




Strengthening Digital Literacy to Prevent Online Gambling Exposure through Social Media among Adolescents in Terasa Village, Sinjai Regency

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ARTICLE INFO	ABSTRACT
<p>Keywords: Adolescents Digital Literacy Online Gambling Prevention Social Media</p>	<p>The rapid expansion of online gambling in Indonesia has increasingly reached adolescents, largely through advertisements, links, and persuasive content circulating on social media. Adolescents in Terasa Village, Sinjai Regency, are particularly vulnerable because intensive social media use is not yet balanced by adequate digital literacy. This community service activity aimed to strengthen adolescents' digital literacy as a protective strategy to prevent exposure to online gambling through social media. The activity employed a participatory, practice-based training that combined interactive lectures, demonstrations, and simulations, and used a one-group pretest-posttest design to measure changes in participants' understanding. A nine-item instrument covering digital literacy concepts, recognition of online gambling content, its impacts, and reporting procedures was administered before and after the training. The results showed improvement across all items, with the average proportion of correct answers rising from about 60.7% in the pretest to about 89.3% in the posttest, an average increase of roughly 28.6 percentage points. The Normalized Gain value was about 0.73, which falls into the high category. The largest improvement occurred on items concerning how to block and report gambling content, which were initially the least understood. These findings confirm that practice-based digital literacy training is effective in closing knowledge gaps and equipping rural adolescents with protective skills against online gambling exposure.</p>
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INTRODUCTION

The development of digital technology has transformed the way people communicate, access information, and spend their leisure time. Social media has become the primary space for adolescent interaction, yet behind its benefits lies an increasingly real risk, namely the widespread exposure to online gambling. In recent years, online gambling in Indonesia has grown very rapidly and has reached various groups, including adolescents, through advertisements, links, and persuasive content circulating on social media. Gambling, including in its online form, has long been recognized as a risky behavior that can develop into a disorder with serious psychological, social, and financial consequences (Griffiths, 2003). Adolescents are a particularly vulnerable group because they are at a developmental stage of identity formation and are easily influenced by their digital environment (Calado, Alexandre, & Griffiths, 2017).

This vulnerability is reinforced by the fact that the intensity of social media use among adolescents is often not matched by the ability to filter and critically evaluate information. Digital

literacy, namely the ability to find, evaluate, use, and create information critically and responsibly, is a key skill for protecting oneself from harmful content (Gilster, 1997; UNESCO, 2021). Adequate digital literacy enables adolescents to recognize the modes by which online gambling spreads, understand its impacts, and know protective measures such as blocking and reporting content. Conversely, low digital literacy makes adolescents easily exposed and even persuaded to try, so digital literacy needs to be positioned as a primary prevention strategy (Reddy, Sharma, & Chaudhary, 2023).

Terasa Village in Sinjai Regency, South Sulawesi, is one of the areas facing this challenge. Based on preliminary observation, most adolescents in the village are already accustomed to using devices and are active on social media, but their use stops at entertainment and communication. When confronted with content leading to online gambling, such as advertisements for prize-based games, links from certain accounts, or invitations from peers, some adolescents are unable to recognize the danger and tend to regard it as ordinary entertainment. This limitation is not caused by a lack of interest in learning, but rather by the absence of preparation that introduces digital literacy as a tool for self-protection. The gap between high digital activity and low ability to evaluate content is the core problem addressed in this community service activity.

If this problem is left unaddressed, adolescents risk becoming increasingly exposed to online gambling, which can lead to declining academic performance, family financial problems, psychological disorders, and even legal issues. Conversely, if adolescents are equipped with digital literacy from an early age, they will have the resilience to refuse and avoid harmful content and will be able to become agents of change for their peers. Such preparatory activities are in line with various community service programs that have proven that practice-based training can significantly improve people's knowledge and digital skills (Awiliyanto, 2025; Junaedi et al., 2025; Nauli et al., 2025). A participatory approach that actively involves adolescents is also consistent with the direction of media and information literacy policy, which emphasizes the safe, ethical, and responsible use of technology (UNESCO, 2021).

Based on this description, this community service activity aims to: (1) introduce the concept of digital literacy as well as the modes and dangers of online gambling spread through social media to the adolescents of Terasa Village; (2) train adolescents' practical skills in recognizing, avoiding, blocking, and reporting online gambling content; and (3) foster adolescents' awareness and critical attitude so that they are able to protect themselves and their peers from exposure to online gambling on social media.

