 2 Pekanbaru showed that approximately 80 percent of students expressed an interest in becoming entrepreneurs after graduation. Nevertheless, most of them did not know how to access affordable business capital that complies with sharia principles (Abdillah Nurul Bahri et al., 2025). Many students also did not have physical collateral, such as land certificates or vehicles, and had no formal credit history recorded in banking institutions (Ramadhan, 2026). These conditions often place young prospective entrepreneurs in a difficult position because they are considered unbankable by conventional financing standards.

At the same time, students' daily digital activities offer an opportunity that has not been fully recognized. The use of e-wallets, online payments, QRIS transactions, and social media produces digital footprints that may reflect financial behavior, payment consistency, and personal responsibility (Siregar et al., 2025). Such digital records can potentially serve as

supporting information for assessing financial credibility, especially for individuals who do not yet have formal credit histories (Siregar et al., 2026). However, most students have not been trained to manage their digital activities as financial documentation or to understand how responsible digital behavior may support their future access to sharia financing (Hayati & Pertiwi, 2025).

Previous studies support the importance of structured financial education for students and young people. (Mahendra et al., 2022) found that sharia financial literacy training increased students' average understanding from 63 to 87. (Alhassan et al., 2024) also reported that interactive education on Islamic investment improved literacy scores from 52.5 to 88.5 and strengthened awareness of the dangers of riba. (3) In addition, participatory mentoring programs have helped vocational students improve their understanding of personal financial management, savings, investment planning, and financial decision-making (Almi & Nasution, n.d.). These findings suggest that financial literacy interventions should combine conceptual knowledge with practical application.

The main problem faced by the partner school can therefore be formulated as the low capacity of students to understand sharia financial literacy and to manage digital footprints as alternative financial documentation. Although students already use digital financial services in their daily activities, they have not yet developed sufficient awareness of how these activities can be organized into a simple financial portfolio (Hoirullah & Adiba, 2026). In an ideal condition, students should be able to understand sharia financial principles, manage digital transactions responsibly, prepare basic financial documentation, and identify appropriate sharia financing alternatives for their business plans. However, the actual condition shows limited financial knowledge, low awareness of digital footprints, and the absence of a structured school-based program that connects digital literacy with sharia entrepreneurship (Munawwaroh, n.d.).

This gap shows the urgency of implementing a systematic empowerment program at SMK Muhammadiyah 2 Pekanbaru. Without proper intervention, students' digital activities may remain merely consumptive habits, while their potential to build financial credibility and entrepreneurial readiness will not be optimally developed. Conversely, when students understand the relationship between sharia financial literacy, digital behavior, and business planning, they have a greater opportunity to become active economic actors who can contribute to their families and local communities (Akmalana & Riza, 2025).

The relevant approach used in this community-service program is Participatory Action Research (PAR). This approach positions students, teachers, and Islamic financial institutions as active participants in identifying needs, designing learning activities, implementing workshops, and evaluating program outcomes (Ainun et al., 2025). PAR is appropriate because empowerment should not be delivered merely as one-way socialization; instead, it should encourage students to reflect on their own financial behavior and develop practical solutions based on their real conditions (Mahendra et al., 2022).

Through this approach, students are guided to recognize their digital activities as potential economic assets, improve their understanding of sharia financial principles, and prepare simple digital financial portfolios. The program also encourages the formation of a Sharia Entrepreneur Club as a sustainable platform for students to continue developing business ideas, financial discipline, and collaboration with sharia financial institutions (Siregar et al., 2026). Based on the problems and needs described above, this community-service program

aims to improve the sharia financial literacy of students at SMK Muhammadiyah 2 Pekanbaru, strengthen their understanding of digital footprints as alternative financial documentation, and enhance their economic empowerment and readiness to develop sharia-based businesses.

