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Digital Literacy Mentoring Based on Tabayyun Values to Prevent the Spread of Religious Hoaxes on Social Media among the Al-Yusufiyah Study Group in Manunggang Julu

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Abstract

Religious hoaxes and misleading content can spread on social media when users forward messages without verifying them. This community engagement program aimed to strengthen knowledge of religious hoaxes and verification skills among members of the Al-Yusufiyah study circle in Manunggang Julu, Padangsidimpuan. The program was grounded in *tabayyun*, the practice of verifying information before accepting or sharing it. On 18 October 2026, 20 members aged 41–50 years participated in a pre-experimental one-group pretest–posttest study. The program covered *tabayyun* and types of misleading content and included a five-step verification procedure (5C), group simulations, and a discussion of social media ethics. Knowledge and verification skills were assessed using a 10-item test, and scores were analyzed using the Wilcoxon signed-rank test and a paired t-test. The mean score increased from 50.5 (SD = 10.99) to 82.0 (SD = 7.68), a gain of 31.5 points (95% CI [28.36, 34.64]). All 20 participants improved (Wilcoxon signed-rank test, $p < .001$). The program was followed by short-term gains in test performance, and the absence of a control group limits causal inference. Regular study-circle activities could incorporate brief verification exercises with periodic reinforcement and longer-term evaluation.

Keywords: Islamic Digital Literacy; *Tabayyun*; Religious Misinformation; Community Engagement; Religious Study Circles

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INTRODUCTION

Social media and messaging applications have become major channels for the dissemination of religious information. This development provides benefits by expanding access to religious learning. However, it also creates risks associated with the circulation of unverified claims. A large-scale analysis of verified true and false news on Twitter found that falsehoods spread farther, faster, deeper, and more broadly than the truth. Human users, rather than automated accounts, were primarily responsible for this difference (Vosoughi et al., 2018). In Indonesia, social media has been identified as the most widely used channel for disseminating hoaxes (Juditha, 2018). Hoaxes can also threaten participatory democracy, as illustrated by a viral video related to Qur'an Surah Al-Maidah verse 51 during the 2017 Jakarta gubernatorial election, which reinforced racial sentiments (Utami, 2018). Globally, the increasing prevalence of fake news has been regarded as an indication of the weakening of institutional safeguards against misinformation (Lazer et al., 2018). Similarly, substantial amounts of fake news were shared on Facebook during the 2016 United States presidential election (Allcott & Gentzkow, 2017).

We argue that adult participants in Islamic religious study groups (*majelis pengajian*) constitute an important target group because they function both as recipients and as transmitters of religious messages within family and religious study group networks. People often share misleading content not because they deliberately intend to spread falsehoods, but because they fail to pay sufficient attention to accuracy when sharing information (Pennycook & Rand, 2021). Furthermore, susceptibility to fake news is explained more by a lack of analytical reasoning than by political bias alone (Pennycook & Rand, 2021). Among members of religious study groups, messages are frequently forwarded with good intentions, such as providing religious reminders or seeking spiritual rewards. Therefore, an intervention that encourages participants to pause before sharing information and verify its accuracy, using value-based language familiar to the participants, is worth investigating.

Anti-hoax digital literacy programs have been implemented among various population groups in Indonesia. For example, a program targeting mothers of schoolchildren introduced *prebunking* content and facilitated the creation of fact-checking materials (Andriarti et al., 2024). Other studies have examined digital literacy among adolescents (Rico & Sulistyowati, 2024) and emphasized digital literacy as a form of social responsibility in combating hoaxes (Putri et al., 2025). Within Islamic educational settings, a training program

involving 40 Islamic Religious Education teachers addressed bullying and hoaxes from an Islamic perspective through interactive training, case studies, group discussions, and pre- and post-activity questionnaires (Suwahyu et al., 2025). Another study examined media literacy among students in Islamic boarding schools (*pesantren*) (Bustomi et al., 2023). Nevertheless, evidence regarding the effectiveness of media literacy interventions remains mixed. Tips for identifying fake news improved participants' ability to distinguish between true and false news in the United States and India. However, the improvement remained measurable several weeks later only in the United States, not in India. No significant effects were found among participants in rural northern India (Guess et al., 2020). A gap remains in the literature reviewed: community-based programs targeting adult participants in Islamic religious study groups that integrate the Islamic principle of *tabayyun* with structured verification exercises and assess their outcomes through pre- and post-intervention scores remain limited.

