Masterpiece Journal Society Service Insight
e-ISSN: 3090-2185 *Page*: 588-605
Volume 2, Issue 2 (2026)

Strengthening Islamic Financial Literacy and Agricultural Zakat Awareness in Galesong Timur Village

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Abstract: Rural households frequently manage agricultural income, household expenditures, and microenterprise activities through interconnected financial arrangements, creating challenges in financial planning and agricultural zakat compliance. This community engagement program aimed to strengthen Islamic financial literacy, financial management skills, and awareness of agricultural zakat among residents of Galesong Timur Village, Takalar Regency, Indonesia. The program employed a participatory community empowerment approach involving 20 participants representing farmer groups, the Family Welfare Movement (PKK), and micro, small, and medium enterprises. The intervention combined interactive lectures, contextual case discussions, cash-book exercises, financial separation practices, harvest-based zakat calculations, consultation, and reflection. Program effectiveness was assessed using a 15-item pretest and posttest administered to the same participants. Descriptive statistics, normalized gain analysis, and the Wilcoxon signed-rank test were used to evaluate changes in learning outcomes. The mean score increased from 6.75 (45.0%) in the pretest to 12.70 (84.7%) in the posttest, representing an improvement of 5.95 points or 39.7 percentage points. The normalized gain was 0.721, indicating a high level of learning improvement, while the Wilcoxon test confirmed a statistically significant difference ($W = 0$, $p < 0.001$). The largest improvement occurred in agricultural zakat literacy, which increased by 58.8 percentage points, followed by family financial planning and control (+42.0 points). The findings demonstrate that context-specific, practice-oriented Islamic financial education can substantially improve short-term financial and agricultural zakat knowledge. Sustained mentoring is recommended to translate these learning gains into consistent financial recordkeeping and compliant zakat practices.

Keywords : agricultural zakat; Islamic financial literacy; Islamic financial management; community empowerment; rural households

1. Introduction

Financial resilience at the household level depends not only on the amount of income generated but also on the ability to manage, allocate, and control financial resources effectively. This issue is particularly important in rural communities where household livelihoods are frequently dependent on agriculture, informal economic activities, and microenterprises characterized by irregular and seasonal cash flows. Rural households may simultaneously allocate income to daily consumption, agricultural production, business capital, debt repayment, savings, emergency needs, and social obligations. When these financial activities are managed through an undifferentiated pool of cash and without systematic records, households may experience difficulties in identifying their actual financial position, preserving productive capital, planning for future expenditures, and fulfilling religious financial obligations. Financial literacy therefore represents more than the ability to recognize financial concepts; it involves the capacity to apply financial knowledge in planning, decision-making, and financial control. Previous research demonstrates that financial literacy is associated with improved financial decision-making, while financial education can generate improvements in financial knowledge and subsequent financial behavior (Goyal & Kumar, 2021; Kaiser et al., 2022; Lusardi & Mitchell, 2014).

The importance of financial literacy becomes more complex when viewed from an Islamic financial perspective. Islamic financial management emphasizes not only economic efficiency but also ethical and religious principles governing the acquisition, utilization, and distribution of wealth. Financial decisions should consider the prohibition of riba, responsible indebtedness, transparency in transactions, avoidance of excessive consumption, and the responsible allocation of wealth. Consequently, Islamic financial literacy requires individuals to understand financial management while simultaneously incorporating Islamic principles into everyday economic decisions. For rural households, this perspective is particularly relevant because financial management is closely connected to agricultural production, household welfare, business sustainability, and religious obligations. Practical financial education that combines cash-flow management, budgeting, financial separation, saving, and responsible debt management with Islamic principles can therefore provide a more contextually appropriate approach to strengthening household financial resilience.

Agricultural households face additional challenges because agricultural income is commonly seasonal and dependent on harvest cycles. Revenue received at harvest must often finance production costs for the subsequent cycle, household consumption, education, health-related needs, debt obligations, and other expenditures. Without adequate financial planning, households may interpret harvest proceeds as disposable income even though part of the proceeds is required to preserve productive capacity. Simple financial records and the separation of household and business funds can help farmers distinguish between revenue, production costs, household consumption, business capital, savings, and surplus. Such practices are consistent with the broader principles of Islamic financial management, particularly amanah (trustworthiness), moderation, responsibility, and the preservation of wealth. Thus, strengthening financial literacy among rural households should address not only general financial knowledge but also the practical financial decisions associated with agricultural and household activities.

Within this context, agricultural zakat represents an important dimension of Islamic financial literacy. Zakat is not merely a voluntary form of charitable giving but constitutes a religious obligation under specific conditions. Nevertheless, knowledge concerning agricultural zakat remains uneven among farming communities. Previous studies in several Indonesian agricultural regions indicate that farmers may understand the general concept of zakat but have limited knowledge regarding the specific conditions of agricultural zakat, including the applicable nisab, timing of payment, rates associated with different irrigation systems, eligible recipients, and appropriate channels of distribution (Anwar & Ismail, 2022; Indayani & Azis, 2023; Karmila et al., 2024; Liana et al., 2023; Rahim et al., 2021; Ulfa, 2023). Such knowledge gaps may influence the ability of farmers to correctly determine their zakat obligations and distinguish zakat from other forms of social giving, such as infaq, sadaqah, gifts, or payments to workers.

The issue of agricultural zakat is also closely associated with zakat compliance and institutional trust. Knowledge alone may not necessarily lead to appropriate zakat practices when individuals lack confidence in zakat institutions or do not understand the mechanisms through which zakat can be calculated and distributed. Research has highlighted the importance of governance, transparency, accountability, communication, and trust in strengthening the effectiveness of Islamic social finance institutions (Alshater et al., 2021; Napitupulu et al., 2024; Sawmar & Mohammed, 2021; Widiastuti et al., 2021). In the Indonesian context, institutional trust and communication mechanisms have also been identified as important factors influencing individuals' intention to pay zakat through formal institutions (Abdullah et al., 2023; Hamdani et al., 2024). These findings suggest that agricultural zakat education should not be limited to explaining religious concepts. It should also provide practical guidance regarding calculation, documentation, consultation, and appropriate distribution channels.