Method

This community-service program was conducted at SMK Muhammadiyah 2 Pekanbaru, located on Jalan KH. Ahmad Dahlan No. 90, Sukajadi, Pekanbaru, Riau. The activity involved 31 students from grades XI and XII who were selected purposively based on their interest in entrepreneurship, active use of digital financial services, and willingness to participate in all stages of the program. Students were chosen as the main participants because they represent potential young entrepreneurs who need adequate financial knowledge and digital skills before starting a business after graduation.

The program used a Participatory Action Research (PAR) approach, which places students, teachers, and sharia financial institutions as active partners in identifying problems, planning activities, implementing training, and evaluating results (Rohmah et al., n.d.). This approach was considered appropriate because empowerment should not be delivered as a one-way transfer of knowledge; rather, students were encouraged to reflect on their own financial behavior, recognize their digital assets, and develop practical solutions relevant to their daily lives (Rini & Fitriyanthi, 2026). The community-service team acted mainly as facilitators, while students participated actively in discussions, simulations, and the preparation of financial portfolios.

The activities were carried out through five connected stages: (1) preparation and initial needs assessment, (2) sharia financial literacy workshop, (3) digital footprint management training, (4) economic empowerment and business-plan assistance, and (5) monitoring, evaluation, and the establishment of a Sharia Entrepreneur Club. In the preparation stage, the team coordinated with the school, identified student needs, and administered a pre-test. The sharia financial literacy workshop covered basic Islamic financial principles, sharia financing products, the prohibition of riba, and Islamic financial ethics. The digital footprint training focused on managing e-wallet transactions, bill payments, and social media activities as simple financial documentation.

The evaluation used both quantitative and qualitative data. Quantitative data were collected through pre-test and post-test questionnaires measuring three main variables: sharia financial literacy, awareness of digital footprints, and students' economic empowerment. The sharia financial literacy questionnaire consisted of 30 items covering cognitive understanding, financial skills, and ethical orientation. The digital footprint questionnaire consisted of 20 items, while the economic empowerment questionnaire consisted of eight items. All responses used a Likert scale and were converted into an index ranging from 0 to 100 to allow comparison between the pre-test and post-test results.

Qualitative data were obtained through observation, group discussions, and documentation. Observation was used to record students' participation, financial behavior, and engagement during workshops and mentoring sessions. Group discussions were used to explore students' experiences, difficulties, business interests, and understanding of digital financial activities. Documentation included attendance lists, activity records, photographs, student portfolios, and business-plan drafts. These qualitative data were used to support and

explain the quantitative findings. The increase in students' understanding was calculated by comparing the average post-test score with the average pre-test score, as follows: Increase=Post-test Score (%)−Pre-test Score (%)

The success of the program was measured using several indicators: an increase of at least 20 points in sharia financial literacy and digital footprint awareness, the ability of at least 70 percent of students to prepare a digital financial portfolio, the formation of one Sharia Entrepreneur Club, and the preparation of simple sharia-based business proposals. The combination of pre-test and post-test scores, observation, and documentation was expected to provide a comprehensive picture of the program's impact on students' financial literacy, digital awareness, and entrepreneurial readiness.



Figure 1. Activity Design

Result and Discussion

This community-service program was carried out face-to-face at SMK Muhammadiyah 2 Pekanbaru and involved 31 students from grades XI and XII as the main participants. The implementation was conducted participatively through a pre-test, sharia financial literacy workshop, digital footprint training, group mentoring, post-test, and the establishment of a Sharia Entrepreneur Club. The discussion of the results focuses on three main aspects: (1) changes in students' understanding based on pre-test and post-test results, (2) changes in practical financial behavior and digital portfolio preparation, and (3) the achievement of program targets and its implications for students' entrepreneurial readiness.



Figure 2. Implementation of the Community-Service Program

The evaluation using pre-test and post-test questionnaires showed an increase in students' understanding across all measured variables. Before the program, the average score of sharia financial literacy was 50.22, which was categorized as low. After participating in

the workshop, the average score increased to 66.45 and moved into the moderate category, representing an increase of 16.24 points or 32.33 percent.

