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Enhancing Digital Literacy Among Rural Women to Detect AI-Generated Hoax Videos on Social Media

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Abstract. Advances in artificial intelligence (AI) technology, particularly deepfake technology, have increased the risk of hoaxes and disinformation spreading on social media, making it necessary to improve the public's digital literacy. This community service project aims to enhance the ability of homemakers to detect AI-generated hoax videos in Sidodadi Village, Bengkulu Tengah Regency. The activity was conducted using the Participatory Action Research (PAR) approach, which includes the stages of To Know, To Understand, To Plan, To Act, and To Change. The target participants were 20 housewives who are active social media users. The program began with observations and Focus Group Discussions (FGDs) to identify digital literacy issues, followed by the development of training materials, interactive training sessions, hands-on practice in identifying AI-generated hoax videos, and an evaluation using pre-test and post-test methods. The results showed that the training successfully improved participants' skills across all digital literacy indicators. Before the training, participants' average proficiency scores ranged from 3.2 to 3.7 (moderate category), while after the training, they increased to 4.4–4.6 (high category). The greatest improvements were observed in the ability to recognize the characteristics of AI-generated videos, distinguish between authentic and manipulated videos, verify information sources, and exercise greater caution before sharing content on social media. In addition to enhancing knowledge, this activity also fostered participants' critical thinking when evaluating digital information. This community service program demonstrates that needs-based digital literacy training effectively strengthens community resilience against the spread of AI-based hoaxes and encourages homemakers to become agents of digital literacy within their families and communities.

Keywords: *Digital literacy; Deepfakes; Misinformation; Artificial intelligence; Social media*
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INTRODUCTION

Rapid advancements in digital technology, particularly in the field of artificial intelligence (AI), have brought significant changes to how society accesses, produces, and distributes information. One rapidly evolving innovation is deepfake technology an AI-based video manipulation technique. This technology appears almost lifelike and authentic, making it difficult to distinguish from reality [1]. Such videos make it difficult for the public to distinguish between accurate information and manipulated content. The ease of creating AI-based content also offers various benefits, such as increased media production efficiency, as this technology has the potential to revolutionize audiovisual production and reduce costs [2]. AI-generated video production also supports creativity and communication by facilitating creativity, education, and communication [2]. Furthermore, this technology can be applied across various sectors, including education, healthcare, and the media industry [3]. However, despite these advantages, the use of deepfakes carries serious consequences for society.

Various studies indicate that deepfakes have the potential to cause widespread negative impacts, ranging from the spread of misinformation to threats to social stability. Deepfake content can be harmful to individuals as well as to communities, organizations, and nations [1]. AI can be used to spread propaganda because it has the capability to disseminate false propaganda [4]. Furthermore, the viral nature of social media allows disinformation to spread

rapidly; the viral nature of these platforms enables disinformation to reach a mass audience within minutes [5]. This situation is exacerbated by individuals' tendency to be easily influenced by biases. Users do not have the same level of vulnerability to all misinformation because their biases influence them [6].

The impact of deepfakes and hoax videos is not limited to the realm of information; it also has a direct impact on people's social lives. Individuals may experience various forms of digital crime, such as extortion, bullying, defamation, harassment, identity theft, intimidation, and revenge pornography [4]. Furthermore, the consequences of such videos can damage reputations, lead to harassment, or incite violence. Moreover, deepfakes can erode trust, security, and privacy [7], and reduce trust in news on social media [8]. In a broader context, this technology can even weaken the factual basis for public decision-making and erode trust within society [9]. This has the potential to disrupt political and social stability.

This phenomenon indicates that society faces a serious challenge in which the truth is becoming increasingly difficult to verify. Therefore, strategic efforts are needed to improve the public's digital literacy, particularly in understanding, recognizing, and detecting AI-generated hoax videos and deepfakes. Women are a key group that should be the focus of efforts to improve digital literacy. This is because women play a strategic role in managing information within the household and serve as children's primary educators. In daily life, homemakers are often active social media users. They have significant potential both as recipients and disseminators of information. However, limited access to digital literacy education leaves some women vulnerable to hoaxes and manipulative content such as AI-generated hoax videos.