Beyond compliance, agricultural zakat has considerable potential to support community empowerment and rural economic development. Islamic social finance can contribute to productive economic activities when zakat resources are managed effectively and directed toward sustainable livelihood development. Previous studies have demonstrated the potential of zakat-based interventions to support agricultural financing, livestock development, poverty reduction, food security, financial inclusion, and community empowerment (Isman et al., 2023; Iswanto et al., 2023; Mohamed & Shafiai, 2021; Mukhlis et al., 2023; Salim et al., 2024). Zakat-based community development initiatives can also strengthen local institutional capacity when accompanied by structured mentoring and appropriate governance mechanisms (Rahayu et al., 2024). Therefore, improving agricultural zakat literacy can potentially generate broader socioeconomic benefits, provided that knowledge is translated into accurate calculation, appropriate payment, effective institutional engagement, and productive utilization.

Despite the growing literature on financial literacy and Islamic social finance, an important practical gap remains in integrating Islamic financial management education with agricultural zakat literacy at the grassroots level. Existing studies frequently examine financial literacy, zakat awareness, zakat compliance, or zakat governance as separate issues. Less attention has been given to community-based interventions that simultaneously connect household financial planning, agricultural cash-flow management, separation of business and household finances, and agricultural zakat literacy. This integration is particularly relevant for rural communities because financial decisions are interconnected. For example, the inappropriate use of agricultural income for household consumption may reduce productive capital, while inadequate financial records may make it difficult for farmers to determine whether their agricultural output meets the relevant zakat requirements. An integrated educational approach can therefore help participants understand financial management and religious obligations as complementary components of responsible wealth management.

This issue provides the rationale for the implementation of the "Keuangan Berkah Desa" community engagement program in Galesong Timur Village, Takalar Regency, South Sulawesi, Indonesia. The program involved participants from farmer groups, the Family Welfare Movement (PKK), and micro, small, and medium enterprises (MSMEs). These groups represent interconnected dimensions of rural economic life. Farmers manage seasonal agricultural income and potential agricultural zakat obligations; PKK members frequently contribute to household financial planning and expenditure decisions; while MSME actors face challenges related to cash-flow management and the separation of personal and business finances. Bringing these groups into a shared learning environment creates an opportunity to address household, agricultural, and entrepreneurial financial decisions within an integrated Islamic financial management framework.

The program was designed around practical and participatory learning rather than conceptual instruction alone. Participants were introduced to basic Islamic financial management principles, cash-flow recording, budgeting, financial separation, responsible debt management, emergency funds, and agricultural zakat. Case-based exercises were used to simulate household and harvest-related financial decisions, allowing participants to apply the concepts to situations that reflect their everyday economic activities. This approach is consistent with evidence that financial education is more likely to generate meaningful learning when it is connected to practical financial decisions and behavioral contexts (Kaiser et al., 2022).

Accordingly, this study aims to evaluate the effectiveness of a participatory community empowerment program in strengthening Islamic financial literacy and agricultural zakat awareness among rural residents of Galesong Timur Village. Specifically, the program seeks to improve participants' understanding of Islamic financial management, develop basic skills in financial recording and financial separation, and strengthen knowledge regarding agricultural zakat obligations. The study contributes to the community engagement literature by demonstrating how Islamic financial education and agricultural zakat literacy can be integrated into a context-specific rural empowerment intervention. The analysis focuses on changes in participants' immediate learning outcomes based on pretest and posttest measurements. While the findings do not establish long-term behavioral or economic effects, they provide an empirical basis for developing sustained mentoring programs that can connect financial knowledge with consistent recordkeeping, responsible financial practices, and appropriate agricultural zakat compliance.

2. Research Methodology

2.1 Research Design

This study employed a participatory community empowerment design to evaluate the effectiveness of an Islamic financial literacy and agricultural zakat education program in a rural community. The intervention was implemented through an experiential learning process that combined conceptual instruction, case-based discussion, practical exercises, consultation, and reflection. A one-group pretest–posttest design was used to assess changes in participants' knowledge immediately before and after the intervention. The design was selected because the primary objective of the program was educational and community-oriented, namely to strengthen participants' practical understanding of Islamic financial management and agricultural zakat. The pretest–posttest approach enabled the research team to compare participants' learning outcomes before and after exposure to the intervention. However, because the study did not employ a control group or delayed posttest, the results are interpreted as evidence of short-term changes in learning outcomes rather than causal effects or long-term behavioral change.

2.2 Study Setting and Participants

The program was conducted on 12 August 2026, from 08:00 to 12:30 Central Indonesia Time (WITA), in Galesong Timur Village, Galesong Timur District, Takalar Regency, South Sulawesi, Indonesia. The activity was organized by the community engagement team of the Faculty of Economics and Business, Universitas Muhammadiyah Makassar, in collaboration with the Galesong Timur Village Government. A total of 20 participants completed the entire intervention and both assessment stages. Participants were purposively selected to represent three community groups closely associated with rural household economic activities: farmer groups, members of the Family Welfare Movement (PKK), and micro, small, and medium enterprise (MSME) actors. The participant composition consisted of 17 women and 3 men. The number of participants from each community group was not recorded separately; therefore, subgroup comparisons were not conducted.

The inclusion of participants from different community groups was intentional. Farmers were directly exposed to issues involving seasonal agricultural income and agricultural zakat, PKK members were relevant to household financial planning and expenditure management, while MSME actors were exposed to issues concerning business cash flow and the separation of personal and business finances.

Table 1. Participant and Program Characteristics

Component	Description
Program	Keuangan Berkah Desa
Location	Galesong Timur Village, Takalar Regency, South Sulawesi, Indonesia
Date	12 August 2026
Duration	08:00–12:30 WITA
Participants	20 community members
Participant groups	Farmer groups, PKK, and MSMEs
Gender composition	17 women and 3 men
Implementing institution	Faculty of Economics and Business, Universitas Muhammadiyah Makassar
Local partner	Galesong Timur Village Government

Source: Program implementation records and evaluation matrix, 2026.

