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Legal Awareness For Adolescents: Education on the Risks of Online Loans and *Muamalah* Literacy

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ABSTRACT

The rapid expansion of online lending in Indonesia has increased adolescents' exposure to illegal loans, personal data misuse, consumptive debt, and misleading PayLater schemes, while their financial and legal literacy remains limited. This community service program aimed to strengthen legal awareness and *muamalah* literacy among Grade XII students of Sigi State High School No. 7 by integrating positive law, digital risk mitigation, and Islamic financial ethics. The program applied a Community-Based Research approach combined with community education through observation, interactive counseling, discussion, and pre-test post-test evaluation involving 50 students. The materials covered legality of online loan platforms, consumer rights, personal data protection, OTP and phishing risks, loan stacking, and Islamic principles of debt and responsible spending. The findings show a meaningful improvement in students' understanding, with the average score increasing from 7.04 in the pre-test to 8.78 in the post-test. Statistical testing confirmed a significant difference, $t(49) = 4.927$; $p < 0.001$. The program also improved positive law understanding, digital risk mitigation, and sharia financial ethics. Thus, integrative legal and *muamalah* education is an effective preventive model for protecting adolescents from illegal online loans and unsafe digital financial behavior.

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INTRODUCTION

Digital transformation in the financial services sector has accelerated the growth of Indonesia's financial technology (fintech) ecosystem. One of its fastest-growing segments is Peer-to-Peer (P2P) Lending, commonly known as Online Lending (*Pinjaman Online*/Pinjol). Legally, this service is defined as the provision of information technology-based financial services that directly connect funders and fund recipients through electronic systems, as regulated by the Otoritas Jasa Keuangan/OJK Regulation No. 10/POJK.05/2022 on Information Technology-Based Joint Funding Services (LPBBTI), this service directly connects funders and fund recipients through electronic systems. (Otoritas Jasa Keuangan, 2022) It ease of access,(Dm, 2025) minimal documentation requirements and fast disbursement are the main attractions driving the widespread adoption of this service across society.(Apriadi et al., 2025)

However, this rapid growth has not been matched by a proportional increase in financial literacy. OJK data show a concerning disparity: Indonesia's financial inclusion rate reached 80.51% in 2025, a significant increase from 75.02% in 2024, while the financial literacy rate grew only marginally from 65.43% to 65.46% during the same period.(Otoritas Jasa Keuangan, 2025, pp. 4–8) This gap between financial inclusion and literacy is not merely a statistical figure; it reflects a risky situation in which millions of individuals use digital financial products and services without understanding the associated risks, rights, and legal obligations.

The disparity is particularly evident among adolescents. The 2025 National Survey of Financial Literacy and Inclusion (SNLIK), released by OJK in collaboration with the Central Statistics Agency (BPS), reported that students aged 15-17 had the lowest national financial literacy rate, at 51.68%, despite an inclusion rate of 74.00%.(Otoritas Jasa Keuangan, 2025, pp. 8–9) High access combined with limited risk comprehension makes adolescents vulnerable to exploitation by online lending providers, especially illegal entities. Mutmainah and Yumartono similarly show that Generation Z is prone to online loan use because of low financial literacy, easy application access, and digitally mediated lifestyles.(Mutmainah & Yumartono, 2025)

This issue is especially critical for senior high school students. Most are between 16 and 18 years old, a transitional age at which some have recently obtained a National Identity Card (KTP) while others have not. The selection of high school students as the primary partners in this community service program was based on two sociological and psychological considerations. First, students who have recently obtained a KTP can become targets of illegal online lenders because their identity data are still relatively unused or "clean" (Ishaqi, 2024). OJK findings in Malang also reported cases of high school students becoming victims of illegal online loans after their newly issued identity cards were exploited (Kompas TV, 2023).

Second, students who do not yet have a KTP may still be exposed to online lending risks through peer pressure, fear of missing out (FOMO) and consumptive digital lifestyles. These pressures can encourage risky behavior, including the use of parents' identity documents or credentials to access funds. OJK commissioners have reported cases of school-age children becoming trapped in online loans because of peer influence and consumptive behavior (kumparanbisnis, 2024). This pattern is consistent with Zakaria et al.'s findings, which show that consumptive tendencies influence Generation Z's decisions to use online loans (Zakaria, Panjaitan, & Mahmud, 2025). Mutmainah and Yumartono further note that a buy-now-pay-later culture, social media exposure, fashion trends, gadgets, and digital lifestyles can push young people toward using online loans without considering long-term consequences (Mutmainah & Yumartono, 2025). Debt-collection harassment can also create psychological trauma, disrupt schooling, and damage students' social relationships. (CNBC Indonesia, 2025)

Against this national backdrop, similar risks are also present in educational settings in regional areas, including SMAN 7 Sigi in Sigi Regency, Central Sulawesi. Initial observations showed that the main challenge faced by the partner school was not simply students' limited knowledge of online loans, but their lack of practical skills for recognizing digital financial risks. Students were already familiar with gadgets, social media, online games, PayLater promotions, digital links, and instant loan advertisements. However, many did not know how to verify an application's legality, protect personal data, refuse one-time password (OTP) requests, or distinguish genuine financial needs from impulsive spending. This condition calls for preventive education that goes beyond general fintech information by strengthening legal literacy, digital risk mitigation skills, and *muamalah* ethics.