Preliminary observations in Sidodadi Village, Bengkulu Tengah Regency, indicate that the community has tangibly experienced the problems of disinformation and digital fraud. Some families were found to have suffered losses amounting to tens of millions of rupiah after falling victim to scams that originated from information shared on social media. Furthermore, based on initial interviews with village officials and residents, there are still various other cases, such as the spread of false information, fraudulent links, and fake social media accounts. This is due to the community's limited ability to distinguish between authentic content and content that has been manipulated using AI technology. This situation indicates that the community's vulnerability to digital crime remains quite high. Therefore, a digital literacy education program is needed to address hoaxes and enhance the community's ability to recognize and verify AI-based content, including deepfake videos.

Given these conditions, a community service initiative titled "Improving Women's Digital Literacy in Detecting AI Hoax Videos on Social Media in Sidodadi Village, Bengkulu Tengah" is highly relevant to implement. This initiative aims to enhance the community's ability to critically identify and analyze digital information, as well as equip them with practical skills to detect hoaxes and deepfake content. This community service project is expected to foster a digitally literate village community that is resilient against disinformation and capable of maintaining social stability in the era of digital transformation.

METHOD

Methods for Implementing the Community Service Program

This community service activity focuses on implementing the program *"Enhancing Women's Digital Literacy in Detecting AI Hoax Videos on Social Media at the B*ina Ilmu Library, *Sidodadi Village, Bengkulu Tengah*." The activity is carried out in partnership with the Bina Ilmu Library in Sidodadi Village, Bengkulu Tengah, with the primary target audience being housewives who are active users of social media and the internet. This community service initiative employs the *Participatory Action Research* (PAR) approach (Figure 1), a method aimed at learning to solve problems and meet the practical needs of the community, while simultaneously generating scientific knowledge [10]. This approach was implemented collaboratively between the community service team and the community as the primary subjects of the activity [11].

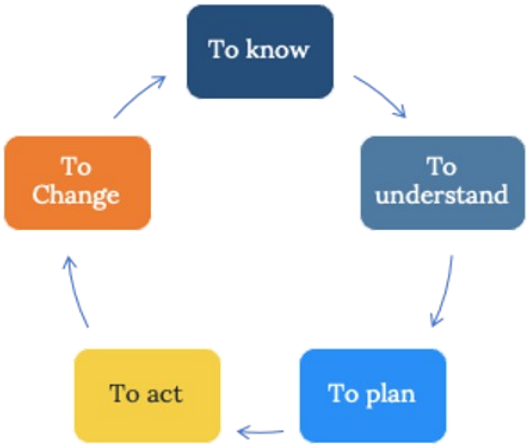


Figure 1. The Work Cycle of *Participatory Action Research* (PAR) by Fals-Borda, 1987

The PAR cycle provides a framework for linking problem identification, participatory planning, action, and reflection, with potential for continued community learning and program development [12, 13]. The stages of this method include:

1. To Know

   This stage aims to understand the actual conditions of the community in Bina Ilmu Village, Bengkulu Tengah, regarding community issues, internet use, and social media. The community service team conducted field observations and engaged in direct communication with the community, particularly regarding existing issues.
2. To Understand

   This stage aims to understand the challenges faced by the community regarding digital literacy. In this stage, Focus Group Discussions (FGDs) are held to explore the community's understanding of how to identify hoaxes and their ability to recognize manipulated video content such as deepfakes.
3. To Plan

   The planning phase was carried out based on the results of the identified problems. The community service team, together with the community, designed a digital literacy education program tailored to their needs, covering material on detecting hoaxes and recognizing deepfakes.
4. To Act

   This phase involves the implementation of the community service program in the form of digital literacy training and education for 20 homemakers. Activities include presenting materials, simulations on identifying hoaxes and deepfakes, and hands-on practice in verifying information.
5. To Change

   The evaluation phase was conducted to measure the effectiveness of the community service activities. The evaluation instruments used in this activity consisted of pre-test and post-test questionnaires designed to measure changes in participants' ability to detect AI-generated hoax videos on social media. Additionally, reflective discussions were held to gather feedback, identify perceived benefits, and provide input for evaluating future program development. The instruments used a 5-point Likert scale, ranging from 1 = Not at All Able to 5 = Very Able. The questionnaire consists of eight statements that measure the ability to recognize AI videos, identify signs of fake videos, distinguish between real and fake videos, verify the authenticity of a video before believing it, find ways to verify videos, explain the existence of fake AI videos to others, exercise caution before sharing videos on social media, and the level of confidence in recognizing fake AI videos.