2.3 Intervention Procedure

The intervention was structured into several sequential stages: preparation and coordination, baseline assessment, Islamic financial education, practical financial exercises, agricultural zakat education, harvest-based case exercises, and post-intervention evaluation. During the preparation stage, the research team coordinated with the village government to identify the target participants, determine the implementation schedule, and prepare instructional and evaluation materials. The baseline stage began with a 15-item pretest designed to identify participants' initial knowledge of Islamic financial management and agricultural zakat. The first instructional component focused on Islamic financial management. Participants were introduced to the principles of responsible financial management, cash-flow identification, expenditure recording, prioritization of needs and wants, budgeting, emergency funds, responsible debt management, and the separation of household and business finances. Islamic values, including amanah (trustworthiness), moderation, responsibility, and avoidance of riba, were integrated into the discussion.

The second component consisted of practical financial management exercises. Participants practiced recording income and expenditure using a simple cash-book format. They were also guided to distinguish between household consumption, agricultural production costs, business capital, savings, and personal withdrawals. Case scenarios were used to demonstrate how poor financial separation can affect business continuity and household financial resilience. The third component addressed agricultural zakat literacy. The instructional material covered the concept and objectives of zakat, agricultural zakat as an Islamic financial obligation, nisab, timing of payment, the relationship between irrigation systems and zakat rates, eligible recipients (mustahik), and the distinction between zakat, infaq, sadaqah, gifts, and labor payments. Participants subsequently worked through simplified harvest-based scenarios to practice identifying relevant information for zakat calculation.

Because specific agricultural zakat cases may depend on commodity characteristics, production conditions, irrigation arrangements, and applicable religious interpretations, the program did not present a single calculation as universally applicable. Participants were instead encouraged to consult qualified zakat institutions, scholars, or relevant authorities when dealing with specific cases. The final stage involved a posttest using the same 15-item instrument, followed by reflection and consultation. The learning process was designed to encourage participants to connect abstract concepts with financial decisions encountered in their everyday household, agricultural, and business activities.

Table 2. Intervention Stages and Learning Activities

Stage	Main Activity	Approach
Preparation	Participant identification, coordination, and material preparation	Coordination with village government
Baseline assessment	15-item pretest	Individual assessment
Islamic financial education	Financial principles, cash flow, budgeting, debt, emergency funds	Interactive lecture and discussion
Financial practice	Cash-book recording and financial separation	Worksheets and case exercises
Zakat education	Agricultural zakat, nisab, timing, irrigation, and mustahik	Contextual explanation and discussion
Harvest exercise	Application of agricultural zakat concepts to harvest scenarios	Participatory case study
Evaluation	Posttest and reflection	Paired assessment and consultation

Source: Community engagement implementation records, 12 August 2026.

2.4 Measurement Instrument

Learning outcomes were measured using a 15-item multiple-choice test developed according to the instructional content delivered during the intervention. Each correct response received a score of 1, whereas an incorrect response received a score of 0. Consequently, the maximum possible score was 15. The instrument covered four conceptual domains:

1. Principles of Islamic financial management: Items 1, 2, 7, and 14;
2. Household financial planning and control: Items 3, 4, 5, 6, and 15;
3. Zakat and agricultural zakat literacy: Items 8, 9, 10, and 11; and
4. Agricultural financial recording and financial separation: Items 12 and 13.

The same instrument was administered immediately before and after the intervention to enable paired comparison. Participant identities were anonymized using codes P01–P20 in the evaluation matrix. For program-level interpretation, scores were classified into three operational categories: needs strengthening (<60%), adequate (60%–<80%), and good (≥80%). These categories were developed solely for evaluating the learning outcomes of the community engagement program and should not be interpreted as formal measures of religious competence.

2.5 Data Analysis

The analysis combined descriptive and inferential statistics. Descriptive analysis included the mean, sample standard deviation, median, score range, percentage of correct responses for each item, and percentage changes across the four learning domains. Normalized gain was interpreted as low (<0.30), moderate (0.30–<0.70), or high (≥0.70), following the conventional interpretation proposed by Hake (1998). Because the sample was relatively small and the analysis involved paired observations, the Wilcoxon signed-rank test was used to examine whether posttest scores differed significantly from pretest scores. Statistical significance was assessed at the 5% level ($p < 0.05$). In addition to overall scores, changes in individual items and conceptual domains were examined to identify which areas demonstrated the greatest improvement. This domain-level analysis was particularly important for determining whether the intervention primarily strengthened general financial knowledge or addressed specific knowledge gaps in agricultural zakat.

2.6 Analytical Scope and Validity Considerations

The evaluation was designed to measure immediate educational outcomes rather than long-term behavioral or economic impacts. The absence of a comparison group means that observed improvements cannot be attributed exclusively to the intervention with the same level of causal certainty as a controlled experimental design. Furthermore, the immediate administration of an identical posttest may introduce a testing or recall effect. Accordingly, the findings are interpreted conservatively as evidence of short-term improvement in participants' knowledge following the educational intervention. The study does not claim that participants subsequently adopted consistent financial recordkeeping practices, achieved sustained improvements in financial management, or complied with agricultural zakat obligations. These outcomes require follow-up measurement through delayed assessments, observation of financial records, and verification of actual zakat practices. The participatory design nevertheless provides an important methodological advantage for community-based intervention because it allows learning activities to be directly connected to participants' socioeconomic circumstances. The combination of quantitative pretest–posttest assessment and practical case-based learning also provides a basis for evaluating both measurable learning improvement and the contextual relevance of the intervention.