Table 1. Pre-Test and Post-Test Results

No	Variable	Pre-test Mean	Post-test Mean	Increase	Increase (%)
1	Sharia financial literacy	50.22	66.45	16.24	32.33
2	Digital footprint awareness	48.19	64.76	16.57	34.39
3	Economic empowerment	47.15	64	16.85	35.74

The results show that all three variables improved after the intervention. The highest relative increase occurred in economic empowerment, which rose from 47.15 to 64.00, followed by digital footprint awareness, which increased from 48.19 to 64.76. Meanwhile, sharia financial literacy increased from 50.22 to 66.45. These findings indicate that the program was effective not only in improving conceptual knowledge but also in strengthening students' awareness of the economic value of their digital activities.

Table 2. Results of the Paired-Samples t-Test for Pre-Test and Post-Test

Variable	n	Pre-test	Post-test	Difference	t	p-value	Decision
Sharia financial literacy	31	50.22	66.45	16.24	17.448	<0.001	Significant
Digital footprint awareness	31	48.19	64.76	16.57	16.318	<0.001	Significant
Economic empowerment	31	47.15	64	16.85	17.309	<0.001	Significant

The paired-sample t-test confirmed that the differences between pre-test and post-test scores were statistically significant. The test resulted in t=17.448 and p=0.001 for sharia financial literacy, t=16.318 and p=0.001 for digital footprint awareness, and t=17.309 and p=0.001 for economic empowerment. Therefore, the improvement in students' understanding and readiness cannot be considered incidental, but reflects the effect of the training and mentoring activities.

The improvement in sharia financial literacy can be explained by the contextual design of the training materials. The sessions did not only explain Islamic financial concepts in general, but also connected them with students' daily activities, such as using e-wallets, making digital payments, and planning personal expenses. This approach helped students understand that financial decisions made in everyday life are closely related to Islamic values, including avoiding riba, practicing amanah, and avoiding israf.

The increase in digital footprint awareness was also substantial. Before the training, most students used digital financial services only for daily consumption, such as buying food,

paying for transportation, or purchasing mobile credit. After the training, students began to understand that transaction records, payment consistency, and responsible digital behavior could be organized into a simple financial portfolio. This change shows a shift in students' mindset from passive digital users to more financially aware digital actors.

The practical results of the program were reflected in the preparation of digital financial portfolios. From the target of at least 70 percent of participants, 23 students or 74.19 percent successfully prepared a digital financial portfolio. The portfolio contained a simple recapitulation of digital transactions and financial activities without including sensitive personal data, such as account numbers, PINs, or other private information. This achievement indicates that students were able to apply the knowledge gained during the training into a concrete output.

Table 3. Achievement of Program Targets

No	Indicator	Target	Achievement	Status
1	Increase in sharia financial literacy	Minimum 20 points	32.33 points	Achieved
2	Increase in digital footprint awareness	Minimum 20 points	34.39 points	Achieved
3	Students preparing digital financial portfolios	Minimum 70 percent	74.19 percent	Achieved
4	Establishment of Sharia Entrepreneur Club	One club	One club	Achieved

The formation of the Sharia Entrepreneur Club became an important outcome of the program because it provides a sustainable platform for students to continue developing their business ideas after the community-service activity ends. Through this club, students can discuss business opportunities, prepare simple business proposals, and receive guidance from supervising teachers. The club also strengthens cooperation among students and encourages collective learning in sharia-based entrepreneurship.

The qualitative findings from observation and interviews supported the quantitative results. Students showed greater discipline in preparing personal budgets, separating needs from wants, and saving part of their pocket money. They also became more confident in interacting with sharia financial institutions, such as BMT or Islamic cooperatives, although they did not have physical collateral or a formal credit history. One student stated that, before the training, e-wallet transactions were only used for daily purchases without any record. After the training, the student began to organize transaction histories into a portfolio as evidence of financial credibility.