METHOD

This community service activity was carried out in Terasa Village, Sinjai Regency, South Sulawesi, in partnership with the village government and the local youth organization (Karang Taruna). The target participants were village adolescents gathered in a single training location. The implementation used a participatory, practice-based training approach that combined interactive lectures, demonstrations, and simulations. To measure the impact of the activity, a one-group pretest–posttest design was used, namely a single group of participants whose knowledge was measured before and after the training without a comparison group. This approach is commonly used in community service programs because it effectively describes changes in participants' understanding within a relatively short activity period (Awiliyanto, 2025). Overall, the series of activities was carried out through six sequential stages as shown in Figure 1, from preparation to evaluation and data analysis.

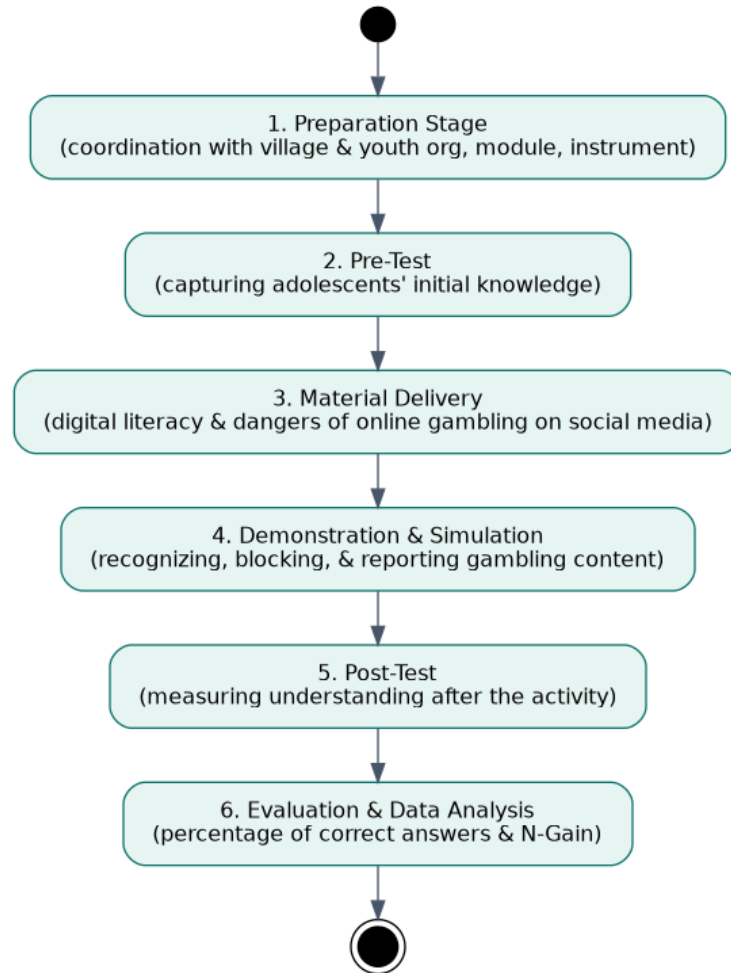


Figure 1. Flowchart of the Activity Implementation Stages

Instrument

The main instrument was a set of nine questions developed following the main points of the training material, covering the definition of digital literacy, the characteristics of online gambling content and advertisements, the modes of its spread on social media, the impacts of online gambling, the risk of exposure, critical thinking in evaluating content, how to block and report content, related regulations, and strategies to protect oneself and peers. These items were administered identically in the pretest and posttest so that changes in understanding could be compared fairly. In addition, a material module, an implementation observation sheet, and activity documentation were used as supporting instruments.

Data Collection

Data were collected through six stages of activity. The preparation stage included coordination with the village government and Karang Taruna to agree on the schedule, the number of participants, and technical needs, as well as the development of the module and instrument. In the pretest stage, participants answered the nine questions to capture their initial knowledge as a baseline. The material delivery stage was conducted through interactive lectures discussing digital literacy and the dangers of online gambling on social media. The demonstration and simulation stage was the core of the activity: participants were guided to recognize examples of online gambling advertisements and links, to practice the steps of critical thinking in evaluating content, and to simulate how to block accounts and report content through official complaint channels. After the entire series was completed, participants took a posttest with exactly the same items as the pretest. This learning-by-doing pattern provides real experience so that the trained skills are more firmly retained (Junaedi et al., 2025; Nauli et al., 2025).