3. Results and Discussion

3.1 Result

3.1 Program Implementation and Participant Engagement

The community engagement program was implemented according to the planned schedule on 12 August 2026 from 08:00 to 12:30 WITA in Galesong Timur Village, Takalar Regency, South Sulawesi, Indonesia. The activity began with participant registration and preparation, followed by an opening session and remarks from the village government. The first instructional session focused on Islamic financial management for households, farmers, and micro, small, and medium enterprises (MSMEs). Participants were subsequently introduced to practical cash-book recording and financial separation. The second session focused on agricultural zakat, including harvest-based case exercises, group discussion, evaluation, and follow-up planning. The participation of the Village Head, Danu Ardiansyah, S.Kom., and the Village Secretary, Rian Firmansyah, S.M., provided institutional support for the program. Their involvement was particularly relevant because the intervention was designed not only as a short-term educational activity but also as an entry point for strengthening financial management practices among farmer groups, the Family Welfare Movement (PKK), and MSMEs. Institutional engagement may facilitate the continuation of financial literacy and zakat-related activities at the village level.

The learning process revealed that participants' financial problems were interconnected rather than confined to a single financial domain. Household expenditures could reduce business capital, agricultural income could be consumed before funds for the following production cycle were separated, and informal transfers to relatives or workers could sometimes be perceived as substitutes for zakat. These circumstances demonstrate the importance of an integrated financial management perspective in rural communities. Accordingly, the intervention introduced a sequential decision-making process consisting of: (1) recording income and expenditures, (2) separating productive capital, (3) determining household priorities, (4) identifying potential zakat obligations, and (5) determining appropriate distribution channels. This sequence was intended to transform abstract concepts of Islamic financial management into practical financial decisions that participants could relate to their daily economic activities.

Figure 1. Documentation of program implementation: (a) facilitators and participants; (b) evaluation activity; (c) learning session; and (d) village partner support.

Source: Original documentation of the community engagement team, 12 August 2026.

The immediate outputs of the program included the delivery of two major instructional components, practical cash-book exercises, financial separation exercises, agricultural zakat case discussions, participant evaluation, and the formulation of follow-up directions. Participants also received a simple financial recording format that could be reused after the program. However, the availability of the recording format should not be interpreted as evidence of sustained implementation. Whether participants subsequently used the format consistently requires verification through longitudinal mentoring and observation.

3.2 Changes in Learning Outcomes

The pretest and posttest results indicate substantial improvement in participants' learning outcomes. All 20 participants obtained higher posttest scores than their corresponding pretest scores. The mean score increased from 6.75 out of 15 items in the pretest to 12.70 in the posttest. In percentage terms, the mean achievement increased from 45.0% to 84.7%, representing an absolute improvement of 39.7 percentage points. The standard deviation of percentage scores decreased from 9.4 to 7.8, suggesting that post-intervention performance became somewhat more concentrated around the higher mean. The median score also increased from 7.0 to 13.0, while the score range shifted from 3–9 in the pretest to 11–15 in the posttest. Individual improvements ranged from 3 to 10 correct answers.
The normalized gain was 0.721, which falls within the high-gain category based on the operational interpretation adopted in this study. In addition, the Wilcoxon signed-rank test produced W = 0 with $p < 0.001$, indicating a statistically significant difference between the paired pretest and posttest scores. These results indicate that the intervention was associated with a substantial short-term improvement in participants' knowledge. Nevertheless, the statistical significance should be interpreted within the boundaries of the study design. Because the program used a one-group pretest–posttest design without a comparison group, the observed improvement cannot be interpreted as definitive causal evidence that the intervention alone produced the change. Furthermore, the posttest was administered immediately after the intervention; therefore, the results primarily represent immediate learning outcomes rather than long-term knowledge retention or behavioral change.

Table 3. Summary of Pretest and Posttest Learning Outcomes (n = 20)

Indicator	Pretest	Posttest	Change/Result
Score, mean (SD); maximum = 15	6.75 (1.41)	12.70 (1.17)	+5.95 (2.01)
Percentage, mean (SD)	45.0 (9.4)	84.7 (7.8)	+39.7 percentage points (13.4)
Median score	7.0	13.0	+5.5
Score range	3–9	11–15	Individual gain = 3–10
Normalized gain	–	–	0.721 (high)
Wilcoxon signed-rank test	–	–	W = 0; p < 0.001

Source: Authors' analysis of the original program evaluation data, 2026. SD = sample standard deviation.

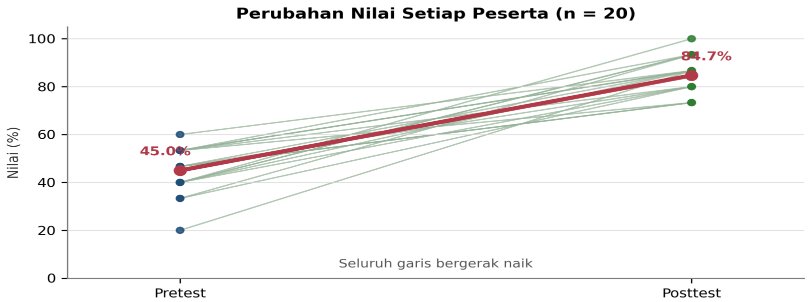

Figure 2. Individual pretest and posttest score changes among participants.
Source: Authors' analysis of the original program evaluation data, 2026.

Figure 2 demonstrates that the improvement occurred consistently across all participants. No participant recorded a flat or declining score. The participant with the lowest initial achievement increased from 20.0% to 86.7%, while the lowest posttest score was 73.3%. This pattern is important because aggregate means may conceal participants who do not benefit from an intervention. In the present study, however, the individual-level pattern provides additional evidence that the improvement was broadly distributed across the participant group. The results also suggest that the intervention successfully addressed substantial knowledge gaps. Nevertheless, a high score immediately following an educational intervention should not automatically be interpreted as evidence of knowledge retention. Repeated measurements after several weeks or months would be required to determine whether the learning gains were sustained.