Accordingly, this community service activity (PKM) was designed to respond to the partner school's needs through an integrative educational approach. Positive law functions as an external protection mechanism by helping students understand the legality of lending providers, consumer rights, and the legal consequences of digital transactions. Islamic economic law, meanwhile, functions as an internal ethical filter by encouraging students to control consumptive behavior, avoid unnecessary debt, and assess financial transactions based on the principles of halal, trustworthiness, justice, and public benefit (*maslahah*).

Prior research and community service activities have shown that digital financial literacy among adolescents and Generation Z is increasingly important amid fintech development. Sova et al.(Sova et al., 2023) found that high school students still need to strengthen their understanding of financial management and the responsible use of financial technology, while Akbar et al.(Akbar, Zhafirah, Margo, & Septiani, 2026) emphasized the importance of educating high school students on the basic concepts of fintech, the benefits and risks of digital finance, personal data security, and safe financial management. Oktaria et al.(Oktaria, Muchlis, Suryady, & Noviati, 2025) also showed that fintech education for middle and high school students can improve participants' understanding through counseling, digital financial application simulations, and group discussions. Among Generation Z, Sofiana et al.(Sofiana, Utama, Amelia, Putri, & Ambarwati, 2025) demonstrated that education on digital loans, investments, and financial behavior can enhance participants' understanding. Meanwhile, studies on Generation Z indicate that the use of online loans is influenced by ease of access, lifestyle, consumptive behavior, buy-now-pay-later culture, social media, and the pressure to follow trends.(Mutmainah & Yumartono, 2025; Rifardi, Sopingi, & Hidayati, 2024; Zakaria et al., 2025) These findings reinforce the conclusion that adolescents and Generation Z are a vulnerable group in need of preventive education not only about fintech in general, but also about the risks of online loans, data security, and the control of consumptive digital behavior.

Previous community service activities have generally addressed digital financial literacy, fintech education, and financial management for young people. However, most of these initiatives treated fintech as a general issue and did not specifically develop a preventive education model targeting the risks of illegal online loans for high school students. In addition, education on online loans has often focused only on formal legal aspects, while the dimensions of digital data security and *muamalah* ethics have not been systematically integrated. Therefore, based on the partner institution's challenges and the gaps identified in prior activities, this PKM aimed to enhance the legal awareness and *muamalah* literacy of SMAN 7 Sigi students regarding the risks of illegal online loans, personal data security, and Islamic debt ethics. Specifically, the activity was designed to develop an integrative educational approach that strengthens students' understanding of positive law regulations, digital risk mitigation skills, and Islamic financial ethics as the basis for safe, ethical, and responsible financial decision-making.

METHODS

This community service activity used a needs-based community education approach informed by the principles of Community-Based Research (CBR). CBR was relevant because the activity began with a joint needs assessment with SMAN 7 Sigi and continued with educational interventions tailored to students' specific challenges related to online loan risks, personal data security, and *muamalah* literacy (Afandi et al., 2022, p. 197). This approach positioned the school not merely as a venue, but as a partner involved in setting objectives, implementing activities, and evaluating outcomes. Interactive counseling was selected as the main method because it supports information dissemination, improves understanding, and builds students' awareness for safer decision-making when they encounter online lending services.(Rusli et al., 2024, pp. 5–6)

The participants were 50 Grade XII students at SMAN 7 Sigi, Sigi Regency, Central Sulawesi. They were selected because students at this transitional age may have recently obtained a National Identity Card (KTP), making their identity data vulnerable to misuse by illegal online lending entities. To measure program effectiveness, data were collected using a structured questionnaire administered in two stages: before the intervention (pre-test) and after the intervention (post-test). The primary quantitative data measured three cognitive variables: understanding of positive law regulations, digital risk mitigation skills related to data security, and understanding of Islamic financial ethics.

The implementation of this PKM activity was organized into three stages:

1. Preparation: The service team conducted initial observations with SMAN 7 Sigi to map students' baseline understanding of financial literacy. At this stage, pre-test and post-test instruments consisting of 10 specific questions were designed and validated.
2. Implementation: The educational intervention was delivered through participatory interactive counseling. The materials were presented using a dual-filter framework: an external filter based on positive law

(the Electronic Information and Transactions Law/UU ITE and OJK regulations on online lending) and an internal filter based on Islamic economic law (the principles of the *qardh* contract and the prohibition of *riba*).
3. Evaluation and Analysis: Participants completed a post-test to measure changes in understanding after the intervention.

