Improving Indonesian seniors’ digital resilience and quality of life through the Digital Academy for Seniors program

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ABSTRACT

Digital literacy education is essential for everyone, including seniors to sustain their quality of life. The Digital Academy for Seniors aims to instill digital skills among seniors through a non-formal learning program. This qualitative research aimed to provide a comprehensive description of how the program can develop digital resilience and improve the quality of life of seniors. This study concluded that the program can improve the knowledge and attitudes of seniors in using digital media safely. Both of these are important assets for seniors to develop their digital resilience so that they can take advantage of digital media to support their higher quality social lives. These new findings are significant because they differ from previous research that focused on the limitations of seniors in using digital media. The program has demonstrated that anyone can learn digital literacy and benefit from it, regardless of perceived limitations.

Keywords: seniors, digital literacy, digital resilience, non-formal learning.
INTRODUCTION

The emergence of new technology brings about new yet problematic consequences for society. Technology does provide many benefits to society, such as facilitating communication, work, and connecting people. Nuryanti et al.’s (2020) study shows that technology assessment is crucial to prevent such new technology from causing disorder in the community. As media technology becomes increasingly integrated into people’s lives, it becomes more important to provide them with media literacy education. Mastering media literacy is essential to fully benefit from media-based communication (Knaus & Knaus, 2022).

Several prior researches covering new communication technology revealed that such technology requires far more complex tools and software than traditional digital technology (Kuttner & Karpati, 2023). One of the elements of the community experiencing difficulty when adapting to new technology is the seniors. They prefer information to be presented through radio, television, and newspaper rather than online media (Luis et al., 2022). However, technological change and development, and living-apart family members forced them to use such new media. According to Luis et al. (2022), seniors tend to use online media more intensively.

The seniors’ limitation to connect to their family members, friends, and social environment cause them to resort to digital media as the main tool to connect to the world. The seniors’ need to communicate with others is as important as their healthcare needs. Such a view was presented in research about the definition of the quality of life among seniors, which concluded that social interaction is an important factor in their life, more than a health factor (Farquhar, 1995). The importance of a well-maintained social interaction also aligns with WHO’s quality of life criteria comprising four aspects: physical and psychological health, social relation, and the environment. Social relation comprises the assessment of personal relations, social support, and relation with the spouse or closest family members (Rumawas, 2022).

The seniors are the group of people deserving more attention from their surroundings. Many seniors must live alone because of their deceased spouse and living-apart children. They are at risk of loneliness and social isolation. Asante & Tuffour study (2022) shows that loneliness and social isolation can have different implications for the health of seniors.

Several prior researches revealed that loneliness and social isolation rose among them. World Health Organization (WHO) data in 2021 indicated that 20–34% of seniors in China, Europe, Latin America, and the United States felt lonely. It might seem like a trivial issue, but loneliness and social isolation are essentially dangerous for them. Such conditions can decrease seniors’ quality of life, both physically and psychologically. Efforts are required to keep them socially connected. Among the efforts is through meetings directly or through digital media. The seniors can also be provided with social skills and friendship training, facilities to help doing their activities, and age-friendly communities (World Health Organization, 2021). Addressing loneliness and social isolation among seniors cannot be done only by medical intervention, but also by social intervention (Iamtrakul & Chayphong, 2022). This is because such conditions are mainly caused by the minimal interaction with others, both their fellow seniors and family members (Asante & Tuffour, 2022).

The seniors’ use of Information and Communication Technology (ICT) is highly beneficial for their quality of life. ICT utilization allows them to control and be independent, strengthen social networks, access entertainment, and improve their overall psychological wellbeing (Damant et al., 2017). The study, however, also revealed that the seniors felt uncomfortable using the internet, especially regarding privacy, hacking, and data protection. The results of this study illustrate the importance of carrying out useful activities for seniors to protect them from the negative effects of internet.

The Government of Indonesia has conducted various activities to ensure the seniors’ wellbeing remains stable. Central and regional governments each have programs for seniors, such as Program Keluarga Harapan (Family Hope Program) and Program Bantuan Lansia Beresiko Tinggi (Assistance for High-Risk Seniors Program). However, addressing issues on seniors requires structural solutions by the state and cultural participation from other community groups. Tular Nalar plays its role in implementing Digital Literacy Academy activities for the seniors in this context.

