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Digital Financial Literacy for Online Lending Safety and Fraud Prevention

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Abstract

The lack of digital financial literacy in the community level has failed to keep up with the high rate of development of digital financial services and has put the households at risk of illegal lending through the internet and fraudulent use of digital financial services. As the RT.01 area is confronting the high rate of exploitation to the illegal online lending system and digital fraud, this community engagement initiative seeks to promote digital financial literacy among the residents of RT.01, Sengkotek Village, Loa Janan Ilir District, Samarinda, as the online financial services have been expanding at a faster rate than the level of financial literacy on the community level. The program utilized a community-based Participatory Action Research design, which incorporated a needs assessment, creation of contextualized learning resources, a 2-day structured training intervention and evaluation of the outcomes by pre- and post-intervention surveys as part of 120 participants. The learning processes were presented by means of printed materials and brief instructional videos to simplify the materials. Simple explanations combined with visual examples kept the participants more entertained. The outcomes demonstrate the definite rise of financial literacy level, the average score of which grows to 68 points. Most respondents added that they had just woken up and learned the dangers of appealing Internet loan deals. It is also a program that upholds the Sustainable Development Goals that the United Nations advocates, in particular, inclusive education (SDG 4), household financial resilience (SDG 8), and popular awareness of legitimate digital financial systems (SDG 16).

INTRODUCTION

The fast-paced development of financial technology (fintech) has transformed the way individuals consume and receive financial services (Jange et al., 2024). The fast-paced development of financial technology (fintech) has transformed the way individuals consume and receive financial services (Hamidi et al., 2025; Yudaruddin et al., 2024). Nonetheless, such convenience has most of the time been coupled with severe dangers, such as ambiguous interest rates, brutal methods of collection, and abuse of individual information.

However, this convenience has been accompanied most of the time with terrible threats, like vague interest rates, harsh means of collecting them, and misuse of personal data. This is due to the necessity of better comprehension regarding the legalization of marijuana (Laxman et al., 2025). However, this convenience has been accompanied most of the time with terrible threats, like vague interest rates, harsh means of collecting them, and misuse of personal data. This is due to the necessity of better comprehension regarding the legalization of marijuana (Rolobessy et al., 2023; Hossain et al., 2023). However, this convenience has been accompanied most of the time with terrible threats, like vague interest rates, harsh means of collecting them, and misuse of personal data. This is due to the necessity of better comprehension regarding the legalization of marijuana (Schlumpf, 2021; Spivak et al., 2024). The incident of a community service program of RT.01, Sengkotek Village, which involved 120 participants, indicates that the initial level of digital financial literacy was quite low, as the average pretest score is at 45%. This poor level of comprehension leads to financial losses, high debt, psychological pressure, and a loss of confidence in digital financial systems (An et al., 2025; Shim et al., 2013). The incident involving a community service program of RT.01, Sengkotek Village, which involved 120 participants, indicates that the initial level of digital financial literacy was quite low, as the average pretest score was 45%. This poor level of comprehension leads to financial losses, high debt, psychological pressure, and a loss of confidence in digital financial systems (Zhou et al., 2025).

Enhancing digital financial literacy is hence a significant preventive measure towards illegal loaning online and fraud (Pramesti et al., 2025; Teichmann et al., 2023). Proper literacy would assist people in comprehending more about digital financial products, and they will proceed to be more critical and make more responsible financial choices. Lack of adequate literacy can actually make the use of digital financial services more susceptible to the user. With the help of digital financial education, there is increased awareness, self-control, and confidence in managing financial risks, which contributes to the financial resilience of households (Salignac et al., 2022).

This community service is a novelty because it is a participatory program and context-based. The program was built on the basis of local requirements and actual experiences related to online lending and digital fraud. The interactive discussions and basic case simulations, printed modules, and short educational videos were used as learning activities to support literacy levels. Moreover, learning outcomes were easily measured due to the use of pre- and posttests. This is not only a better method of enhancing financial literacy among communities but also provides a powerful and practical method of community development that can be applied in other communities, particularly the developing communities or the remote communities.

IMPLEMENTATION METHOD

This was a community service activity performed in RT.01, Sengkotek Village, Loa Janan Ilir District, Samarinda City, East Kalimantan Province, Indonesia. It was organized in August 2025 and included 120 adult participants of the local community. Among the participants were residents who had already used online lending services and those who were not entirely informed about illegal online lending practices. The partner in the given activity was the RT.01 neighborhood administration of Sengkotek Village, which helped to organize the participants and the activity.

The community-based research (CBR) approach and participatory aspects were employed in the activity. The program was, in practice, carried out in three major steps: preparation, implementation, and evaluation.