Chart 1. Flowchart of the Community Service Program

Data analysis measured the extent to which the program improved students' understanding of online loan risks, digital risk mitigation, and Islamic financial ethics. Descriptive statistics were used to report means, standard deviations, minimum and maximum scores, and percentages of correct answers in the pre-test and post-test. For total scores, a paired-samples t-test was used after the normality of score differences was confirmed using the Shapiro-Wilk test (Paul & Aue, 2014). For the three cognitive variables, the Wilcoxon signed-rank test was used as a supplementary analysis because each variable consisted of a limited number of items and produced bounded categorical scores. Cohen's dz and normalized gain were also calculated to assess the magnitude of improvement.

RESULTS AND DISCUSSION

Implementation of Legal Awareness Education on Online Loan Risks

This community service activity was implemented as a form of preventive legal education for Grade XII students at SMAN 7 Sigi. It aimed to strengthen students' awareness of the risks of illegal online loans. The program was conducted through legal counseling, Islamic financial literacy sessions, interactive discussions, and comprehension evaluation using pre-test and post-test instruments. The activity involved 50 students and focused on four themes: the legal risks of online loans, the characteristics of illegal online lending platforms, personal data protection, and Islamic principles of debt and borrowing in Islam.

Legal education for adolescents is essential because the rapid development of financial technology has expanded public access to digital financial services while also creating new risks, particularly low financial literacy, data insecurity, and the misuse of digital financial platforms. (Dm, 2025; Marginingsih, 2021) In the context of online lending, legal literacy functions as a form of self-protection by enabling students to avoid illegal lending practices, identity misuse, digital intimidation, and personal data exploitation. These risks are consistent with prior studies showing that online lending problems often involve misuse of personal data misuse, threats, and intimidation during debt collection process. (Angin et al., 2025)

The implementation showed that school-based legal education was relevant to participants' needs. This was reflected in students' active participation during the question-and-answer sessions, their responses to case examples, and their discussions about daily digital experiences involving illegal online loans, OTP scams, suspicious links, PayLater schemes, and the use of parents' identity documents.

Thus, the activity did more than provide information; it encouraged students to critically reflect on their digital financial behavior and the risks associated with irresponsible use of online financial services.

1. Session 1: Legal Risks and Characteristics of Illegal Online Loans

The first session was delivered by Nursalam Rahmatullah, M.H., and focused on the legal risks and distinguishing characteristics of illegal online loans (*Pinjol*) and legal online lending platforms (*Pindar*). The session began by explaining the legal definition of online lending under POJK No. 10/POJK.05/2022, which defines information technology-based lending as a financial service that directly connects funders and recipients of funds directly through an electronic system. It also introduced the broader regulatory framework, including Law No. 21/2011 concerning the Financial Services Authority, Law No. 4/2023 concerning Financial Sector Development and Strengthening, and the AFPI code of ethics.

In this session, OJK was presented as the main institution responsible for regulating, supervising, and protecting consumers in the financial services sector. Students were also informed that legal protection is primarily available to consumers who use registered and licensed financial products in good faith. This explanation was important to helped students understand that checking platform legality is the first step before using any digital financial service.

The central practical concept introduced in this session was the "2L and CAMILAN" framework, which was introduced as a simple tool for identifying safe and legal online lending platforms. The "2L" framework refers to Legal and Logical. The Legal aspect requires users to check whether the lending platform and its products are officially licensed by OJK. The Logical aspect requires users to assess whether the costs, interest, and penalties offered by the platform are reasonable and proportionate to the risks.

Figure 1. Legal Risks and Characteristics of Illegal Online Loans Material
Source: Authors' documentation, 2025

The CAMILAN framework refers to Camera, Microphone, and Location access, which are generally the only device permissions that legal online lending applications are generally allowed to request. Students were informed that applications requesting access to contacts, galleries, messages, or other unrelated personal data should be considered suspicious and potentially illegal. They were therefore encouraged to reject excessive access requests and report suspicious platforms through official channels.

The session also discussed several factors that make young people vulnerable to online loans, including ease of access, minimal documentation requirements, social influence, digital advertising, and the tendency to use loans for daily or consumptive needs. These factors were not presented as justifications for using online loans, but as risk factors that require awareness, self control, and careful decision making.

Practical guidance was organized into four protective behaviors: first, verifying the legality of any online lending platform before use; second, understanding interest rates, service fees, and penalty structures before borrowing; third, reading loan contracts carefully before agreeing to any terms; and fourth, avoiding loan stacking or using one loan to repay another loan. Students were also introduced to official verification and complaint channels, including OJK Contact 157, the Consumer Protection Portal Application (APPK), and the Satgas PASTI task force.

2. Session 2: *Muamalah* Literacy: Loans in Islam

The second session was delivered by Dr. H. Ahmad Arief, Lc., M.H.I., and discussed the Islamic perspectives on loans and contemporary online lending practices. The session began by introducing the concept of *al-qardh* in classical *fiqh muamalah*. In Islamic law, *al-qardh* is classified as a *tabarru'* contract, or a charitable and non-profit oriented contract, and as a form of *tatawwu'*, or voluntary mutual assistance.