Data Analysis

The pretest and posttest data were analyzed descriptively by calculating the percentage of correct answers for each question, which were then compared to observe the magnitude of the improvement. To assess the overall degree of effectiveness of the activity, the change in scores was interpreted using the Normalized Gain (N-Gain) formula, namely the difference between the average posttest and pretest scores divided by the difference between the maximum score and the average pretest score, with categories of low (< 0.30), medium ($0.30-0.70$), and high (> 0.70) (Hake, 1998).

RESULTS AND DISCUSSION

Overview of Activity Implementation

The activity was carried out in Terasa Village, attended by adolescents gathered in a single room. The training opened with the delivery of material in a classical manner, followed by direct demonstration and simulation. Participants' enthusiasm was evident from the presentation session and increased further when they began to recognize for themselves examples of online gambling content that they had frequently encountered on social media. The learning atmosphere was two-way, in which participants were not reluctant to ask questions and share experiences. The assistance of the service team during the simulation session helped participants understand the steps to block and report content independently. The documentation of the activity is shown in Figure 2.



Figure 2. Extension activities

Participants' Knowledge Before and After the Training

To measure the impact of the activity, participants answered the same nine questions in the pretest and posttest. The comparison of the percentage of correct answers in both measurements is presented in Table 1.

Table 1 shows that all questions experienced an increase in the percentage of correct answers after the training, without exception. Overall, the average percentage of participants' correct answers rose from about 60.7% in the pretest to about 89.3% in the posttest, an average increase of about 28.6 percentage points. When interpreted using the Normalized Gain (N-Gain) formula, this achievement yields a value of about 0.73, which falls into the high category. The most prominent improvement occurred on the item concerning how to block and report content, which rose 37 points from 48% to 85%, followed by understanding of the characteristics of online gambling content and its regulations. This pattern is interesting because the items that were initially least mastered actually experienced the greatest leaps, while items that were already well understood from the start, such as the impacts of online gambling, still increased to near-perfect levels. A visualization comparing the two measurements is presented in Figure 3.

Table 1. Percentage of Correct Answers in Pre-Test and Post-Test

No	Question	Pre-Test	Post-Test	Improvement
1	Definition of digital literacy	70%	93%	+23%
2	Characteristics of online gambling content and ads on social media	55%	88%	+33%
3	Modes of online gambling spread (endorsements, links, bonuses)	58%	90%	+32%
4	Impacts of online gambling (psychological, financial, legal)	74%	95%	+21%
5	Risk of exposure through social media	62%	89%	+27%
6	Critical thinking in evaluating content	60%	87%	+27%
7	How to block and report content	48%	85%	+37%
8	Regulations and sanctions related to online gambling	53%	86%	+33%
9	Strategies to protect oneself and peers	66%	91%	+25%

Discussion

The consistent improvement across all questions indicates that the training material was well absorbed by the participants. The average increase of about 28.6 points with a high N-Gain category strengthens the assumption that the combination of lectures, demonstrations, and simulations is an appropriate approach to fostering adolescents' digital literacy. This result is in line with the findings of similar activities reporting that practice-based training can significantly improve participants' skills because participants directly experience the process of recognizing and following up on content themselves, rather than merely listening to theory (Junaedi et al., 2025). It is this direct experience that makes knowledge more easily retained and reapplied after the training ends.