The details regarding the stages, team, resources, targets, and outcomes are presented in Table 1 below. This community service activity involves the community service team as resource persons and the primary implementers of

the activities, responsible for developing materials, delivering training, providing guidance, and conducting program evaluations.

Table 1. Stages, Team, Targets, and Outputs of the Program and Implementation Schedule

PAR Phases	Activities	Team/Parties Involved	Target Outcomes	Outputs	Implementation Timeline
To Know	Identify digital literacy issues in the community	• Community service team • Village library managers • Community	Identification of issues related to hoaxes and deepfakes	Preliminary data on community needs	February 28, 2026
To Understand	Focus group discussions (FGDs) on the community's understanding of AI-generated hoax videos and deepfakes	• Community Service Team	Participants' understanding was assessed	FGD results and problem mapping	March 20, 2026
To Plan	Development of training materials and programs	• Community service team	Completion of the training program	Training modules and materials	June 26,
To Act	Training on AI-powered video detection of hoaxes and deepfakes, and verification practices	• Speakers • Community Service Team • Village Library Managers • Female participants	Participants are able to recognize hoaxes and deepfakes	Documentation and materials	July 19, 2026
To Change	Evaluation via pre-test and post-test	• Community service team • Village library managers • Participating women	Increased understanding among participants	Results of the activity evaluation and questionnaire	July 19, 2026

Location and Community Service Partners

The community service activity was carried out in Sidodadi Village, Pondok Kelapa Subdistrict, Bengkulu Tengah Regency, Bengkulu Province. Sidodadi Village is a village where the majority of the population works as farmers, so the community's information needs are very diverse, ranging from agriculture and education to digital literacy. The Bina Ilmu Library (village library) was selected as a partner because it plays an active role as a center for literacy and community empowerment. Since 2019, the Bina Ilmu Library has received various awards, including being named the Best Library in Bengkulu Tengah Regency for three consecutive years and winning a rotating trophy. The library operates daily from noon until evening, serving visitors from all walks of life from children and students to the general public. The library is managed by a team of nine staff members all young people from the village who are able to sustainably organize a variety of literacy activities.

RESULT

To Know: Identifying the Community's Digital Literacy Issues

Based on field observations and direct communication with the community (Figure 2), it was found that the residents of Sidodadi Village are predominantly farmers who actively use smartphones and social media. However, the community's digital literacy skills remain relatively limited, particularly in recognizing and dealing with various forms of digital fraud. One case identified involved residents who fell victim to a scam disguised as the sale of palm oil fertilizer, resulting in financial losses. In addition, many residents and their family members reported frequently receiving phone calls from operators of illegal online lending platforms (pinjol) and other types of scams. Most community members lack the technical skills to take simple preventive measures, such as blocking scammers' phone numbers, recognizing the signs of digital fraud, or reporting suspicious accounts or numbers.



Figure 2. Initial Observations with the Manager of the Bina Ilmu Library and the Community of Sidodadi Village, Bengkulu Tengah

The findings also indicate that the public is frequently exposed to various social media platforms, particularly those related to national political issues, public figures, celebrities, and religious leaders. Such content often causes confusion and anxiety, and can even spark discussions that escalate into the spread of unverified information, as the public struggles to distinguish between authentic and manipulated content. This situation indicates that high exposure to digital content has not been matched by the ability to verify information. Therefore, the community needs education to foster digital literacy practical skills to identify, verify, and critically assess digital content before sharing it.

To Understand: Identifying Public Understanding of AI-generated Hoax Videos

The "To Understand" phase was conducted through Focus Group Discussions (FGDs) by the community service team and the academic program to delve deeper into the digital literacy issues faced. The discussions focused on the public's habits in using social media, their experiences with false information, and the training needs they considered most relevant. The FGD results showed that the community is increasingly encountering social media content featuring political figures, celebrities, and religious leaders, along with various related issues. Therefore, the community service team assessed that improving digital literacy skills is the most urgent need compared to other digital literacy topics.

Based on the discussion results, the community service team then mapped out several alternative digital literacy programs that could be implemented by the Bina Ilmu Village Library, namely:

- Improving Housewives' Digital Literacy in Detecting AI-Generated Hoax Videos.
- Digital Literacy Education on Hoaxes, Online Scams, and Cybersecurity for the Community.
- Artificial Intelligence (AI) Literacy for the Safe and Productive Use of AI by the Public.