1. Preparation Stage. At the preparation stage, the team conducted an initial survey to obtain a general picture of the community's level of financial literacy and to identify potential risks related to illegal online lending. During this stage, the team also prepared supporting instruments, including pretest and posttest questionnaires, semi-structured interview guidelines, and learning modules for financial literacy education.
2. Implementation Stage. In the implementation phase, training and financial literacy workshops were provided to the members of the community. The sessions covered practical issues like personal finances, the dangers of using illegal loans online, and making better financial choices. The pretest and posttest were carried out to determine the changes in understanding by having the participants complete the pretest in advance and the posttest after the sessions. Moreover, a few participants were chosen and in-depth interviews were carried out to understand their experiences, perceptions, and problems with management finances and utilization of digital financial services (Hall et al., 2021).
3. Evaluation Stage. The pretest and posttest results were compared in the last stage with a paired t-test to determine the difference in the level of financial literacy and intentions of the participants to use illegal online lending services. The functionality of the employed counseling and training practices was also examined by the team. This assessment was followed by the enhancement and further development of financial education that is better suited to the specific needs of the local population (Dirks, 2021).

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Figure 1. Implementation Stage CBR-PAR

RESULTS

The RT.01, Sengkotek Village, Loa Janan Ilir Subdistrict, Samarinda Seberang, East Kalimantan, Indonesia, was the location of the community service activities (Table 1).

Table 1. Community Service and Partner Team

	The activity was done with 120 respondents who were representatives of different communities. The sample was chosen at random and was representative of variations in terms of age, education, occupation and experience in the use of digital financial services especially online lending.
	Documentation of the Workshop This was to be kept in order to ensure that the activity reflected the real conditions in the community. The participants included young and old adults, elementary school to the higher education, formal workers, informal workers, as well as homemakers. Through this piece, the activity was in a position to elicit varying degrees of knowledge, experiences, and issues regarding the services of online lending and other digital financial products.

According to Table 2, a greater proportion of respondents were women (54 percent) who were active consumers of digital financial services, both in their daily use and in their income. Nonetheless, the category was also more prone to fraud and personal data abuse because of weak digital financial literacy. Male respondents (46%) generally used online loans for productive purposes and tended to be more cautious in verifying the legality of the lending platforms. It was found that the largest group was in the 26-35 age range (29%), a productive age group with relatively high financial needs. Younger respondents (17-25 years old) also expressed a high interest in online loans but had little knowledge of risks and legal issues.

Table 2. Descriptive Statistical Results

Characteristics	Category	Number	%
Gender	Male	55	46
	Female	65	54
Age	17-25 years	30	25
	26-35 years	35	29
	36-45 years	30	25
	>45 years	25	21
Education level	Elementary/Junior High School	20	17
	High School/Vocational School	45	38
	Diploma/Bachelor's Degree	40	33
	Postgraduate	15	13
Have used online loans	Yes	90	75
	No	30	25

Regarding education, the majority of the respondents graduated from high school or vocational schools (38%), which seemed to be the primary consumers of the digital loan services because of their convenience and periodic offers. The most educated respondents were more aware and financially literate, and the least educated ones were the most susceptible to illegal lending practices. Approximately 30 percent of the participants who were asked had the experience of using legal online loan services registered under Otoritas Jaka Keuangan (OJK) and were generally positive about it, which suggests that, in the case of regulated sites, benefits could be gained with the help of the established consumer protection.

The participants were able to learn more about the significance of checking the legality of the platform, protecting personal information, and being more careful with their finances (Table 1) by conducting participatory activities, including interactive workshops, simple fraud identification simulations, and using printed materials and short educational videos, which resulted in an improved financial literacy score of 64% at the conclusion of the activity compared with 47% at the start (Table 3). This enhancement indicates that easy-to-understand, contextual, and accessible learning materials can be successful in enhancing the knowledge, increasing the awareness of the risks of illegal lending online, and promoting a more cautious attitude to finances when accessing digital financial services.

Table 3. Pretest dan Posttest

Indicators	***Percentage***		***Increase***
	Pretest	***Posttest***	
Knowledge of basic financial concepts	47%	70%	
Understanding of the risks of illegal online lending	43%	69%	
Ability to manage personal and family finances	46%	67%	
Awareness of data security and digital privacy	44%	68%	
Average	47%	64%	

The mean financial literacy score, as reflected in Table 3, shows that it was 47 percent prior to the activity and 64 percent following the intervention. This enhancement indicates that easy, contextual, and accessible learning materials can effectively improve learning, sensitize more people to the dangers of illegal online lending, and encourage more people to adopt more careful approaches to using digital financial services.

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DISCUSSION

The results of this community service activity show that the residents of Sengkotek Village have developed a high level of knowledge about RT.01, Sengkotek Village, especially on issues related to the dangers of illegal online lending after attending the training sessions and simulated cases. The pre-intervention perception of online loans is that they were a quick way out of emergency financial situations. Having been provided with systematic education on the issues of high-interest rates, unseen charges, and dangers of using personal information irresponsibly, the participants showed a tangible improvement in a more moderate and cautious attitude towards online financial choices. This is part of the change that is aligned with the objective of the program to boost digital financial literacy. It is manifested in the increased scores of financial literacy and reduced intentions to resort to using the services of illegal online lending (Imane & Fatima, 2024; Jahidah et al., 2024).