The presenter explained that lending in Islam is fundamentally intended as an act of worship, solidarity, and social assistance. Two Qur'anic verses, Surah Al-Baqarah verse 245 and Surah At-Taghabun verse 17, were used as normative foundations for explaining the virtue of sincere lending. Students were guided to understand that any additional fee or benefit imposed as a loan condition may violate the ethical foundation of *qardh* and may fall within the category of *riba*.

The session then outlined four ethical rules for assessing whether an online loan may be considered permissible from an Islamic perspective. First, the transaction must be free from *riba*. Second, the loan must be used for a genuine and legitimate need. Third, the borrower must have a sincere intention and realistic ability to repay the debt. Fourth, the loan must not cause neglect of higher-priority needs, in line with the principle of *fiqh muwazanah*, or ethical prioritization.

The presenter further explained that illegal online loans may generate broader social and financial consequences, including debt accumulation, personal data misuse, pressure from debt collectors, and irresponsible consumption patterns. Students were encouraged to view online loan risks not only as a legal issues, but also as matters of personal responsibility and Islamic financial ethics.

Figure 2. Loans in Islam Material
Source: Authors' Documentation, 2025

The session concluded by introducing Sharia compliant fintech P2P lending as an alternative model of digital financing. Students were informed that several Sharia fintech platforms registered with OJK operate through contracts and business models that emphasize transparency, fairness, and the avoidance of *riba*. This explanation showed that Islamic economic values are not merely normative but can also be applied practically in contemporary digital financial services.

After the two material sessions, the program continued with an open sharing session moderated by Nadia, S.Sy., M.H. Through interactive discussion and question and answer activities, students shared their experiences related to suspicious links, OTP requests, online loan advertisements, and PayLater promotions. Several responses indicated that students had previously encountered digital financial offers through social media and messaging applications, but did not fully understand the legal risks, data security threats, or ethical consequences behind such offers.

This interactive process enabled participants not only to receive legal and religious information, but also to connect the material with their own digital experiences. The discussion showed that online loans risks are closely related to students' daily digital environments, particularly social media exposure, instant promotional messages, and peer influence.

Figure 3. Sharing Session
Source: Authors' Documentation, 2025

Overall, the integration of legal education and *muamalah* literacy functioned as a “dual filter” for students. Positive law served as an external filter by helping students understand platform legality, consumer rights, data protection, and legal consequences. Meanwhile, Islamic financial ethics served as an internal filter by encouraging students to control consumptive desires, avoid unnecessary debt, reject riba, and make financial decisions based on responsibility, fairness, and benefit.

Statistical Evaluation of Students’ Understanding Before and After the Program

Program effectiveness was evaluated using pre-test and post-test instruments covering three cognitive variables: understanding of positive law regulations, digital risk mitigation skills (data security), and understanding of Islamic financial ethics. The three variables were operationalized into 10 items measuring students’ understanding of the legality of online loan applications, personal data protection, the dangers of sharing OTP codes, the risks of suspicious links, hidden fees in PayLater services, loan stacking practices, consumer rights, impulsive spending due to FOMO, and ethical attitudes toward consumptive debt from an Islamic perspective.

1. Instruments
   a. Positive Law Regulatory Understanding

   These variable measures students’ understanding of the legality, consumer rights, and information transparency required by state regulations (OJK and applicable laws).

      1) Tests students’ knowledge of how to verify the legality of a loan application by checking OJK’s list of registered entities.
      2) Explicitly tests students’ knowledge of legally recognized consumer rights, specifically the right to receive accurate, clear, and honest information.
      3) Tests students’ ability to identify “standard clauses” or hidden terms and conditions (such as a Rp25,000/month service fee concealed behind a “0% installment” offer). This falls under consumer rights protection for transparent information.

   b. Digital Risk Mitigation Skills (Data Security & Financial)

   This variable is particularly dominant and measures students’ sensitivity to cybercrime threats (such as fraud and data interception) as well as the traps embedded in financial application systems.

      1) Tests understanding of privacy protection. Students are expected to refuse access to “contacts and gallery” and permit only the standard access authorized by OJK (Camera, Microphone, and Location/CAMILAN).
      2) Tests preventive actions when encountering online loan advertisement spam chats, specifically refusing to share OTP codes.
      3) Tests sensitivity to cybercrime threats in the form of dangerous (phishing) links by ignoring them.

4) Tests the ability to identify fraudulent schemes disguised as Customer Service requests for OTP codes for “verification” purposes.
5) Tests digital financial risk mitigation specifically, awareness of the dangers of instant loan systems that can trigger a cycle of compounding debt (loan stacking).

c. Sharia Financial Ethics Understanding

This variable measures students’ moral and religious filter regarding muamalah principles in resisting consumptive impulses.

1) Explicitly tests students’ understanding of the attitude most consistent with Islamic teachings when asked by a friend to take on debt.
2) Tests the ability to avoid worldly temptations (*tabdzir*/ extravagance) stemming from digital lifestyle traps, such as impulsive shopping and FOMO (Fear of Missing Out) triggered by sudden discounts.