- Improving Financial Literacy and Digital Health Information Literacy for the Community.

Based on the results of discussions and agreements reached by the community service team, the program selected for implementation is *"Improving Housewives' Digital Literacy in Detecting AI Hoax Videos."* This program was prioritized because it was deemed most relevant to the issues faced by the community, namely the increasing spread of AI videos (deepfakes) on social media and the community's particularly housewives' limited ability to recognize and verify the authenticity of videos before believing or sharing them.

To Plan: **Development of Training Materials and Programs**

The training materials were developed based on the results of a community needs assessment, which indicated the need to improve the ability to recognize AI hoax videos. The community service team designed materials focused on two main aspects: a basic understanding of AI (deepfake) videos and practical skills in identifying AI hoax videos. In the initial session, participants were given an explanation of what AI videos are and the process of creating them using artificial intelligence. In addition, participants were also informed about the various negative impacts that can result, such as defamation, identity theft, prize scams, the promotion of counterfeit products or medications, news manipulation, and the spread of misleading health information.

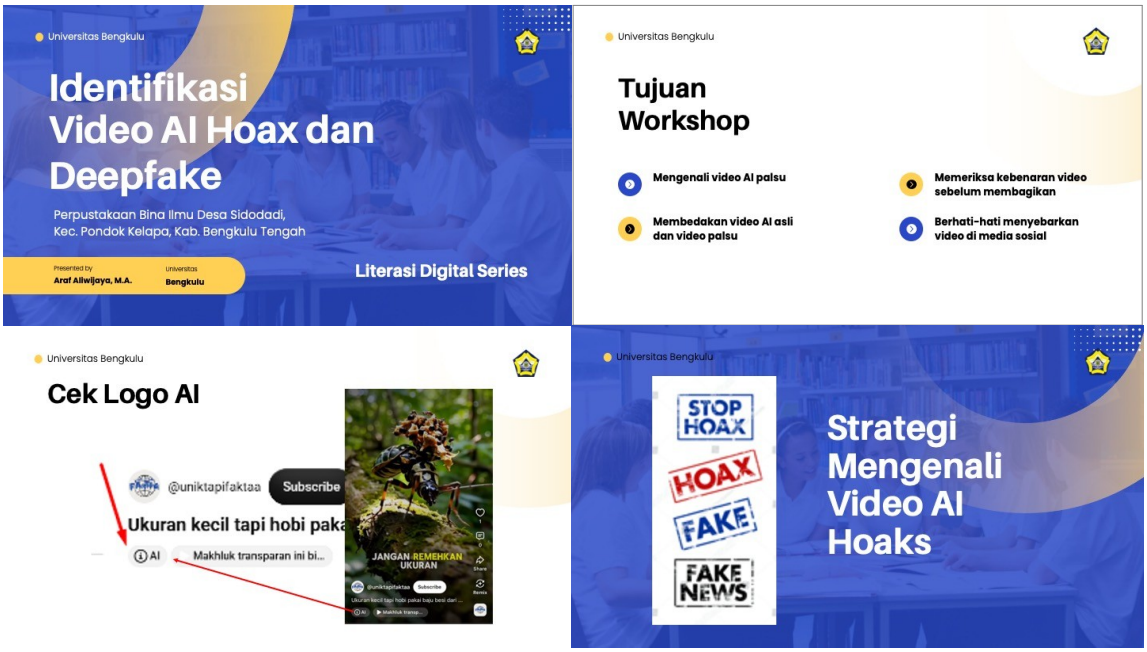


Figure 3. Module on Identifying AI Hoax Videos

To enhance the relevance of the material, the presenter also shared various real-life case examples (Table 2) commonly found on social media. These examples were intended to help participants understand that AI hoax videos are a threat that is closely intertwined with their daily lives.

Table 2. Examples of Videos to Be Identified

No.	Case Type	Video Examples
1	Deepfakes of Public Figures	Videos of presidents, ministers, celebrities, or religious leaders that have been manipulated by AI.
2	Fake Product Promotions	Videos of famous figures that appear to be promoting a product.
3	Prize Scams	Videos of celebrities offering fake prizes or sweepstakes.