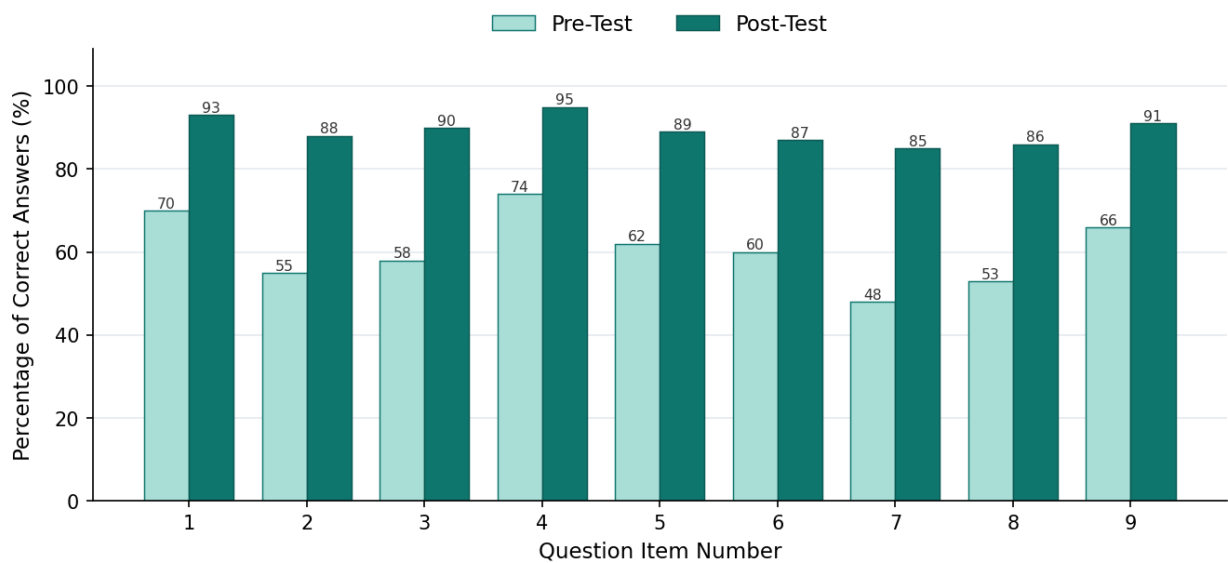


Figure 3. Flowchart of the Activity Implementation Stages

The highest leap on the item regarding how to block and report content shows that the training did not stop at providing information but equipped participants with real action skills to protect

themselves. This is important because effective digital literacy is not enough as mere awareness; it must be accompanied by the ability to act appropriately when facing harmful content (Gilster, 1997; UNESCO, 2021). Mastery of these skills simultaneously strengthens the role of adolescents as protective agents for their peers. This finding is consistent with studies that position digital literacy and media literacy as protective factors against risky online behavior, including exposure to gambling (Calado & Griffiths, 2016; Reddy et al., 2023).

The achievements of this activity also reinforce the results of several community service programs that found that technology-based skills training can significantly improve people's understanding and readiness (Awiliyanto, 2025; Gozali et al., 2026). In the context of online gambling prevention, the ability to recognize modes and follow up on content provides concrete added value for village adolescents who have so far been vulnerable due to limited preparation. Thus, this activity not only succeeded in increasing participants' knowledge in the short term but also equipped them with a critical attitude relevant to the challenges of the digital era. Nevertheless, it should be recognized that the measurement in this activity is still limited to changes in knowledge through the pretest and posttest, so its impact on participants' behavior in the long term still requires further mentoring and study.

CONCLUSIONS

This community service activity addressed the problem raised from the outset, namely the suboptimal digital literacy of Terasa Village adolescents in facing exposure to online gambling through social media. Through participatory training that combined lectures, demonstrations, and simulations, adolescents gained real experience in recognizing, avoiding, blocking, and reporting online gambling content. The measurement results showed an improvement in understanding across all material items, with the average percentage of correct answers rising from about 60.7% in the pretest to about 89.3% in the posttest, an average increase of about 28.6 points with an N-Gain value in the high category. The greatest improvement actually occurred on the aspect that was initially most unfamiliar to participants, so it can be concluded that the training succeeded in closing the knowledge gap while equipping adolescents with self-protection skills relevant to the demands of the digital era. For sustainability, it is recommended that there be periodic mentoring, expansion of the target by involving parents and community leaders, and evaluation that also assesses changes in participants' behavior, not only their knowledge.

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AUTHOR CONTRIBUTION STATEMENT

AN1 conceived the activity concept and wrote the manuscript draft; AN2 designed the instrument and collected and analyzed the data; AN3 conducted the field training and prepared the documentation. All authors have read and approved the final version of this manuscript.

AI DISCLOSURE STATEMENT

The authors used a generative artificial intelligence (AI) assistant during the preparation of the outline and the drafting of this manuscript. After using the tool, the authors thoroughly reviewed and edited all content and take full responsibility for the content of this publication.

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