Tular Nalar is a program run by MAFINDO (Indonesian Anti-Defamation Society) with Ma’arif Institute and Love Frankie and supported by Google.org. MAFINDO is a community organization that aims to raise awareness about the dangers of false information (hoaxes) and promote immunity against hoaxes in Indonesian society. As an umbrella organization,
MAFINDO was established in 2016 and has more than 95,000 online members and 1,000 volunteers in more than 20 branches throughout Indonesia (Mafindo, 2021). Its Digital Academy for Seniors program is significant and expected to improve seniors’ digital skills and build their digital resilience to improve their quality of life. Being resilient can be viewed as an individual condition or state allowing one to face any problems (How et al., 2022). When translated into the context of digital, it can be said that individuals with digital resilience are those who can face and overcome various problems related to digital technology. In this study, digitally resilient seniors are those who can adapt, confront challenges, solve problems, and take advantage of opportunities presented through digital technology.

As mentioned earlier, medical and economic solutions are insufficient for addressing seniors’ issues. They need training in social skills to keep them connected with their social environment directly or through digital media. The importance of encouraging seniors to use digital media is highlighted by research on the media choices of seniors in Turkey. The study indicates that the limitations in mastering information and communication technology do not mean that seniors do not need digital media. Seniors who have adequate digital literacy can develop strong interactions and relationships with friends, children, and grandchildren, thus overcoming their loneliness (Öngün et al., 2016).

Survey report of Indonesian Internet Profile (Profil Internet Indonesia) 2022 revealed that the 2021-2022 internet penetration in the country amounted to 77.02%, equal to 210,026,769 out of the total population of 272,682,600. The percentage is an increase from 73.70% from 2019-2020. In terms of age, internet penetration in the age group above 55 (seniors) was also quite high: 51.73% (Asosiasi Penyelenggara Jasa Internet Indonesia, 2022). Despite such a high percentage, the research indicated that Indonesian seniors were not fully digitally literate (Septiani et al., 2021).

One popular digital media among seniors is an instant messaging application, especially WhatsApp. Initial data of the research indicated that almost 100% of the seniors participating in the FGD were WhatsApp users. The research also confirms the instant messaging application’s popularity among seniors in several countries, such as Switzerland (Hämmerle et al., 2020). The result indicated that senior informants were positively impacted by using WhatsApp. In addition to the use of WhatsApp, skills to use smartphones, are also important for seniors. A study conducted to find out the skills of 26 seniors in Thailand in using smartphones concluded that the ability to use smartphone has given extra value to their lives. Its use has also boosted their confidence (Duangpatra et al., 2021). Therefore, it is important for seniors to have digital literacy skills that allow them to maximize the use of digital media, especially the smartphones they have.

Although prior research has presented and supported the use of instant messaging applications among seniors, there is only a limited amount of research analyzing digital education for seniors to improve their digital resilience. Digital skills are required to protect themselves from fake news or hoaxes. Seniors also need skills to protect their personal data. They need digital resilience so that digital media use can genuinely improve their quality of life.

There are several prior researches on seniors, including those on the obstacles they face in using digital media (Asante & Tuffour, 2022; Hämmerle et al., 2020; Öngün et al., 2016; Probosiwi & Suryani, 2022; Rumawas, 2022; Widianto & Isdijoso, 2020; Wuriyanti & Febriana, 2022; Xuan et al., 2022). However, only a few research studies have focused on the organization’s programs aimed at raising seniors’ awareness and potential to maintain their productivity and contribute to solving social issues, including the spread of hoaxes. This scarcity of research is unfortunate because it is crucial due to its potential for social inclusion. The research aimed at analyzing and developing a comprehensive description of the learning method of Digital Academy for Seniors is crucial to serving as inputs and best practices to be applied in other seniors’ communities.

This research is important as it can enrich the study and contribute to the development of interdisciplinary scientific knowledge on media and digital literacy. The limitations of previous research that focused on seniors in the study of digital literacy create an opportunity for this research to provide new perspectives on the role of digital literacy education for a more inclusive societal group. The selection of the non-formal education program, the Digital Academy for Seniors, as the subject of this research is also a novel aspect in the development of digital literacy. Articles on this non-formal learning program have the potential to provide practical insights and open opportunities for replicating similar programs for various other communities. Media literacy and digital literacy education are no longer solely conducted through formal approaches in schools, as previously done by researchers.
Based on the background of the problem, this research is conducted with the aim of obtaining a comprehensive answer to the question, “How can the Digital Academy for Seniors Program enhance digital resilience and the quality of life of Seniors?”