4	Fake News	Fake news videos made to appear as if they come from official media outlets.
5	Medicine Scams	Videos of celebrities or religious figures that appear to be promoting medications.

Next, the session focused on practical strategies for detecting AI-generated hoax videos. The speaker introduced several simple indicators that the public can use. Participants were taught a few simple steps for identification, namely:

a. Paying attention to facial features, such as lip movements that are out of sync with the audio, unnatural blinking, stiff facial expressions, and blurred edges of the face or hair.
b. Listen to the voice for example, a flat or monotonous tone, or unnatural pronunciation of words.
c. Observing body movements and surrounding objects that appear unnatural.
d. Assessing whether the video's content makes sense or is, in fact, too sensational.
e. Check the video's source, including the uploader's account and whether it has been reported by a reputable media outlet.
f. Recognizing AI logos or labels that are beginning to be used on some platforms.

To Act: **Training on Detecting AI-Generated Hoax Videos, Deepfakes, and Verification Practices**

For this training session, the community service team and the library invited 20 homemakers to participate. As shown in Table 3, the participants represented a relatively broad age range, from 20 to 59 years (Table 3). The largest proportion of participants was aged 40–49 years, accounting for 50% (n = 10), while participants aged 20–29 years and 30–39 years each accounted for 20% (n = 4). The remaining 10% (n = 2) were aged 50–59 years. This age distribution indicates that the training reached adult women across different stages of life, particularly those in the middle-adulthood age group.

Table 3. Age Distribution of Participants

No.	Age Range (Years)	Number (People)	Percentage (%)
1	20–29	4	20
2	30–39	4	20
3	40–49	10	50
4	50–59	2	10
Total		20	100

Table 4 presents the participants' educational backgrounds. Most participants were high school graduates, representing 45% (n = 9) of the total, followed by junior high school graduates at 35% (n = 7) and bachelor's degree holders at 20% (n = 4). The variation in educational attainment suggests that the training engaged participants with diverse educational backgrounds and, potentially, different levels of familiarity with digital technologies and information evaluation practices. Therefore, the training materials and practical activities were designed to be accessible and understandable for participants with varying levels of digital literacy.

Table 4. Education Level of Participants

No	Education Level	Number (People)	Percentage (%)
1	Junior High School	7	35
2	High School	9	45
3	Bachelor's degree	4	20
Total		20	100

The event began with participant registration and a pre-test to assess participants' initial ability to identify fake AI videos. Next, the speaker presented material for approximately 1 hour on the development of artificial intelligence (AI) technology, the characteristics of AI videos (deepfakes), the impact of the spread of AI hoax videos on social media, and practical steps for verifying a video before trusting or sharing it (Figure 4). The presentation was conducted interactively using real-life examples commonly encountered on social media platforms such as TikTok, Facebook, WhatsApp, and Instagram, making it easier for participants to understand the material.



Figure 4. Presentation of Material and AI Video Identification Practice

Following the presentation session, the activity continued with hands-on practice to hone participants' skills in identifying AI videos. In this session, participants were asked to compare several examples of authentic videos with AI-generated videos to identify differences based on indicators such as mismatched lip-syncing, unnatural facial expressions, inconsistent lighting, unnatural hand or finger movements, and background distortions. Participants also searched for videos on the TikTok platform to find content suspected of being AI-generated, then presented their reasoning for categorizing those videos as AI-generated based on the characteristics they had learned. Additionally, the presenter showed several videos without providing prior information about their authenticity; participants were then asked to determine whether the videos were genuine or AI-generated and to explain the basis for their assessment. Discussions were held for each example so that participants received immediate feedback on the correct indicators for detecting AI-generated videos. The activity concluded with a post-test and a reflection session to assess improvements in understanding and to gather feedback from participants on the training implementation.