3.3 Learning Outcomes across Instructional Domains

The domain-level analysis provides a more detailed explanation of the overall improvement. Four domains were evaluated: Islamic financial management principles, household financial planning and control, agricultural zakat literacy, and agricultural financial recording and financial separation. The largest improvement occurred in agricultural zakat literacy. The percentage of correct responses increased from 28.8% before the intervention to 87.5% afterward, representing an increase of 58.8 percentage points. Household financial planning and control recorded the second-largest improvement, increasing by 42.0 percentage points. Agricultural financial recording and financial separation increased by 32.5 percentage points, while Islamic financial management principles increased by 21.3 percentage points.

Table 4. Percentage of Correct Responses by Learning Domain

Learning Domain	Items	Pretest (%)	Posttest (%)	Δ Points
Islamic financial management principles	1, 2, 7, 14	65.0	86.3	+21.3
Household financial planning and control	3, 4, 5, 6, 15	39.0	81.0	+42.0
Agricultural zakat literacy	8, 9, 10, 11	28.8	87.5	+58.8
Agricultural financial recording and separation	12, 13	52.5	85.0	+32.5

Source: Authors' analysis of the original program evaluation data, 2026.

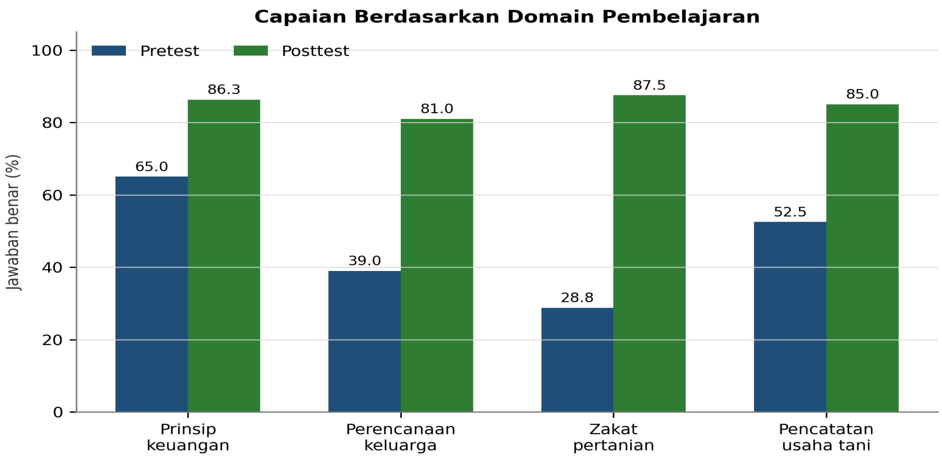

Figure 3. Pretest and posttest achievement across the four instructional domains.

Source: Authors' analysis of the original program evaluation data, 2026.

The relatively high pretest score for Islamic financial management principles suggests that participants had a basic understanding of general Islamic financial values before the program. However, the lower initial scores for household financial planning and agricultural zakat literacy indicate that participants experienced greater difficulty when abstract principles had to be translated into specific

Masterpiece Journal Society Service Insight
e-ISSN: 3090-2185 *Page*: 588-605
Volume 2, Issue 2 (2026)

financial decisions. The particularly large improvement in agricultural zakat literacy is noteworthy. The initial score of 28.8% indicates that knowledge concerning agricultural zakat was considerably weaker than knowledge of general Islamic financial principles. Following the intervention, this domain reached 87.5%. This finding suggests that contextualized instruction using harvest-related examples may be particularly useful for rural communities whose livelihoods are connected to agriculture. The increase in household financial planning and control from 39.0% to 81.0% also demonstrates the relevance of practical financial management exercises. Participants were not merely introduced to definitions of financial planning but were asked to organize income, expenditures, savings, emergency funds, productive capital, and household priorities. Such an approach may reduce the conceptual distance between financial literacy and actual financial decision-making.

3.4 Item-Level Changes and Knowledge Gaps

Item-level analysis provides further evidence regarding which aspects of Islamic financial management and agricultural zakat were most responsive to the intervention. As shown in Table 5, all 15 evaluation items experienced positive changes between the pretest and posttest.

Table 5. Changes in Correct Responses across the 15 Evaluation Items

Item	Evaluation Focus	Pretest (%)	Posttest (%)	Δ Points
1	Purpose of Islamic financial management	75	90	+15
2	Principle of avoiding riba	80	90	+10
3	Recording income and expenditures	35	75	+40
4	Prioritizing needs over wants	65	85	+20
5	Function of an emergency fund	55	75	+20
6	Benefits of financial recordkeeping	15	80	+65
7	Caution in debt management	30	75	+45
8	Purpose of zakat	25	95	+70
9	Agricultural zakat objects	60	85	+25
10	Timing of agricultural zakat payment	25	85	+60
11	Harvest and irrigation systems	5	85	+80
12	Agricultural business recordkeeping	50	90	+40
13	Separation of business and household funds	55	80	+25
14	Amanah, frugality, and responsibility	75	90	+15
15	Priority setting and budgeting	25	90	+65

Source: Authors' analysis of the original pretest and posttest response matrix, 2026.

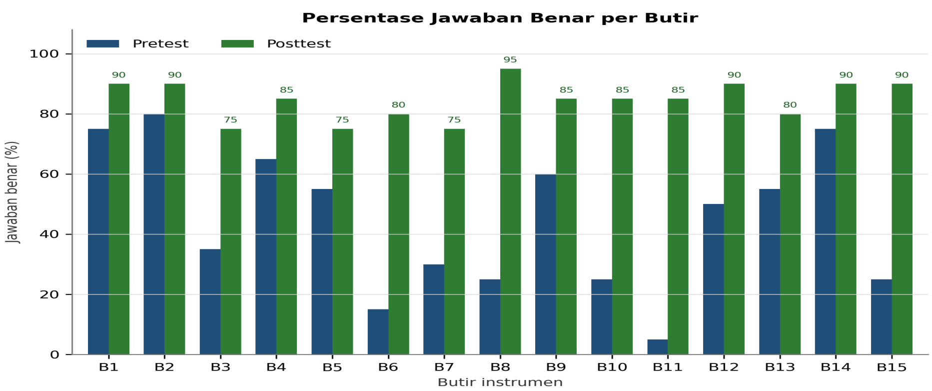

Figure 4. Comparison of the percentage of correct responses across the 15 evaluation items.
Source: Authors' analysis of the original pretest and posttest response matrix, 2026.