The novelty of this program lies in operationalizing the Islamic principle of *tabayyun* into a five-step verification procedure (5C), which is delivered to participants of an Islamic religious study group in Manunggang Julu, Padangsidimpuan City, Indonesia. The program's outcomes are measured through participants' knowledge and information-verification skills scores. Its theoretical foundation comprises three main perspectives. First, *tabayyun* refers to the Qur'anic command to carefully investigate information conveyed by an unreliable source (Qur'an, Surah Al-Hujurat \(49\): 6). This principle is reinforced by a hadith narrated by Muslim, which warns against indiscriminately repeating everything one hears (as discussed in Ma'arif et al., 2025, pp. 1874–1875). *Tabayyun* is considered a foundational ethical principle of digital literacy rather than merely a technical skill (Ma'arif et al., 2025). In contemporary contexts, the concept of an unreliable source (*fasiq*) can be reinterpreted to include anonymous accounts and partisan media outlets (Astria et al., 2026).

Second, digital literacy encompasses cognitive, motor, sociological, and emotional skills, while information literacy refers to the ability to assess the quality and credibility of information (Eshet-Alkalai, 2004). An Indonesian hermeneutical study also identifies digital literacy as a relevant approach to countering hoaxes (Khasri, 2019). Third, simple accuracy reminders have been shown to nearly triple individuals' ability to distinguish between true and false information when evaluating their intention to share COVID-19-related content (Pennycook & Rand, 2019). Meanwhile, false beliefs can be difficult to correct once misinformation has spread (Lewandowsky et al., 2012). Accordingly, this program

emphasizes preventive measures by encouraging participants to pause before sharing information and equipping them with practical tools for verifying its accuracy.

This program focuses on changes in participants' *tabayyun* knowledge and message-filtering skills among members of the Al-Yusufiyah Islamic Religious Study Group before and after the mentoring intervention. Specifically, the program aims to: (1) strengthen participants' understanding of misleading religious content and the principles of *tabayyun*; (2) train participants to apply the 5C verification procedure to messages they receive; and (3) examine whether participants' knowledge and information-verification skills scores improve following the mentoring intervention

METHODS

Research Design

This study was conducted as a community service program employing a quantitative approach with a pre-experimental one-group pretest–posttest design. The design was supplemented by direct observations and discussion notes to obtain additional information about participants' engagement and learning experiences during the intervention. The pretest–posttest design was used to assess changes in participants' knowledge of *tabayyun* and their information-verification skills before and after the program. Since the study did not involve a control group or random assignment, the findings were interpreted as changes observed following participation in the program rather than definitive evidence of a causal relationship.

Research Setting and Participants

The program was conducted on Sunday, October 18, 2026, in Manunggang Julu, Padangsidimpuan Tenggara District, Padangsidimpuan City, North Sumatra, Indonesia. The participants consisted of 20 members of the Al-Yusufiyah Islamic Religious Study Group, aged between 41 and 50 years. Participants were selected using purposive sampling based on their membership in the religious study group and their relevance to the program's focus on religious information literacy. The program targeted adult participants who encounter religious information through social media and messaging applications.

Intervention Procedures

The intervention was delivered in a single meeting lasting 90 minutes and consisted of three integrated activities: educational delivery, practical verification exercises, and group discussion. Each activity lasted 30 minutes. The first activity introduced the Islamic principle of *tabayyun* as an ethical foundation for verifying information. Participants were introduced to various forms of misleading religious content, including hadiths without reliable references, excerpts from religious lectures presented outside their original context, health claims attributed to *thibbun nabawi* (Prophetic medicine), provocative religious messages, fraudulent donation and investment appeals, and religious preachers whose scholarly credentials could not be verified. The session also addressed common characteristics of hoax messages.

The second activity involved practical exercises in small groups. Participants examined sample messages using their mobile phones and applied the five-step 5C verification procedure. Facilitators provided assistance, particularly to participants who were less familiar with using internet browsers and digital information-search tools. The third activity consisted of group presentations and discussions on ethical social media use from an Islamic perspective, referring to Qur'an Surah An-Nahl [16]:125. The activity concluded with a collective commitment to verify information before sharing it with others. The 5C verification procedure was developed by the program team as a practical learning framework consisting of five steps: (1) checking the information source; (2) verifying the religious evidence or supporting references; (3) examining the context and publication date; (4) consulting fact-checking platforms; and (5) preventing further dissemination when information remains uncertain. This procedure was specifically designed as a learning tool for the participants and was not adopted from a previously validated instrument. The instructional examples were developed to reflect common patterns of misinformation circulating on digital platforms. All names, social media accounts, and institutions used in the examples were fictitious.