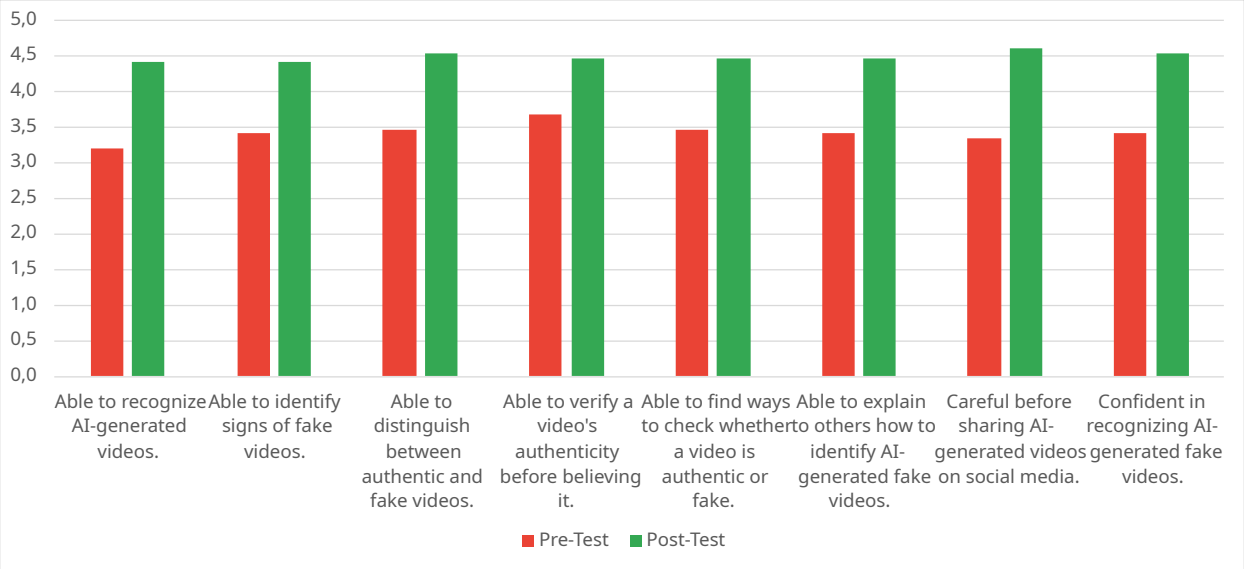
To Change: **Evaluation via Pre-Test and Post-Test**

The evaluation instruments used in this activity consisted of pre-test and post-test questionnaires designed to measure changes in participants' ability to detect AI-generated hoax videos on social media. The instruments used a 5-point Likert scale, ranging from 1 = Not at All Able to 5 = Very Able. The questionnaire consists of eight statements that measure the ability to recognize AI videos, identify signs of fake videos, distinguish between real and fake videos, verify the authenticity of a video before believing it, find ways to verify videos, explain the existence of fake AI videos to others, exercise caution before sharing videos on social media, and the level of confidence in recognizing fake AI videos.

The results of the pre-test and post-test evaluations showed that the training had a positive impact on improving participants' digital literacy in recognizing AI-generated hoax videos on social media (Figure 5). After the training, all indicators showed a significant improvement, with scores ranging from 4.4 to 4.6, indicating a high category. Before the training, participants' skill levels were in the moderate category, with average scores ranging from 3.2 to 3.7. The aspects with the lowest scores were the ability to recognize videos created by AI (3.2) and exercising caution before sharing AI videos on social media (3.3), indicating that most participants still struggled to identify the characteristics of AI-generated videos and lacked optimal vigilance regarding the spread of digital information. Nevertheless, participants have already developed the initial habit of verifying information before trusting it (3.7); however, this ability is not yet supported by technical knowledge on how to detect fake AI videos.

The comparison of pre-test and post-test scores shows an increase across all eight digital literacy competencies. Pre-test mean scores ranged from 3.2 to 3.7, whereas post-test mean scores ranged from 4.4 to 4.6. The magnitude of improvement across the indicators ranged from 0.8 to 1.3 points on the 5-point scale. The largest improvement was observed in participants' ability to exercise caution before sharing AI-generated videos (+1.3), followed by their ability to recognize AI-generated fake videos (+1.2), explain AI-generated fake videos to others (+1.1), and their confidence in recognizing such content (+1.1). The smallest improvement was observed in the ability to verify a video's authenticity before believing it (+0.8), although its post-test score still reached 4.5. Overall, the results indicate a consistent improvement across all measured competencies rather than improvement in only one specific aspect of AI video literacy. The increase of 0.8–1.3 points suggests a clear shift in participants' self-reported ability from the moderate pre-test range to the high post-test range. The pattern also indicates that the intervention was particularly effective in strengthening cautious and responsible behavior when encountering potentially AI-generated content, as reflected in the largest gain for the indicator concerning caution before sharing.