2. Pre-Test and Post-Test Results

Descriptive analysis results indicate an improvement in participants’ understanding following the educational activity. The mean pre-test score was 7.04, with a standard deviation of 1.99. After the activity, the mean post-test score increased to 8.78, with a standard deviation of 1.15. This represents an improvement of 1.74 points, equivalent to 17.4 percentage points.

Table 1. Descriptive Statistics of Pre-Test and Post-Test Scores

Test	N	Mean	Standard Deviation	Minimum	Maximum
Pre-test	50	7.04	1.99	2	10
Post-test	50	8.78	1.15	6	10

Source: Processed primary data, 2025

Prior to the difference test, the normality of the pre-test and post-test score differences was assessed using the Shapiro-Wilk test. The use of the Shapiro Wilk test is appropriate for testing data normality in small to medium samples before determining the suitable type of difference test (Paul & Aue, 2014; Sianturi, 2025). The test results showed a Shapiro Wilk statistic of 0.969 with a significance value of 0.210. Since the significance value exceeded 0.05, the total pre-test and post-test score differences were normally distributed. Therefore, the primary statistical test employed was the Paired Sample *t*-test.

Table 2. Paired Sample *t*-Test Result

Test	Mean Difference	SD Difference	t	df	Sig	95% Confidence Interval
Post-test -Pre-test	1.74	2.50	4.927	49	< 0.001	1.03 – 2.45

Source: Processed primary data, 2025

The results of the Paired Sample *t*-test indicate a statistically significant difference between pre-test and post-test scores, with $t(49) = 4.927$; $p < 0.001$.

The mean difference of 1.74 falls within a 95% confidence interval of 1.03 to 2.45. These findings demonstrate that the legal and *muamalah* literacy education provided through the PKM activity significantly improved students' understanding of online loan risks.

Cohen's *dz* = 0.70 indicates that the magnitude of improvement falls in the medium to large range. The normalized gain of 0.59 places the improvement in participants' understanding in the medium category. Accordingly, this activity not only produced descriptive improvement but also demonstrated a statistically meaningful increase in comprehension.

Improvement of Positive Law Regulatory Understanding

The first variable measured students' understanding of positive law regulations, encompassing knowledge of the legality of online lending services, consumer rights, and information transparency. This variable comprised three main indicators: the ability to verify the legality of online loan applications through OJK, understanding of consumers' right to accurate, clear, and honest information, and the ability to identify hidden fees in PayLater services.

Table 3. Improvement of Positive Law Regulatory Understanding

Indicator	Pre-test Correct Answer	Post-test Correct Answer	Increase
Checking the legality of online loan applications through OJK	32 (64%)	49 (98%)	+34%
Understanding hidden service fees in PayLater	34 (68%)	39 (78%)	+10%
Understanding consumer rights to correct, clear, and honest information	40 (80%)	42 (84%)	+4%
Average achievement	**70.67%**	**86.67%**	**+16.00%**

Source: Processed primary data, 2025

The evaluation results showed that understanding of positive law regulations improved from 70.67% in the pre-test to 86.67% in the post-test. In terms of scores, participants' average increased from 2.12 to 2.60 out of a maximum of 3. This improvement indicates that participants developed a greater appreciation for the importance of the legality of financial institutions, cost transparency, and consumer rights protection before using digital financial services.

The greatest improvement was observed in the indicator measuring students' ability to verify the legality of online loan applications through the OJK website, rising from 64% to 98%. This finding demonstrates that the material covering the differences between legal and illegal online lenders was well understood by participants. From the perspective of legal literacy, the ability to verify legality is a fundamental and crucial skill: students not only learned that illegal online lenders are dangerous, but also acquired the practical ability to perform verification steps.

The improvement in understanding of hidden fees in PayLater is also noteworthy. Although PayLater services are often promoted as "0% installments," participants began to understand that service fees may still appear in the terms and conditions. This relates to consumers' right to accurate, clear, and honest information. Consequently, positive law education in this activity helped students read digital transactions more critically, particularly with respect to hidden clauses that could create financial burdens.

From a legal transactional perspective, online loan transactions must be understood as legal relationships based on agreements. Therefore, all parties must pay attention to the legality of the service provider, the agreement terms, the rights and obligations of each party, data validation, payment obligations, and the legal consequences of such transactions (Wahyuni, 2021)· Accordingly, the improvement in students' understanding of OJK legality, cost transparency, and consumer rights not only reflects an increase in general knowledge, but also reinforces their awareness that every "I agree" click in a digital loan application can give rise to legal consequences.

These findings are consistent with consumer protection studies affirming that online loan consumers have the right to accurate, clear, and honest information, as well as protection from harmful practices such as high interest rates, unilateral clauses, data misuse, and intimidatory collection methods (Angin et al., 2025; Syarifah & Saly, 2023). Furthermore, Santoso and Dewi showed that the development of online lending in Indonesia has shifted from a focus on access speed to demands for security, transparency, and consumer protection. (Santoso & Dewi, 2025) Correspondingly, Indriastuti et al. affirmed that financial literacy helps users evaluate loan terms, platform legality, hidden fees, and long-term risks (Indriastuti, Hartini, & Sismadi, 2025). Therefore, the improvement in students' ability to verify application legality through OJK represents an important achievement in building practical legal awareness.