These findings are consistent with previous community-service programs showing that interactive financial literacy training can significantly improve students' understanding. (Rini & Fitriyanthi, 2026) reported an increase in students' average understanding from 63 to 87 after sharia financial literacy training. (2) Similarly, (Hayati & Pertiwi, 2025) found that interactive education on Islamic investment increased literacy scores from 52.5 to 88.5 and strengthened awareness of avoiding riba. (3) The increase achieved in this program,

particularly in sharia financial literacy and digital footprint awareness, is therefore in line with the pattern found in earlier studies.

From the perspective of the Theory of Planned Behavior, the program helped strengthen students' perceived behavioral control. Students did not only gain knowledge about sharia finance, but also developed practical skills in managing digital transactions, preparing portfolios, and planning simple businesses. This combination of knowledge and skills increased their confidence to take financial decisions and consider entrepreneurship as a realistic option after graduation.

The program also produced an institutional impact for SMK Muhammadiyah 2 Pekanbaru. The establishment of the Sharia Entrepreneur Club strengthened the school's role as a place for developing young entrepreneurs, while the prepared business proposals can be used as initial learning materials in entrepreneurship or school production units. In the longer term, the program contributes to SDG 1 on poverty reduction, SDG 4 on quality education, and SDG 8 on decent work and economic growth by improving students' financial capacity and entrepreneurial readiness.

Overall, the results demonstrate that the integration of sharia financial literacy, digital footprint awareness, and participatory mentoring can improve students' economic empowerment. Students began to view their digital activities not merely as consumption habits, but as potential financial documentation that can support their credibility and future access to sharia financing. Nevertheless, continued mentoring is still needed, particularly in developing business plans, improving digital security awareness, and strengthening partnerships with sharia financial institutions so that the program's impact can be sustained.

Conclusion

This community-service program succeeded in improving the sharia financial literacy, digital footprint awareness, and economic empowerment of students at SMK Muhammadiyah 2 Pekanbaru. The increase in the average scores from the pre-test to the post-test indicates that the training and mentoring activities had a positive effect on students' understanding and readiness to manage their finances responsibly. The average sharia financial literacy score increased from 50.22 to 66.45, digital footprint awareness increased from 48.19 to 64.76, and economic empowerment increased from 47.15 to 64.00. These improvements show that students not only gained conceptual knowledge of sharia finance but also began to understand the practical value of managing their digital transactions as financial documentation.

The program also achieved its main targets. A total of 23 students, or 74.19 percent, were able to prepare a digital financial portfolio, while one Sharia Entrepreneur Club was established as a sustainable platform for developing students' business ideas and financial discipline. The formation of this club indicates that the program has created an initial institutional foundation for continuing sharia-based entrepreneurship education at the school.

The results also show that students' digital activities, such as e-wallet transactions, bill payments, and social media use, can be managed as simple financial portfolios. This change reflects a shift in students' mindset from using digital financial services only for consumption to recognizing them as potential evidence of financial credibility that may support future access to sharia financing. However, the impact of the program remains at an early stage because students still differ in their level of readiness, particularly in terms of capital, digital skills,

business experience, and confidence in accessing sharia financial institutions. Therefore, the improvement in knowledge and motivation needs to be followed by more practical and sustained assistance.

ased on these findings, it is recommended that SMK Muhammadiyah 2 Pekanbaru continue the Sharia Entrepreneur Club through regular mentoring, business-plan coaching, and collaboration with BMT or other sharia financial institutions. Future community-service programs should also provide practical training on financial record-keeping, digital security, product marketing, and the preparation of sharia-based business proposals. In addition, the school may integrate digital financial portfolio management into entrepreneurship learning so that students can develop their financial capacity continuously before entering the workforce or starting their own businesses.

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