The most substantial improvement was observed in Item 11, concerning the relationship between agricultural output and irrigation systems. The percentage of correct responses increased from only 5% to 85%, representing an 80-percentage-point improvement. This was followed by Item 8, concerning the purpose of zakat, which increased from 25% to 95%, and Items 6 and 15, which each increased by 65 percentage points. The very low initial score on Item 11 indicates that the relationship between agricultural production conditions and zakat calculation represented a particularly important knowledge gap. The substantial posttest improvement suggests that harvest-based case exercises were useful for introducing this concept. However, the result should not be interpreted as evidence that participants are independently capable of resolving all agricultural zakat cases. The determination of zakat obligations may depend on commodity characteristics, production conditions, irrigation systems, applicable fiqh interpretations, and institutional guidance. In contrast, Item 2, concerning the avoidance of riba, recorded the smallest improvement, increasing by 10 percentage points from an already relatively high baseline of 80%. This pattern indicates a ceiling effect: concepts that participants already understood relatively well had less room for improvement than concepts associated with substantial initial knowledge gaps. The item-level findings therefore provide an important implication for future community education. Rather than allocating equal instructional time to all topics, subsequent programs could prioritize concepts with low baseline understanding, particularly financial recordkeeping, debt management, budgeting, agricultural zakat timing, and harvest-related zakat calculation.

3.5 Shift in Participant Achievement Categories

The distribution of participants across achievement categories further illustrates the magnitude of the observed learning improvement. Before the intervention, 19 of the 20 participants were classified as requiring further strengthening, while one participant was classified as having an adequate level of understanding. After the intervention, none remained in the "needs strengthening" category, four participants were classified as adequate, and 16 participants reached the "good" category.

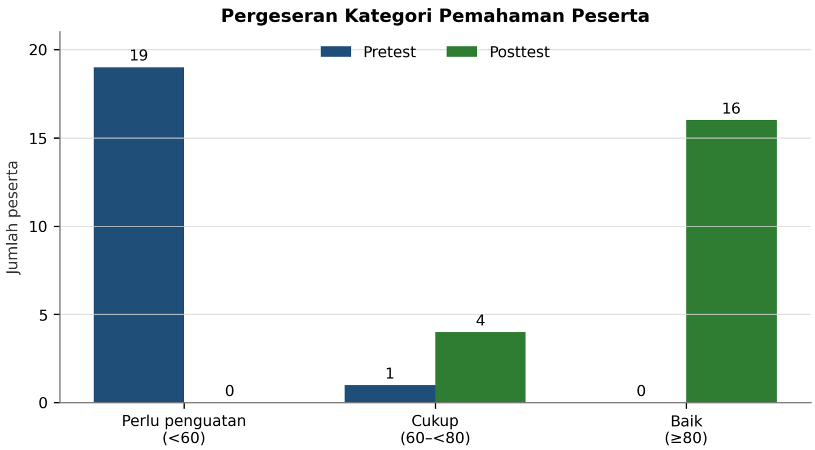

Figure 5. Distribution of participant achievement categories before and after the intervention.
Source: Authors' analysis of the original program evaluation data, 2026.

The movement of participants from the lowest category toward the adequate and good categories suggests that the intervention was not limited to improving the highest-performing participants. Instead, the posttest distribution indicates a broad upward shift in learning outcomes. This is consistent with the individual-level results presented in Figure 2. The achievement categories used in this study are operational classifications developed for program evaluation. They should not be interpreted as formal standards of religious competence or as evidence that participants have achieved comprehensive expertise in Islamic financial management or agricultural zakat. Formal determination of zakat obligations remains dependent on the relevant Islamic jurisprudential principles and, where necessary, consultation with qualified scholars or authorized zakat institutions.

3.2 Discussion

The findings demonstrate that a context-specific and practice-oriented Islamic financial education program can generate substantial short-term improvements in participants' knowledge of Islamic financial management and agricultural zakat. The overall mean score increased from 45.0% in the pretest to 84.7% in the posttest, with a normalized gain of 0.721, categorized as high. The Wilcoxon signed-rank test also indicated a statistically significant difference between the pretest and posttest scores ($W = 0$, $p < 0.001$). These results suggest that the intervention was effective in addressing immediate knowledge deficiencies among rural participants. However, the findings should be interpreted as evidence of short-term educational improvement rather than definitive evidence of sustained behavioral or economic transformation.

3.6.1 Contextualized Islamic Financial Education and Learning Improvement

The substantial improvement in learning outcomes can be explained by the program's emphasis on contextualized and practice-oriented learning. Rather than presenting Islamic financial management as an abstract body of knowledge, the intervention connected financial concepts with situations commonly encountered by participants, including agricultural income, household expenditure, business capital, savings, debt, and zakat obligations. Participants were required to practice recording cash flows, distinguishing productive capital from household consumption, and establishing financial priorities. This approach is consistent with the broader financial literacy literature, which emphasizes that financial education is more meaningful when individuals can translate financial knowledge into decisions that are relevant to their everyday circumstances (Goyal & Kumar, 2021; Kaiser et al., 2022). In the present setting, the educational process was particularly relevant because rural households may simultaneously function as households, agricultural production units, and small business entities. Consequently, financial decisions in one domain can directly affect financial capacity in another.

The findings therefore extend the conventional understanding of financial literacy by demonstrating the relevance of an Islamic financial management perspective in rural community empowerment. Financial management is not limited to budgeting and expenditure control but also incorporates ethical and religious considerations, including amanah, responsible debt management, avoidance of riba, moderation in consumption, and responsibility for the social use of wealth. The integration of these dimensions provides a more context-sensitive approach to financial literacy in Muslim rural communities. Nevertheless, the present findings should not be interpreted as demonstrating that increased knowledge automatically produces improved financial behavior. Financial literacy research distinguishes between knowledge acquisition and subsequent behavioral outcomes. Therefore, the high posttest scores provide evidence of learning but do not establish whether participants subsequently changed their financial practices.