Research Instruments and Data Collection

Data were collected using a written test consisting of 10 multiple-choice questions, each with four response options. The instrument assessed two main domains. The first domain, represented by items 1–5, measured participants' knowledge of *tabayyun* and its Islamic foundations. The questions covered the meaning of *tabayyun*, Qur'an Surah Al-

Hujurat [49]:6, a hadith narrated by Muslim concerning the transmission of information, hadiths without reliable sources, and the potential consequences of sharing unverified messages. The second domain, represented by items 6–10, assessed participants' understanding of information verification based on the 5C procedure. The questions addressed source verification, characteristics of hoaxes, suspicious donation requests involving personal bank accounts, the use of fact-checking platforms, and appropriate actions when information could not be verified.

Each correct answer was assigned one point, while incorrect answers received zero points. The total score was calculated by multiplying the number of correct answers by 10, resulting in a score range of 0–100. The same set of questions was administered twice: before the intervention (pretest) and immediately after the intervention (posttest). Participant identification codes were used to match individual pretest and posttest scores while maintaining confidentiality. The test instrument was developed by the program team based on the educational materials and the five components of the 5C verification procedure. The instrument was not subjected to statistical reliability testing. In addition to the written test, an observation sheet was used to document participant engagement, involvement in group discussions, difficulties encountered during practical exercises, and the overall implementation of the program.

Data Analysis

Quantitative data were analyzed using descriptive and inferential statistical techniques. Descriptive analysis included the mean, standard deviation, minimum and maximum scores, and frequency distributions to describe participants' knowledge and information-verification skills before and after the intervention. The normality of the differences between pretest and posttest scores was examined using the Shapiro–Wilk test. Since the difference scores were not normally distributed, the Wilcoxon signed-rank test was used as the primary statistical procedure to examine changes in participants' scores. The statistical significance level was set at 0.05. Statistical calculations were performed manually using the collected pretest and posttest data.

Qualitative information obtained from observations and discussion notes was analyzed descriptively to complement the quantitative findings. This information was used to describe participants' engagement, difficulties in applying the 5C verification procedure, and responses to the learning activities.

Ethical Considerations

Participation in the program was voluntary. Before the activities began, participants received an explanation of the program's objectives, procedures, and the intended use of the collected data. Participants provided consent before their responses were included in the analysis. Confidentiality was maintained by using identification codes instead of personal names on the test sheets. Individual identities were not disclosed in the research report. The program was conducted with permission from the organizers of the Al-Yusufiyah Islamic Religious Study Group and the relevant institutional authorities.

RESULTS

1. Participant Characteristics

A total of 20 members of the Al-Yusufiyah Islamic Religious Study Group participated in the community service program. The participants were aged between 41 and 50 years, with a mean age of 46.2 years (SD = 2.98). Most participants were female (70%), while male participants accounted for 30%. Regarding educational background, 12 participants (60%) had completed senior high school, and eight (40%) held a bachelor's degree.

Table 1. Participant Characteristics (n = 20)

Characteristics	Category	Frequency (n)	Percentage (%)
Gender	Female	14	70
	Male	6	30
Educational background	Senior high school	12	60
	Bachelor's degree	8	40
Age (years)	Mean	46.2	-
	Standard deviation	2.98	-
	Minimum	41	-
	Maximum	50	-

Source: Primary data from the Al-Yusufiyah Islamic Religious Study Group, October 18, 2026.

Table 1 presents the characteristics of the 20 participants involved in the community service program. The table shows that 14 participants (70%) were female and six (30%) were male. Regarding educational background, 12 participants (60%) had completed senior high

school, while eight (40%) held a bachelor's degree. The participants had a mean age of 46.2 years (SD = 2.98), with ages ranging from 41 to 50 years.

2. Changes in Pretest and Posttest Scores

The assessment results showed an increase in participants' knowledge and information-verification scores following the program. The mean pretest score was 50.50 (SD = 10.99), increasing to 82.00 (SD = 7.68) in the posttest. The mean improvement was 31.50 points. All 20 participants obtained higher posttest scores than pretest scores. Three participants improved by 20 points, 11 by 30 points, and six by 40 points. Before the intervention, seven participants (35%) scored 40 or below. Following the intervention, no participants scored below 70, while 17 participants (85%) achieved scores of 80 or higher.