Figure 5. Improvement in Digital Literacy in Recognizing AI Hoax Videos



After the training, all eight indicators showed an improvement, with post-test mean scores ranging from 4.4 to 4.6. The greatest improvement was observed in the aspect of exercising caution before sharing AI videos on social media, which achieved the highest score of 4.6, followed by the ability to distinguish between real and fake videos, finding ways to verify videos, explaining fake AI videos to others, and an increase in participants' self-confidence in identifying such content. These results show that the training not only improved participants' knowledge of the characteristics of AI hoax videos but also fostered critical thinking and more responsible behavior in using social media. Overall, these findings indicate that the community service program successfully enhanced women's digital literacy competencies. Consequently, these homemakers are better prepared to become critical social media users and have the potential to serve as educational agents for their families and communities in countering the spread of AI hoax videos.

DISCUSSION AND IMPLICATIONS OF THE COMMUNITY SERVICE PROGRAM

The results indicate that a needs-based digital literacy intervention can improve participants' ability to recognize and evaluate AI-generated hoax videos. The improvement observed across all eight indicators suggests that the intervention addressed not only participants' initial lack of technical knowledge about AI-generated content but also their ability to apply verification practices in social media use. This is important because the initial assessment showed that participants were frequently exposed to digital content but had limited ability to distinguish authentic

information from manipulated content. The alignment between the identified community needs and the training content may therefore have contributed to the observed improvement in participants' digital literacy competencies.

During the initial observation phase, it was found that residents of Sidodadi Village still struggled to distinguish authentic videos from those manipulated by AI. The community was also vulnerable to various forms of digital scams circulating on social media. This situation was reflected in the pre-test results, where participants' ability to recognize AI videos, identify signs of fake videos, and verify information was still in the moderate category. After the training, all indicators improved to the high category. This finding is consistent with previous studies showing that the increasing realism of deepfake technology makes AI-generated content difficult for ordinary users to distinguish from authentic media [1]. However, the present community service activity extends this discussion from identifying the risks of deepfakes to demonstrating a practical approach for developing community-level detection skills. Rather than focusing only on awareness of the risks associated with deepfakes, the training provided participants with concrete indicators and opportunities to apply them to real social media content. This suggests that AI literacy in rural communities should encompass not only awareness of AI-related risks but also practical competencies for evaluating and verifying AI-generated information.

After the training, participants demonstrated improved ability to distinguish between authentic and fake videos, to find ways to verify videos, and to exercise greater caution before sharing information on social media. This pattern is particularly relevant in rural settings, where access to digital information may be high even when opportunities for structured digital literacy education are limited. The improvement in verification-related indicators suggests that participants were not simply acquiring information about deepfakes but were beginning to develop a more reflective approach to digital content. In this context, the ability to pause, verify, and evaluate content before sharing may be as important as the ability to recognize technical signs of AI manipulation. The *"To Act"* stage further strengthened this process by providing participants with opportunities to practice identifying AI-generated videos, compare authentic and manipulated content, search for potentially AI-generated videos on TikTok, and explain the reasons for their judgments. Thus, participants were positioned not only as recipients of information but also as active learners who tested the knowledge provided during the training. The subsequent reflection and post-test in the "To Change" stage provided an opportunity to assess the perceived learning outcomes and identify changes in participants' confidence and verification practices. Taken together, these stages suggest that the effectiveness of PAR in this program was related to its ability to connect community diagnosis, contextualized learning, practical application, and reflection within a single intervention cycle.

During the identification phase and focus group discussions (FGDs), it was found that the public frequently encounters videos featuring political figures, celebrities, or religious leaders, leading to confusion regarding the authenticity of such information. These improvements suggest that the intervention strengthened not only participants' awareness of AI-generated content but also their practical verification and responsible-sharing practices. This community service initiative is expected to serve as one solution to the problem reported by López-Borrull et al., namely that the viral nature of social media allows disinformation to spread to a very wide audience in a short period of time [5]. On the other hand, Rana et al. state that each individual has a different level of vulnerability to misinformation due to their personal biases [6]. Therefore, training that emphasizes the importance of verifying information and critical thinking is a relevant solution to reduce the public's vulnerability to AI-based hoaxes.