Improvement of Digital Risk Mitigation Ability

The second variable measured digital risk mitigation skills, specifically students' sensitivity to cybercrime threats, personal data misuse, OTP sharing, dangerous links, and digital financial risks such as loan stacking. This variable was the most dominant component in the instrument, as the risks of illegal online lending typically arise not only through financial transactions but also through data exploitation and digital manipulation.

The evaluation results showed that digital risk mitigation skills improved from 63.20% in the pre-test to 83.60% in the post-test. In terms of scores, participants' average increased from 3.16 to 4.18 out of a maximum of 5. This improvement of 20.40 percentage points represents the largest increase compared to the other two variables.

Table 4. Improvement of Digital Risk Mitigation Ability

Indicator	Pre-test Correct Answer	Post-test Correct Answer	Increase
Refusing excessive access to contacts and gallery	27 (54%)	41 (82%)	+28%
Ignoring online loan spam chats and not giving OTP	32 (64%)	45 (90%)	+26%
Avoiding suspicious links or phishing attempts	32 (64%)	40 (80%)	+16%
Refusing to share OTP with fake customer service	37 (74%)	42 (84%)	+10%
Understanding the risk of loan stacking	30 (60%)	41 (82%)	+22%
Average achievement	**63.20%**	**83.60%**	**+20.40%**

Source: Processed primary data, 2025

The greatest improvement within this variable was recorded in the indicator measuring students' ability to restrict personal data access, rising from 54% to 82%. This finding is significant because illegal online lending is frequently associated with personal data misuse and unethical collection practices. This aligns with Poernomo, who affirms that personal data misuse is one of the primary issues in online lending practices, particularly when applications gain access to user data and use it for collection purposes or information dissemination without consent. (Poernomo, 2023) Utami and Achmad's study showed that illegal fintech lending desk collection agents can engage in threats and defamation because they have access to data on borrowers' phones. (Utami & Achmad, 2023) Therefore, students' ability to refuse excessive access to contacts and gallery constitutes an important form of digital security literacy.

Improvement was also evident in students' ability to handle OTP related and phishing schemes. The number of students who understood that OTP codes must not be shared with third parties increased from 64% to 90% on the online loan spam chat indicator, and from 74% to 84% on the fake customer service indicator. This demonstrates that the educational activity successfully heightened students' vigilance against digital fraud schemes that are often disguised as persuasive and official communications.

In addition, students' understanding of the risks of loan stacking improved from 60% to 82%. Loan stacking refers to the behavior of using funds from one loan service to repay obligations to another. In the context of adolescents, this practice is particularly dangerous as it can create an uncontrolled debt cycle. These findings show that the education not only enhanced data security awareness, but also helped students understand the systemic risks of repeatedly using digital loan services.

Improvement of Sharia Financial Ethics Understanding

The third variable measured students' understanding of Islamic financial ethics, specifically their ability to use *muamalah* principles as a moral filter against peer pressure to incur debt and against consumptive digital behavior. This variable comprised two indicators: students' attitude toward requests to take on consumptive debt, and their ability to avoid impulsive spending driven by FOMO.

Table 5. Improvement of Sharia Financial Ethics Understanding

Indicator	Pre-test Correct Answer	Post-test Correct Answer	Increase
Avoiding consumptive debt and seeking halal alternatives	46 (92%)	50 (100%)	+8%
Avoiding impulsive PayLater use due to FOMO	42 (84%)	50 (100%)	+16%
Average achievement	88.00%	100.00%	+12.00%

Source: Processed primary data, 2025

The evaluation results showed that understanding of Islamic financial ethics improved from 88.00% in the pre-test to 100.00% in the post-test. In terms of scores, participants' average increased from 1.76 to 2.00 out of a maximum of 2. The post-test achievement of 100% indicates that all participants were able to grasp the fundamental principle that consumptive debt should be avoided, and that financial decisions should be guided by legitimate, *halal*, and responsible needs that do not harm oneself or others.

These results indicate that the "Loans in Islam" material successfully reinforced students' understanding that debt is not an instrument for sustaining a consumptive lifestyle. In Islamic jurisprudence (*fiqh muamalah*), lending and borrowing is fundamentally an act of *tabarru'* and *tatawwu'* in classical fiqh, used to describe the essential nature of the *al-qardh* contract. *Al-qardh* refers to the transfer of property to another party, which must be returned in equivalent value. Al-Zuhaili explains that *qardh* belongs to the category of *tabarru'* contracts charitable contracts oriented toward mutual assistance, not profit (Az-Zuhaili, 2011). Therefore, from the perspective of Islamic Economic Law, debt must be understood as a moral and social responsibility undertaken on the basis of genuine need, the ability to repay, honesty, trustworthiness, and freedom from *riba* and exploitation. This principle is consistent with the PKM materials, which emphasized that online loans are only justifiable when they are free from *riba*, accompanied by a sincere intention to repay, and do not neglect higher-priority needs.