3.6.2 Agricultural Zakat Literacy as the Major Learning Gap

One of the most important findings is the exceptionally large improvement in agricultural zakat literacy. The domain increased from 28.8% in the pretest to 87.5% in the posttest, representing an improvement of 58.8 percentage points. This was the largest gain among all four learning domains. The finding indicates that agricultural zakat represented the most substantial initial knowledge gap among participants while simultaneously becoming the domain with the greatest learning improvement. This finding is consistent with previous studies reporting limitations in farmers' understanding of agricultural zakat, particularly concerning the object of zakat, nisab, payment timing, rates, agricultural production conditions, and distribution mechanisms (Anwar & Ismail, 2022; Karmila et al., 2024; Liana et al., 2023; Rahim et al., 2021). The relatively low pretest achievement in the present study reinforces the argument that agricultural zakat literacy remains an important educational issue in rural communities.

The strongest item-level improvement occurred in the question concerning the relationship between agricultural output and irrigation systems. Correct responses increased from only 5% to 85%, an improvement of 80 percentage points. This result is particularly relevant because the determination of agricultural zakat can involve technical considerations that are difficult to understand when presented only through theoretical explanations. The use of harvest-based cases enabled participants to relate the concept to actual agricultural situations. The finding also provides a practical implication for agricultural zakat education. Educational programs should prioritize concrete scenarios rather than rely exclusively on normative explanations. For example, participants can be introduced to cases involving different harvest quantities, irrigation methods, production costs, and timing of harvest. Such exercises may improve conceptual understanding while allowing participants to identify situations requiring further consultation. However, the substantial improvement in posttest scores should not be interpreted as evidence that participants can independently determine every agricultural zakat obligation. Differences in agricultural commodities, production conditions, irrigation arrangements, and jurisprudential interpretations may influence the applicable calculation. Consequently, future community programs should establish linkages with BAZNAS, LAZ, UPZ, or qualified Islamic jurisprudence experts to ensure that improved literacy is followed by accurate implementation.

3.6.3 Financial Recordkeeping, Budgeting, and Household Financial Control

The second major improvement occurred in the domain of household financial planning and control, which increased from 39.0% to 81.0%, representing a 42.0-percentage-point improvement. This finding suggests that participants initially experienced considerable difficulty in translating financial principles into basic planning and control activities. The largest item-level improvements in this domain were observed in the benefits of financial recordkeeping and priority setting and budgeting, each increasing by 65 percentage points. These results are particularly relevant for rural households because irregular and seasonal income can make it difficult to distinguish between current consumption, productive capital, savings, and future obligations. The findings indicate that simple financial recording can serve as an entry point for broader financial management. A cash book does not merely provide information about how money is spent; it can help households identify income patterns, monitor expenditures, protect productive capital, and recognize available financial resources. For agricultural households, this distinction is particularly important because income generated during harvest periods may need to finance production activities in subsequent periods.

The improvement also supports the argument that financial literacy interventions should move beyond knowledge transmission toward applied financial skills. Goyal and Kumar (2021) emphasize the multidimensional nature of financial literacy, while Kaiser et al. (2022) provide evidence that financial education can influence financial knowledge and downstream behavior. The present program contributes to this discussion by demonstrating how simple recording exercises can be integrated with Islamic financial principles and agricultural zakat education within a rural community setting. At the same time, the posttest improvement should be interpreted cautiously. Participants demonstrated improved knowledge of recordkeeping and budgeting immediately after the intervention, but the study did not observe whether they continued to maintain financial records. Future evaluations should therefore assess actual use of cash books over several months rather than relying exclusively on post-intervention knowledge tests.

3.6.4 Integration of Household, Agricultural, and MSME Financial Management

An additional contribution of the program lies in its integration of participants from farmer groups, PKK, and MSMEs within a single learning framework. These groups have different economic responsibilities, but their financial activities are interconnected at the household level. Farmers manage agricultural production and harvest income, PKK members frequently participate in household financial decisions, and MSME actors manage business revenues and operating expenditures. The program consequently treated financial management as an integrated system rather than as three separate educational topics. For example, household consumption can affect business capital, business income can support household expenditure, and agricultural income can determine the household's capacity to save, repay debt, or fulfil zakat obligations. This interconnected perspective is particularly relevant to rural communities where economic activities are often organized around household-based production systems.

The approach also provides a practical explanation for why financial separation became an important component of the intervention. Separating household and business funds can improve financial visibility and help participants determine whether business activities generate sufficient resources to sustain operations. In agricultural households, similar separation can be applied between production capital and post-harvest consumption. Although the participants were drawn from multiple community groups, the present study did not conduct subgroup comparisons because detailed subgroup-level evaluation data were not collected. The predominance of female participants also does not provide sufficient evidence to establish gender differences in learning outcomes. Future studies could address this limitation by collecting participant characteristics and conducting subgroup analysis based on gender, occupation, educational background, and previous financial experience.

3.6.5 Agricultural Zakat Literacy and Islamic Social Finance Empowerment

The findings have broader implications for Islamic social finance and rural economic empowerment. Improving agricultural zakat literacy can be viewed not only as a religious educational objective but also as a potential foundation for strengthening local social finance ecosystems. Previous studies have highlighted the potential contribution of zakat to poverty reduction, agricultural development, community empowerment, food security, and financial inclusion (Mohamed & Shafiai, 2021; Mukhlis et al., 2023; Salim et al., 2024). From this perspective, improving knowledge about agricultural zakat represents an initial stage in a broader empowerment process. Individuals first need to understand their financial position and potential zakat obligations before they can participate effectively in institutional zakat mechanisms. At the community level, improved literacy may also facilitate communication between farmers and zakat institutions.