Table 2. Descriptive Statistics of Pretest and Posttest Scores (n = 20)

Statistical Measure	Pretest	Posttest	Mean Difference
Mean	50.50	82.00	31.50
Standard deviation	10.99	7.68	6.71
Minimum score	30	70	20
Maximum score	70	100	40

Source: Primary data from the program assessment, October 18, 2026.

Table 2 presents the descriptive statistics of participants' pretest and posttest scores. The mean score increased from 50.50 (SD = 10.99) before the intervention to 82.00 (SD = 7.68) after the intervention. The mean improvement was 31.50 points. The minimum score increased from 30 to 70, while the maximum score increased from 70 to 100. These results indicate an improvement in participants' assessment scores following the mentoring program.

The Shapiro–Wilk test indicated that the distribution of score differences was not normal ($W = 0.80$; $p < 0.001$). Therefore, the Wilcoxon signed-rank test was used as the primary statistical procedure. The test showed a statistically significant difference between pretest and posttest scores ($W = 0$; $n = 20$; $p < 0.001$). All participants demonstrated positive score changes.

Table 3. Results of Statistical Tests

Statistical Test	Statistic	p-value	Interpretation
Shapiro–Wilk test	W = 0.80	< 0.001	Score differences were not normally distributed

Statistical Test	Statistic	p-value	Interpretation
Wilcoxon signed-rank test	W = 0	< 0.001	Significant difference between pretest and posttest scores
Paired-samples t-test	t(19) = 21.00	< 0.001	Significant difference in the supplementary analysis
Cohen's d_z	4.70	-	Very large standardized effect

Source: Primary data from the program assessment, October 18, 2026.

Table 3 summarizes the results of the statistical analyses. The Shapiro–Wilk test indicated that the score differences were not normally distributed (W = 0.80; p less than 0.001). Therefore, the Wilcoxon signed-rank test was selected as the primary statistical procedure. The test revealed a statistically significant difference between pretest and posttest scores (W = 0; p less than 0.001). The paired-samples t-test and Cohen's dz were also included as supplementary analyses.

3. Individual Score Distribution

The individual score distribution provides a more detailed picture of the changes experienced by participants. As illustrated in Figure 1, all participants recorded higher scores in the posttest than in the pretest. The mean score also increased from 50.50 to 82.00.

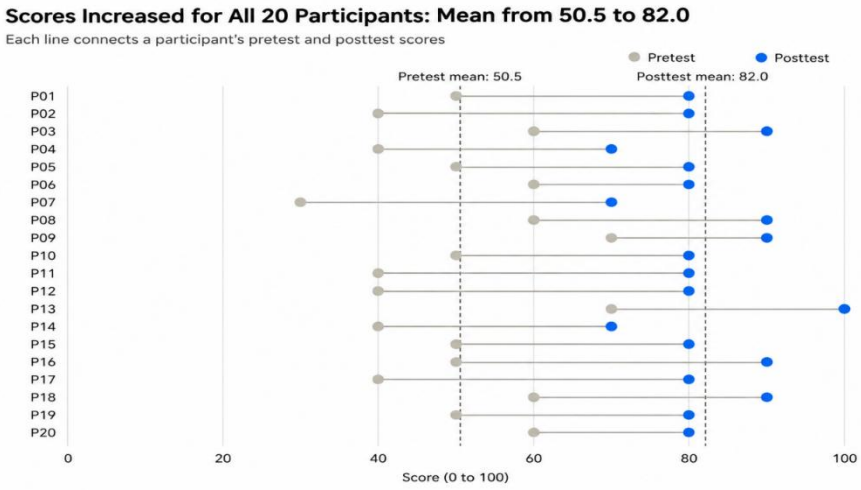

Figure 1. Individual Pretest and Posttest Scores of Participants (P01–P20)
Source: Primary data from the program assessment, October 18, 2026.

Figure 1 illustrates the individual pretest and posttest scores of all 20 participants. The figure shows that every participant obtained a higher posttest score than pretest score. The two horizontal reference lines indicate an increase in the mean score from 50.50 to 82.00.

This pattern demonstrates that the improvement occurred across all participants, although the magnitude of individual improvement varied.