We can explain these changes by the Theory of Planned Behavior (Ajzen, 1991), wherein the more one is informed, the more informed attitudes are formed, and the perception of behavioral control becomes stronger, thus intentions to use risky financial behavior go down. The role of digital financial literacy in this program was both a cognitive improvement tool and a behavioral control tool, as it allowed the participants to evaluate and avoid unlawful digital financial services, more importantly. This observation coincides with the current empirical data on the importance of financial literacy in enhancing behavioral regulation in the context of digital finance (Liu & Fu, 2024; Zaimovic et al., 2025).

The findings are very pertinent to the United Nations Sustainable Development Goals (SDGs) in terms of sustainability. To begin with, enhancing digital financial literacy contributes directly to SDG 4 (Quality Education) through enhancing access to inclusive, context-specific, and practically relevant financial education within the community. Second, the decreased interest in illegal online borrowing is an indicator of greater financial stability (in households) and a shield against exploitative financial services, which leads to SDG 8 (Decent Work and Economic Growth) by encouraging more responsible financial behavior. Third, greater awareness of the legality of financial service providers and consumer protection systems among people would increase trust in formal financial systems, which underpin SDG 16 (Peace, justice, and strong institutions).

In spite of such positive results, the qualitative results of the in-depth interviews show that there are still behavioral limitations, especially peer pressure and pressing financial needs, that still impact some of the participants in their thinking about illegal online lending (Lemańska-Majdzik & Okręglicka, 2024). This implies that even though financial literacy is a requisite to behavior change, it is not enough to produce sustainable progress to SDG-related results alone without supplementary social assistance protocols and available and low-cost formal monetary options. This finding correlates with earlier researchers on the importance of the institutional, regulatory, and social environment in the development of healthy financial behavior (Rahman et al., 2021).

Moreover, the growing complexity and variety of digital fraudulent activities in the rapidly digitalizing financial sector in Indonesia highlight that ongoing and dynamic financial education should be included in a larger and sustainable development agenda (Jameaba, 2022). The participatory and community-based strategy that was embraced in this program, which integrates the use of real-life case simulation with a participatory learning intervention, showed effectiveness in creating a sense of community awareness, vigilance, and shared responsibility in handling digital financial risks. This method would not only strengthen SDG 4 by means of lifelong learning but also SDG 16 by enhancing social norms permitting legal and responsible financial behaviors.

Theoretically-wise, this exercise builds on the Theory of Planned Behavior(Ajzen, 1991), to the community-based digital financial literacy setting, by showing that building attitudes and perceived behavioral control through education can lower the intentions towards illegal online lending. Moreover, the results indicate that the incorporation of local social and cultural factors into the models of financial behavior in the community is significant and leads to the creation of the notion of contextual financial literacy (Istan, 2023; Duong et al., 2024). In a practical sense, these findings have significant implications for various stakeholders. To regulators like the Financial Services Authority (OJK), the results illustrate the urgency in enhancing the community-based financial literacy efforts in those regions that have high fintech proliferation rates and low literacy. To communities, the program solidifies the need to ensure that the financial service providers online are legitimate before transacting business online. In the meantime, in relation to educational and training institutions, learning methods based on the application of interactivity and simulation were found to be more efficient than traditional ones in enhancing the level of public knowledge and impacting financial behavior.

CONCLUSION

The community service program, which was provided in RT.01, Sengkotek Village, Loa Janan Ilir Subdistrict, proved to be effective in enhancing the digital financial literacy of the community. In addition to the knowledge improvement, the participants also manifested the positive attitudinal change, which is expressed in increased awareness of the digital financial risks and the creation of an information-sharing group based on the community. The results show that the main strengths of digital financial literacy interventions are cognitive knowledge and risk awareness. Meanwhile, the permanent alterations in the intentions to change behavior are also affected by external influences like the urgent need to make money and a lack of formal financing. Thus, educational intervention is not the sole method that can be necessary to promote long-term behavioral change, and more comprehensive structural assistance and institutional involvement are needed. However, the program did not use digital education technologies properly and was confined to a rather narrow geographical region. To improve its effect, the initiatives of this kind may be expanded with online or hybrid learning experiences, partnerships with financial organizations and local governments, and further training to different levels of digital literacy, age groups, and educational backgrounds. It is suggested to conduct future research to determine the long-term sustainability of the results of the program and to investigate how digital tools, including interactive learning applications, can be used to scale up the coverage and influence of digital financial literacy programs.

ETHICAL CONSIDERATIONS

This study adhered to the research and publication ethics of Pena Dimas: Journal of Community Service and the COPE Code of Ethics. All community-based research activities were conducted with integrity and transparency, and data were collected and analyzed responsibly, with appropriate citation practices. This manuscript is original, has not been published elsewhere, and is not under review by another journal, with no data or image manipulation involved.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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AUTHOR CONSTRIBUTIONS

Leny Marlina contributed to the conceptualization of the study, formulation of the community service framework, supervision of program implementation, and final review of the manuscript. Indah Yani contributed to the development of digital financial literacy materials, data collection, and drafting of the manuscript. Fitria Romadlona contributed to the design of educational activities, preparation of intervention materials, and analysis of community responses related to online lending and digital fraud prevention. Sudiyanti contributed to field coordination, participant engagement, documentation, and interpretation of program outcomes. Kahar contributed to technical support during program implementation, data organization, and manuscript editing.

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