However, the relationship should not be considered automatic. Increased zakat knowledge does not necessarily lead to higher zakat payment or institutional participation. Previous research indicates that zakat compliance is influenced by knowledge, perceptions, governance, trust, and institutional factors (Setianingsih et al., 2022; Sawmar & Mohammed, 2021). Therefore, educational interventions need to be accompanied by credible institutional mechanisms that make zakat collection and distribution transparent, accessible, and trustworthy. This implication is particularly important in the Indonesian context, where zakat institutions can potentially serve as intermediaries between rural communities and productive social finance programs. The combination of financial literacy education, zakat consultation, and institutional support may provide a pathway through which religious obligations can contribute to broader community development.

3.6.6 Institutional Support and Sustainability of Community Empowerment

The sustainability of the program represents another important issue emerging from the findings. Although the intervention produced strong immediate learning gains, the continuation of these outcomes depends on whether participants receive opportunities to practice and reinforce the knowledge acquired. This finding is consistent with the literature emphasizing the importance of effective governance, accountability, communication, and trust in Islamic social finance institutions (Napitupulu et al., 2024; Sawmar & Mohammed, 2021). It is also consistent with evidence that structured mentoring can strengthen community capacity in zakat management (Rahayu et al., 2024).

Accordingly, the role of the village government should extend beyond providing logistical support during the intervention. A more sustainable model could involve periodic financial literacy sessions, monitoring of simple financial records, pre-harvest agricultural zakat consultations, and institutional linkages with authorized zakat organizations. Such mechanisms could transform the program from a one-time educational event into a continuing community empowerment system. The proposed model can be conceptualized as a sequence of literacy → practice → mentoring → institutional linkage → sustainable implementation. The first stage provides knowledge, the second translates knowledge into practical skills, the third reinforces those skills, the fourth connects participants with formal Islamic social finance institutions, and the fifth aims to sustain the practices within the community.

4. Conclusions

4.1 Main Findings

This community engagement program demonstrates that participatory and context-specific education can substantially improve short-term knowledge of Islamic financial management and agricultural zakat among rural community members. Among the 20 participants from farmer groups, the Family Welfare Movement (PKK), and micro, small, and medium enterprises (MSMEs), the mean evaluation score increased from 6.75 (45.0%) in the pretest to 12.70 (84.7%) in the posttest. The improvement of 39.7 percentage points was accompanied by a normalized gain of 0.721, categorized as high, while the Wilcoxon signed-rank test confirmed a statistically significant difference between the paired scores ($W = 0$, $p < 0.001$). All participants demonstrated improvement, indicating that the intervention generated a broad short-term learning effect within the participating group.

4.2 Contribution to Islamic Financial Literacy and Agricultural Zakat Education

The principal contribution of the program is the integration of Islamic financial management education with agricultural zakat literacy within a single community-based learning framework. The largest improvement occurred in agricultural zakat literacy, which increased from 28.8% to 87.5%, representing a gain of 58.8 percentage points. This result indicates that agricultural zakat constituted an important initial knowledge gap while also demonstrating strong responsiveness to contextualized education. The intervention further strengthened household financial planning and control, financial recordkeeping, and the separation of agricultural or business finances from household finances. These findings support the relevance of integrating religious, ethical, and practical dimensions of financial literacy in rural Muslim communities.

4.3 Practical Implications for Community Empowerment

The findings have practical implications for village governments, community organizations, educational institutions, and Islamic social finance institutions. Financial literacy programs should move beyond theoretical explanations by incorporating simple cash-book exercises, household budgeting, financial separation, harvest-based cases, and practical agricultural zakat calculations. At the institutional level, village governments can support continuity by incorporating financial literacy and zakat education into farmer, PKK, and MSME development activities. Zakat institutions such as BAZNAS, LAZ, and UPZ can complement these activities by providing periodic consultation, zakat calculation assistance, and guidance on appropriate collection and distribution mechanisms. Such collaboration may strengthen the transition from knowledge acquisition to responsible financial and zakat practices.

4.4 Limitations of the Study

Several limitations should be acknowledged. First, the program involved only 20 participants from a single village, limiting the generalizability of the findings to other rural communities. Second, the one-group pretest–posttest design did not include a control or comparison group; therefore, the observed improvement cannot be interpreted as definitive causal evidence of the intervention. Third, the posttest was conducted immediately after the intervention using the same assessment instrument, creating the possibility of testing or recall effects. Fourth, the evaluation focused on short-term cognitive outcomes and did not measure long-term financial behavior, sustained use of financial records, actual agricultural zakat compliance, or household economic outcomes. Therefore, the findings should be understood primarily as evidence of immediate learning improvement rather than sustained behavioral transformation.

4.5 Future Research and Sustainability Directions

Future community engagement and research should extend the present program through longitudinal mentoring and broader empirical evaluation. Follow-up assessments should be conducted after several months to examine knowledge retention and determine whether participants continue to record financial transactions, separate household and business funds, prepare budgets, and correctly identify agricultural zakat obligations. Future studies should also consider larger and more diverse samples across multiple villages and employ comparison groups or quasi-experimental designs where feasible. Collaboration with village governments and authorized zakat institutions should be strengthened to establish continuous financial literacy programs, pre-harvest zakat consultations, and community-based financial mentoring. Such efforts would enable future research to move beyond short-term learning outcomes toward the assessment of sustainable behavioral change, financial resilience, productive use of Islamic social finance, and broader community socioeconomic empowerment.

ACKNOWLEDGMENTS

The authors would like to express their sincere gratitude to the Government of Galesong Timur Village, particularly the Village Head, Danu Ardiansyah, S.Kom., and the Village Secretary, Rian Firmansyah, S.M., for their institutional support and facilitation throughout the implementation of the program. The authors also extend their appreciation to all participants from the farmer groups, the Family Welfare Movement (PKK), and micro, small, and medium enterprises (MSMEs) for their active participation and valuable contributions during the community engagement activities. Special appreciation is also extended to the Faculty of Economics and Business, Universitas Muhammadiyah Makassar, for facilitating and supporting the implementation of this community engagement program.

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