4. Descriptive Comparison by Educational Background

A descriptive comparison was conducted to examine score changes according to participants' educational backgrounds. Participants with a bachelor's degree (n = 8) had a higher mean pretest score (58.8) than those with a senior high school education (n = 12), whose mean score was 45.0. After the program, the mean posttest scores were 85.0 for participants with a bachelor's degree and 80.0 for those with a senior high school education. Interestingly, the mean improvement was higher among participants with a senior high school education (35.0 points) than among those with a bachelor's degree (26.3 points). These findings are descriptive and should not be interpreted as evidence of statistically significant differences between educational groups because no inferential comparison was conducted.

Table 4. Descriptive Comparison by Educational Background

Educational Background	Number of Participants (n)	Mean Pretest Score	Mean Posttest Score	Mean Improvement
Bachelor's degree	8	58.8	85.0	26.3
Senior high school	12	45.0	80.0	35.0

Source: Primary data from the program assessment, October 18, 2026.

Table 4 presents a descriptive comparison of participants' pretest and posttest scores according to educational background. Participants with a bachelor's degree had a higher mean pretest score (58.8) than those with a senior high school education (45.0). However, the mean improvement was higher among participants with a senior high school education (35.0 points) than among those with a bachelor's degree (26.3 points). These findings represent descriptive differences and should not be interpreted as statistically significant group differences.

5. Individual Score Patterns and Potential Limitations

Further examination of individual scores revealed several relevant patterns. First, all participants experienced positive score changes, with no participant recording an unchanged or lower posttest score. Second, the smallest improvement, amounting to 20 points, occurred among participants P06, P09, and P20. All three held bachelor's degrees and had relatively high baseline scores, ranging from 60 to 70. This pattern may indicate a potential ceiling

effect because participants with higher initial scores had less room for improvement. Participant P13 achieved the maximum posttest score of 100. Three participants, namely P04, P07, and P14, obtained posttest scores of 70. Participant P07 had the lowest pretest score, at 30. These individual patterns indicate that although the overall scores increased, participants did not achieve identical levels of performance after the program.

The assessment instrument consisted of ten multiple-choice questions. The observed score improvements were limited to three values: 20, 30, and 40 points. This restricted distribution contributed to the non-normality of the difference scores and supported the use of the Wilcoxon signed-rank test as the primary statistical procedure. The findings also require cautious interpretation because the same test items were administered before and immediately after the intervention on the same day. Therefore, a potential testing effect may have contributed to the observed improvement. Since the program employed a one-group pretest–posttest design without a comparison group, the contribution of the intervention cannot be separated completely from other possible influences.

6. Findings from Group Simulations and Observations

Observations were conducted throughout three stages of the program: the pretest, the educational and practical simulation sessions, and the posttest. All participants completed the program, and none left before the posttest. During the pretest, several participants appeared hesitant when completing the assessment. Some asked whether their individual scores would be announced. After the facilitators explained that identification codes would be used and individual results would remain confidential, participants appeared more comfortable.

During the educational session, participants became more engaged when the facilitators presented examples of misleading religious messages. Some acknowledged that they had previously forwarded religious messages without checking their accuracy. They also expressed a new understanding that the principle of *tabayyun*, as stated in Qur'an Surah Al-Hujurat [49]:6, applies to information received through WhatsApp and other digital communication platforms.

For the practical session, participants were divided into four groups of five. Each group examined a different example of potentially misleading information and applied relevant steps of the 5C verification procedure. The simulation results are presented in Table 5.

Table 5. Group Simulation Results (n = 20)

Group	Participant Codes	Message Analyzed	Group Assessment	Verification Steps Applied	Group Decision
1	P01–P05	A chain message claiming that forwarding a prayer to ten groups would prevent misfortune, without providing a reliable source.	Hoax	Checking the source and religious evidence through Google and TurnBackHoax.id.	Do not forward the message.
2	P06–P10	A mosque construction donation request directing funds to a personal bank account.	Suspected fraud	Checking the source and fact-checking information. The account holder's name did not match the mosque's name, and no official authorization letter was provided.	Do not transfer funds and report the message to the organizers.
3	P11–P15	A 30-second excerpt from a religious lecture that could provoke anger.	Misleading or questionable	Checking the context and publication date by searching for the complete video on YouTube. The excerpt was found to have been taken out of context.	Do not share the video.
4	P16–P20	A message claiming that a thibbun nabawi remedy could instantly cure all diseases.	Misleading or questionable	Checking religious references and fact-checking sources. The claim lacked supporting medical evidence and contained exaggerated assertions.	Do not purchase or share the message.