METHODS

This writing presents the result of research on 93 seniors who participated in the Digital Academy for Seniors Tular Nalar conducted in February 2023. The Presidential Regulation Number 88 of 2021 describes the Senior as an individual reaching the age of above 60 years (Dinas Sosial Riau, 2022). This program was selected because it emerged and was conducted culturally by the community as its members and volunteers, thus the best practice of this program can be adopted and implemented by anyone in other groups. In 2022, Digital Academy for Seniors Tular Nalar was conducted in eleven cities in Indonesia that are spread across six provinces: Jakarta, West Java, Central Java, East Java, Bali, and Yogyakarta. One of these cities is Purwokerto, which is known as a city of retirees because it is a popular choice of residence for seniors from other areas.

The research used a qualitative approach to explore and understand individual and/or group perceptions on social humanity issues. The outputs from qualitative research are the representation and presentation of findings resulting from data analysis. The outputs can be documentation of cultural observation results, new views and perceptions on the individual and social complexity, program effectiveness evaluation, or critique of the existing social structure (Saldana, 2011).

Informants are selected using purposive sampling by sending invitations to various community groups comprising the seniors, such as the Islamic learning community, Retiree Association of the Republic of Indonesia (PWRI), and Indonesian healthy exercise group accompanied by Family Welfare Program (PKK) group. In addition to requiring old age as a criterion for informants, prospective participants are also selected based on the consideration that they have never received similar training before.

Data was collected from the focus group discussion, in which the participants were divided into groups of 9-10 people. Researchers also use observation as a data collection technique. Observation was conducted to know the participants’ capability to use their smartphones, as well as to find out their smartphone usage behavior. To assess the changes in knowledge, attitudes, and skills of the informants before and after the program, all participants were given pre- and post-tests. The research also used secondary data, i.e., analyses of prior research, and relevant journals and news. This secondary data is used to analyze whether previous research and publications have similarities or differences with the findings in this study, so that researchers are able to provide a more complete analysis with a different perspective from previous findings.

Data analysis was interactively conducted (Miles et al., 2014) which began with making field notes, interview transcripts, and documentations, to data sorting and reduction. The researcher made categorizations based on similarities of pattern, theme, difference, and other common aspects, then drew conclusion. The researcher also conducted triangulation to improve data validity/authenticity, and to enhance the researcher’s understanding on the findings of the previous researches (Sugiyono, 2018). Researchers used source triangulation, where the validity of the research was tested by comparing the results of interviews from one informant with another informant until the data was saturated.

Digital academy for seniors: An overview

Digital Academy for Seniors Tular Nalar is a non-formal learning program developed by MAFINDO. Non-formal education is a form of learning aimed at children, adolescents and adults with special learning needs. Non-formal learning is characterized by high flexibility and openness in the material, management, and learning methods (Yasunaga, 2014). It thereby involves a wide range of stakeholders, including educational establishments, the private sector, non-governmental organizations and public institutions.

There are four lessons in the Digital Academy for the Seniors: Safe and Smart Access, Instant Messaging Applications, Digital Economy, and Youtube or Digital Entertainment. Tular Nalar team has provided comprehensive learning programs for every lesson so the volunteers can apply them anywhere. Prior to implementing the programs, the Tular Nalar team conducted online training for trainers for all volunteers. In every program, several display slides are available as assisting devices, cue cards for a game, training facilitators, and facilitator guidelines.

Every lesson always comprises three competences, i.e., tahu (knowledgeable), tanggap (responsive), and tangguh (resilient), as seen in the following Table 1. There are many definitions of competence, and these
definitions depend on diverse contexts. From these various definitions, it can be concluded that competence relates to the knowledge, skills, and capabilities of a person, which ultimately determine their performance in carrying out their work (Wong, 2020). In this study, competence is interpreted as the knowledge and skills possessed by the elderly in utilizing and addressing the challenges posed by the digital media they use.