The contribution of the Participatory Action Research (PAR) approach can be understood through the sequence of activities implemented in the program. The "To Know" and "To Understand" stages enabled the team to identify actual community experiences with digital fraud, social media exposure, and difficulties in recognizing manipulated content. These findings were then translated into the "To Plan" stage, in which the training materials were developed around the specific problems identified by the community. This process helped ensure that the intervention was contextualized rather than based solely on generic digital literacy content. Participants gained an understanding of the characteristics of AI videos and their impacts; they were able to practice identifying signs of manipulation, verifying video sources, and discussing their findings directly. This implementation is consistent with the participatory orientation described by Crozier et al. and Fernandes and Tandon, in which community participation is connected to learning and the resolution of practical problems [10,11,14]. In the present program, this principle was operationalized by involving community members in identifying the problem and determining the most relevant training focus, rather than treating them solely as training recipients. The findings therefore suggest that PAR may be particularly useful for

community-based AI literacy initiatives because it allows abstract AI-related risks to be translated into locally relevant digital practices and problems.

The sustainability of the program can be supported by positioning the Bina Ilmu Library as a continuing community-based hub for digital and AI literacy activities. As the library already functions as a local literacy and community empowerment center, it has the potential to continue disseminating the knowledge and practical skills introduced through this program. Follow-up activities could include periodic digital literacy sessions, practical exercises for identifying AI-generated content, and discussions of emerging forms of digital misinformation. Such activities would allow the knowledge gained during the initial training to be reinforced and updated as AI-generated content continues to evolve. More broadly, the results of this community service initiative represent an effort to mitigate the various negative impacts of deepfakes, such as propaganda, cybercrime, reputational damage, declining public trust, and disruptions to security, privacy, and fact-based decision-making [4,8,7,9]. Thus, improving women's digital literacy through training can enhance individual competencies and foster preventive strategies to strengthen community resilience against the spread of AI-based disinformation.

The broader implication of this program is that AI literacy initiatives in rural communities should move beyond introducing the concept of artificial intelligence toward developing practical competencies for evaluating AI-mediated information. The experience of Sidodadi Village suggests that village libraries can serve as important community-based spaces for delivering such initiatives because they already function as local literacy and community empowerment centers. Involving women as active participants is also strategically important because their improved ability to evaluate and verify digital content may extend beyond individual media use to information practices within families and local communities. Although the findings from this activity cannot be generalized to all rural communities, they provide practical evidence that participatory, needs-based, and practice-oriented approaches can be considered in the development of community AI literacy programs. Thus, improving women's digital literacy through training can enhance individual competencies and foster preventive strategies to strengthen community resilience against the spread of AI-based disinformation.

A further follow-up strategy could involve collaboration between the community service team, the village library, and community members to periodically identify new digital information risks encountered by residents and adapt future literacy activities accordingly. The library could document frequently encountered examples of AI-generated hoaxes, scams, or manipulated content and use them as locally relevant learning materials. This would maintain the participatory cycle of identifying community problems, developing appropriate learning activities, implementing them, and reflecting on the outcomes.

CONCLUSION

The community service program a training initiative titled "Enhancing Women's Digital Literacy in Detecting AI-generated hoax videos on Social Media in Sidodadi Village, Bengkulu Tengah" successfully improved housewives' digital literacy skills in recognizing, analyzing, and verifying AI-generated hoax videos circulating on social media. The Participatory Action Research (PAR) approach enabled the community to be actively involved from the problem-identification stage through evaluation, ensuring that the training materials aligned with the community's real needs. Pre-test and post-test results showed improvements across all indicators of participants' abilities, particularly in recognizing the characteristics of AI videos, distinguishing between authentic and manipulated videos, verifying information sources, and exercising greater caution before sharing digital content. In addition to enhancing knowledge, the training also fosters critical thinking and a sense of responsibility in social media use. Consequently, this initiative helps strengthen the community's resilience against the spread of hoaxes and AI-based disinformation while empowering women particularly homemakers to serve as agents of digital literacy within their families and communities. For longer-term impact, continued support from the Bina Ilmu Library and periodic follow-up activities are needed to reinforce participants' skills and adapt digital literacy education to emerging forms of AI-generated misinformation. The involvement of trained participants as peer educators may further extend the reach of the program within families and the wider community.

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