Source: Group simulation activities during the community service program, October 18, 2026.

Table 5 summarizes the results of the four group simulations conducted during the practical verification session. Each group analyzed a different example of potentially misleading religious information. The findings show that participants identified various forms of misinformation, including fabricated religious messages, suspicious donation requests, misleading religious lecture excerpts, and unsupported health claims. Each group applied relevant verification steps and reached a decision not to forward or disseminate unverified information.

The simulation showed that participants faced more difficulties with the technical aspects of information verification than with understanding the content of the messages. Several participants initially struggled to copy text from WhatsApp and paste it into a web

browser. Following individual assistance from the facilitators, most groups completed the verification exercises independently. Group collaboration was also evident during the activities. Group 3 demonstrated particularly active interaction, with members assisting one another in operating their mobile phones. Participants with bachelor's degrees also helped other group members access web browsers and conduct online searches.

During the posttest, participants appeared more confident than during the initial assessment. They completed the questions more quickly and required less procedural assistance. At the end of the program, participants agreed to establish a shared commitment within their WhatsApp group to verify messages before forwarding them, at least by consulting the religious study group's organizers. Additional observation records and participant feedback are summarized in Table 6.

Table 6. Summary of Observation Findings and Participant Feedback

No.	Program Stage	Observed Aspect	Observation Findings
1	Pretest	Test-related anxiety	Several participants asked whether their scores would be announced. After being informed that identification codes would be used, they appeared more comfortable.
2	Educational session	Understanding of tabayyun	Participants expressed that they had only recently understood tabayyun as a religious obligation. Discussion became active when examples of fabricated hadiths were introduced.
3	Simulation	Technical difficulties	Six participants initially experienced difficulties copying and pasting text from WhatsApp into Google. Following assistance, 18 participants were able to conduct searches independently.
4	Simulation	Group collaboration	Group 3 demonstrated active collaboration. Participants with bachelor's degrees also assisted other members in accessing web browsers.
5	Posttest	Confidence	Participants completed the test more quickly and asked fewer procedural questions than during the pretest.
6	Closing session	Participant feedback	One participant stated, "I have only just learned that some hadiths are fabricated. I used to think that everything introduced with the phrase 'The Prophet said' was authentic."
7	Closing session	Participant feedback	Another participant stated, "I often receive donation messages. Now I realize that I need to check the bank account details first."
8	Closing session	Technical barriers	Three participants had insufficient storage space on their mobile phones and could not open web browsers. They used the facilitators' mobile phones instead.
9	Closing session	Collective commitment	Participants agreed to establish a rule in their WhatsApp group requiring members to verify messages before

No.	Program Stage	Observed Aspect	Observation Findings
			forwarding them, at least by consulting the group organizers.

Source: Field observation notes and participant feedback collected during the community service program, October 18, 2026.

Table 6 presents the observation findings and participant feedback across the program stages, from the pretest to the closing session. The observations indicate improvements in participants' confidence, understanding of tabayyun, and ability to use digital search tools. The table also documents technical difficulties experienced by several participants and the assistance provided by facilitators. Furthermore, participant feedback reflects increased awareness of the importance of verifying religious information before sharing it.

DISCUSSION

1. Analysis of the Findings

The mean score increased by 31.5 points from pretest to posttest, and all 20 participants demonstrated improvement. Both the Wilcoxon signed-rank test and the paired-samples t-test indicated statistically significant differences between the two assessments. The effect size was very large ($d_z = 4.70$). However, this value should be interpreted cautiously. The score differences were relatively uniform, with a standard deviation of 6.71 and only three distinct improvement values. This limited variation contributed to the large effect size. Furthermore, the program did not include a control group.

The smaller improvement observed among participants with bachelor's degrees was consistent with their higher baseline scores. Overall, these findings indicate an immediate improvement in participants' knowledge and information-verification skills following the mentoring program. However, they do not demonstrate changes in participants' actual message-sharing behavior.

2. Comparison with Previous Literature

These findings are consistent with previous research showing that brief interventions can improve individuals' ability to distinguish between true and false information. Accuracy reminders have been shown to substantially improve the ability to distinguish accurate from inaccurate news and influence sharing intentions (Pennycook & Rand, 2021). Furthermore, vulnerability to fake news has been associated with lower levels of analytical reasoning

(Pennycook & Rand, 2019). The 5C procedure encouraged participants to pause and verify information before sharing it, which is consistent with these mechanisms. Nevertheless, the present program did not directly examine the underlying cognitive processes.