From the perspective of *maqasid al-shariah*, the use of online loans that result in debt burdens, psychological stress, and disruptions to social relationships may conflict with the objectives of protecting wealth, life, reason, and social welfare (Azhim, Natalia, Izzati, & Rizka, 2025). Meanwhile, Islamic fintech can serve as a more ethical financing alternative when managed with principles of transparency, clear contractual terms, and alignment with the values of *maqasid al-shariah* (Ibrahim, Albahi, & Andrini, 2025). The FOMO indicator is also highly relevant to the adolescent context. Impulsive spending driven by discounts, trends, online games, digital lifestyles, and peer pressure can lead to irrational use of PayLater services. Within the *muamalah* framework, such behavior can be linked to *tabdzir* extravagance, or the disproportionate and non-needs-based use of wealth. Mutmainah and Yumartono's findings reinforce this argument, as lifestyle and ease of access have been shown to play a role in Generation Z's use of online loans (Mutmainah & Yumartono, 2025).

Thus, the "Loans in Islam" material not only strengthened students' normative understanding of the prohibition of *riba* and *tabdzir* but also formed an ethical filter against digital loan offers. Accordingly, the improvement in comprehension demonstrated by this variable shows that Islamic financial education functions as an internal filter that complements positive legal protection and digital security literacy.

Comparative Analysis of the Three Cognitive Variables

Comparing across variables, the greatest improvement occurred in digital risk mitigation skills, at 20.40 percentage points. This indicates that prior to the activity, data security and digital risk awareness represented the weakest area among participants. Following the activity, students demonstrated a better understanding of how to refuse excessive data access, avoid suspicious links, refrain from sharing OTP codes, and recognize the risks of loan stacking.

Table 6. Summary of Improvement Based on Three Cognitive Variables

Cognitive Variable	Number of Items	Pre-test Achievement	Post-test Achievement	Increase
Positive law regulatory understanding	3	70.67%	86.67%	+16.00%
Digital risk mitigation ability	5	63.20%	83.60%	+20.40%
Sharia financial ethics understanding	2	88.00%	100.00%	+12.00%
Overall score	**10**	**70.40%**	**87.80%**	**+17.40%**

Source: Processed primary data, 2025

Figure 4. Pre-Test and Post-Test Achievement Across Cognitive Variables
Source: Processed primary data, 2025

The positive law regulatory understanding variable improved by 16.00 percentage points, from 70.67% to 86.67%. This improvement indicates that students developed a greater appreciation for the importance of verifying the legality of online loan applications and reading cost information more critically. The Islamic financial ethics understanding variable improved by

12.00 percentage points, from 88.00% to 100.00%. Although the increase was smaller compared to the other variables, this outcome occurred because students' initial scores on the Islamic ethics dimension were already relatively high at the pre-test stage.

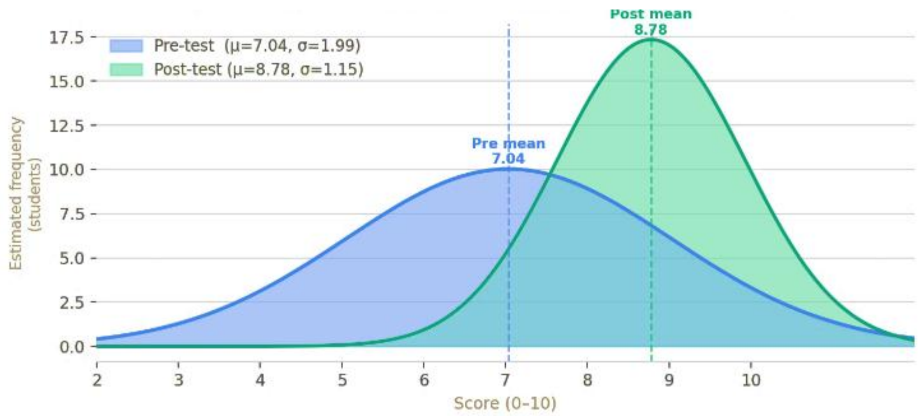

Figure 5. Estimated Pre-Test and Post-Test Score Distribution
Source: Processed primary data, 2025

Figure 5 visualizes the estimated distribution of students' total scores before and after the educational program. The pre-test curve is wider and centered around a mean score of 7.04, indicating that students' initial understanding varied more widely before the intervention. In contrast, the post-test curve shifts to the right and becomes narrower, with a higher mean score of 8.78 and a lower standard deviation of 1.15. This pattern suggests that after the program, students' understanding not only improved but also became more consistent across participants. However, since the figure is based on mean and standard deviation values, it should be interpreted as an estimated distribution rather than an actual frequency distribution of individual scores. In addition to the per variable analysis, the overall score distribution also showed a clear improvement after the program.