However, other studies have shown that the effects of media literacy interventions do not always persist or emerge consistently across different populations. Improvements in news discernment remained measurable several weeks after the intervention in the United States but not in India. No significant effects were found among participants in a rural area of northern India, where social media use was substantially lower (Guess et al., 2020). Since the posttest in the present program was administered immediately after the educational session, the findings cannot establish whether the improvement was sustained over time. This limitation highlights the importance of periodic follow-up activities.

A training program involving 40 Islamic Religious Education (PAI) teachers addressed bullying and hoaxes from an Islamic perspective. The program used written questionnaires before and after the training and reported that 92% of participants considered the activities relevant, while 85% intended to apply the materials (Suwahyu et al., 2025). The present program differs in both its target population and outcome measures because it assessed knowledge and information-verification skills among adult members of an Islamic religious study group.

The present findings also complement research on Islamic boarding schools that promote students' media literacy in the post-truth era (Bustomi et al., 2023) and anti-hoax programs for women that employ prebunking content (Andriarti et al., 2024). Unlike these approaches, the present program positioned *tabayyun* as its underlying ethical framework and translated this principle into the practical 5C verification procedure.

The program's ethical foundation is consistent with the view that *tabayyun* serves as a foundation for digital literacy ethics (Ma'arif et al., 2025). It also reflects research suggesting that the criteria for identifying unreliable sources in Qur'an Surah Al-Hujurat [49]:6 can be reconsidered in the context of social media (Astria et al., 2026).

Within the framework of three approaches to preventing hoaxes, namely institutional measures, technology, and literacy (Juditha, 2018), this program represents a literacy-based approach. Therefore, it needs to be complemented by the involvement of village authorities, religious leaders, and reporting features provided by digital platforms. Moreover, false beliefs can be difficult to correct once misinformation has spread (Lewandowsky et al., 2012). Detailed corrective messages have also been associated with both the effectiveness of

corrections and the continued influence of misinformation (Chan et al., 2017). These findings support the importance of preventing misinformation before it is shared.

3. Implications

Practically, the 5C procedure can be incorporated into regular Islamic religious study group activities. For example, participants could spend five minutes before or after each session practicing information verification. Pocket-sized guidance cards and direct assistance could also support participants who are less familiar with using mobile phones and digital search tools. Religious study group organizers and religious leaders can serve as accessible reference points for participants who need to verify religious evidence and supporting arguments. At the conceptual level, this program demonstrates one way to translate the Islamic principle of *tabayyun* into practical steps that can be taught, practiced, and assessed.

4. Limitations

Several limitations should be considered when interpreting these findings. First, the program did not include a control group. Therefore, the observed score improvement cannot be attributed exclusively to the mentoring activities. Second, the same test questions were used in the pretest and posttest on the same day. Consequently, a potential testing effect may have contributed to the improvement in scores. Third, the posttest was administered immediately after the educational session. Therefore, the sustainability of the observed improvement remains unknown. Fourth, the participants consisted of only 20 members from a single Islamic religious study group. Thus, the findings cannot be generalized to other populations or community settings without further investigation. Fifth, the assessment instrument was developed by the program team and had not undergone statistical validity and reliability testing. Finally, the program measured participants' knowledge and information-verification skills through a written test rather than their actual behavior when receiving, evaluating, and sharing digital messages.

CONCLUSION

Among the 20 members of the Al-Yusufiyah Islamic Religious Study Group, the mean score increased from 50.5 to 82.0 following the *tabayyun*-based digital literacy mentoring program. All participants demonstrated an improvement in their scores. The Wilcoxon signed-rank test confirmed a statistically significant difference between pretest and posttest scores ($p < 0.001$).

This program provides an example of an Islamic values-based digital literacy intervention for adult members of an Islamic religious study group. It integrates the principle of tabayyun with the practical 5C information-verification procedure and provides pretest and posttest data to assess changes in participants' knowledge and verification skills.

Future research should incorporate a comparison group, conduct follow-up assessments several weeks after the intervention, examine participants' actual message-sharing behavior, validate the assessment instrument, and involve participants from a larger number of Islamic religious study groups. In practice, information-verification exercises can be incorporated periodically into regular religious study group activities to reinforce the application of tabayyun in everyday digital communication.

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