Table 7. Wilcoxon Signed-Rank Test Based on Cognitive Variables

Cognitive Variable	Mean Pre-test	Mean Post-test	Mean Difference	Sig
Positive law regulatory understanding	2.12	2.60	0.48	< 0.001
Digital risk mitigation ability	3.16	4.18	1.02	< 0.001
Sharia financial ethics understanding	1.76	2.00	0.24	0.003

Source: Processed primary data, 2025

Because per-variable scores are limited categorical scores based on the number of items, the Wilcoxon Signed-Rank test was used as supplementary analysis to examine changes in each variable. The results showed that all three variables experienced statistically significant improvements. The positive law regulatory understanding variable yielded $p < 0.001$, the digital risk mitigation skills variable yielded $p < 0.001$, and the Islamic financial ethics understanding variable yielded $p = 0.003$.

These results reinforce the conclusion that the PKM activity not only improved students' overall understanding, but also enhanced all three main dimensions targeted by the program. The positive law dimension provided external protection through an understanding of legality and consumer rights. The digital risk mitigation dimension provided practical skills for dealing with cyber threats. Meanwhile, the Islamic financial ethics dimension built an internal filter to prevent students from being driven to use digital loans for consumptive needs.

These activity findings indicate that education on online loan risks for adolescents must be conducted in an integrative manner. Illegal online lending is not merely a regulatory violation; it is also connected to data security, consumptive behavior, social pressure, and weak ethical reasoning. Therefore, an approach that focuses exclusively on positive law is insufficient for building students' resilience against digital financial risks.

The integration of positive law, digital security, and Islamic financial ethics produces a more comprehensive educational model. Positive law provides understanding of provider legality, consumer rights, and service provider obligations. Digital security provides practical skills for protecting personal data, avoiding OTP scams, phishing, and identity misuse. Meanwhile, Islamic Economic Law provides a moral foundation enabling students to control consumptive behavior, avoid unnecessary debt, and evaluate transactions based on the principles of *halal*, *thayyib*, justice, trustworthiness, and *maslahah*.

These comparative findings are also consistent with three recent studies. Indriastuti et al. affirmed that the decision to use online loans is influenced by financial literacy, ease of use, and risk perception. (Indriastuti et al., 2025) Mutmainah and Yumartono showed that Generation Z is vulnerable to using online loans due to a combination of easy access, lifestyle, and consumptive digital culture. (Mutmainah & Yumartono, 2025) Meanwhile, Auliani et al. emphasized that the use of online loans without adequate planning and understanding can undermine financial stability through arrears, emotional stress, reduced purchasing power, and a debt cycle. (Auliani, Salzabil, & Rahma, 2025) Accordingly, the results of this PKM activity reinforce the existing literature that education for adolescents must integrate the dimensions of law, digital security, and financial ethics.

Therefore, the pre-test and post-test results demonstrate that the program "Legal Awareness for Adolescents: Education on the Risks of Online Loans and Muamalah Literacy" is effective as a preventive educational strategy. The increase in mean scores from 7.04 to 8.78, the significant Paired Sample *t*-test result, and improvements across all three cognitive variables indicate that the activity successfully strengthened students' understanding of illegal online loan risks, personal data protection, digital transaction security, and the Islamic ethics of lending and borrowing.

Although this activity yielded positive results, several limitations must be acknowledged. First, the activity was conducted at only one school, SMAN 7 Sigi, so the results cannot be generalized to all high school students in Sigi Regency or Central Sulawesi. Second, the evaluation was conducted through pre-test and post-test in the short term and therefore did not measure long term changes in student behavior. Third, the activity did not directly involve parents or the school committee, even though family supervision is crucial for preventing identity misuse and underage digital loan use.

The practical implications of this activity underscore the need for sustained digital legal literacy programs in school environments. Schools can develop follow-up programs such as *muamalah* literacy corners, digital legal education clinics, or Islamic financial literacy classes involving teachers, parents, universities, and financial supervisory bodies. Educational materials should also be expanded to cover basic cybersecurity topics, including phishing, scams, OTP fraud, personal data protection, and ethical use of digital financial services.

CONCLUSIONS

The Community Service Activity "Legal Awareness for Adolescents: Education on the Risks of Online Loans and Muamalah Literacy" at SMAN 7 Sigi demonstrates that integrative education grounded in positive law, digital risk mitigation, and *muamalah* literacy can improve students' understanding of online loan risks. Evaluation results show an increase in mean scores from 7.04 in the pre-test to 8.78 in the post-test, with a statistically significant difference based on the Paired Sample *t*-test. Improvements were also recorded across all three main dimensions: understanding of positive law regulations, digital risk mitigation skills, and understanding of Islamic financial ethics.

These findings demonstrate that the dual-filter education model is a relevant preventive strategy for adolescents facing the risks of illegal online loans, personal data misuse, OTP fraud, phishing, loan stacking, and FOMO driven PayLater use. Nevertheless, this activity remains limited to a single school and only measures short-term improvements in understanding. Therefore, follow-up activities should involve more schools, teachers, parents, school committees, and financial supervisory bodies so that digital legal and *muamalah* literacy can be developed on a sustained basis.

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