Table 1. Curriculum mapping of the digital academy for seniors

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Tahu</th>
<th>Tanggap</th>
<th>Tangguh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe and Smart Access</td>
<td>Know the types of features that exist on smartphones</td>
<td>Beware of personal data theft</td>
<td>Capable of protecting personal data and accounts, submitting a report, and conducting fact-checking</td>
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<tr>
<td></td>
<td>Know the types of hoaxes</td>
<td>Able to analyze and identify hoaxes</td>
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<tr>
<td></td>
<td>Know how to check facts and hoaxes</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Know the types of personal data</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Know how to protect personal data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instant messaging application</td>
<td>Know the types of Instant Messaging Application</td>
<td>Beware of the benefits and risks of instant messaging application</td>
<td>Capable of protecting personal data and accounts, submitting a report, and conducting fact-checking</td>
</tr>
<tr>
<td></td>
<td>Know the benefits of conversational apps</td>
<td>Recognize the importance of fact-checking before receiving or sharing information</td>
<td>Able to utilize conversational applications to improve their quality of life</td>
</tr>
<tr>
<td></td>
<td>Know the negative impact of conversational apps</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Know the types of hoaxes</td>
<td></td>
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<tr>
<td></td>
<td>Know the types of tools for fact checking</td>
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<tr>
<td></td>
<td>Know how to check facts and hoaxes</td>
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<tr>
<td></td>
<td>Know the types of personal data</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Know how to protect personal data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital economy</td>
<td>Know the types of digital finance and transaction</td>
<td>Responsive to scams and provocation about certain goods or services</td>
<td>Able to take preventive measures from fraud under the guise of buying and selling online</td>
</tr>
<tr>
<td></td>
<td>Know the types of hoaxes</td>
<td>Capable to identify fraud and check bank account</td>
<td>Able to use social media and applications for online shopping properly</td>
</tr>
<tr>
<td></td>
<td>Know how to check facts and bank account</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youtube (digital entertainment)</td>
<td>Know the types of information and menu on Youtube</td>
<td>Able to take precautions against risky content on Youtube</td>
<td>Able to make good use of Youtube</td>
</tr>
<tr>
<td></td>
<td>Know the features provided by Youtube to maintain user safety and comfort</td>
<td></td>
<td>Able to find solutions when faced with risky content on Youtube</td>
</tr>
</tbody>
</table>

Source: Secondary data processing of the Digital Academy for Seniors Curriculum

Table 1 indicates that the lesson to enhance cognitive competence (Tahu) generally comprises basic concepts and information. For example, in the Safe and Smart Access lesson, the seniors are taught the types of features that exist on smartphones, types of hoaxes. In Instant Messaging Applications, as the name suggests, the seniors are taught such an application. In Digital Economy, they are taught various digital sale and purchase platforms and digital finance applications.

Lastly, in the Youtube lesson, they are taught various features and information available on the application.

The second competence developed in the Digital Academy for Seniors is an affective one, Tanggap. To build this competence, the seniors received lessons to be responsive to the diverse negative impacts of digital media use. For example, Safe and Smart Access taught them to be responsive to modus of personal data theft, and Instant Messaging Application trained them to be responsive to the benefits and risks of such applications.
Similarly, Digital Economy taught them to be responsive to digital scams and provocations related to certain goods or services, and Youtube trained them to be able to take precautions against risky content on Youtube. The seniors were also reminded to refrain from posting their family members’ photos or data on their social media accounts.

The third competence promoted in Digital Academy for the Seniors aimed to render the seniors resilient in using digital media. The seniors were taught to practice protecting their data and personal information by limiting the publication and access to profile photo, WhatsApp status, or content posted on their social media accounts. They were also taught to protect their account using two-step verification, check fact and hoax using Kalimasada chatbots, cekfakta.com, turnbackhoax.id, and Hoax Buster Tools application. Various materials about digital self-protection are believed to be part of efforts to develop the digital resilience of seniors. So that in the end, seniors can take advantage, face challenges, and overcome problems arising from the use of digital media.

RESULTS

Experience-based learning in the digital academy for seniors

The Digital Academy for Seniors applied a one-way learning system, where a coach provided lessons. In the academy, every group of participants was guided by a facilitator to make discovery learning to enhance their cognitive comprehension of the lesson seen in Figure 1 and 2. Cue cards and gamification were applied in every lesson. The participants were asked to discover and draw conclusions from key takeaways as the learning results.

Figure 1 and 2. Activities on The Digital Academy for Seniors

The seniors were taught not only to learn through discussion to discover and understand the concepts relevant to each lesson, but also to experience the lesson directly. For example, they were asked to understand better the setting features of their instant messaging application. They were asked to practice limiting access to their personal data, such as profile photo and status in their instant messaging application. They were also taught to use Kalimasada chatbot and Hoax Buster Tools application. They could directly ask their facilitator about confusing matters when conducting such activities.

Moreover, to ensure that the digital citizens are resilient in receiving and producing content in digital media, the seniors also learned examples of hoax cases. Afterward, they checked the facts about the hoax using various fact-checking platforms used earlier (case-based learning). This kind of learning method allowed the participants to understand and practice the lesson they learned in the Digital Academy for Seniors.

Our observation of the seniors participating in the academy found that most did not protect their accounts or personal data. Generally, their profile photos can be viewed by anyone, including people that were not in their contact lists. The results of these observations, showed that before attending the training, seniors did not realize that the personal data they had, including profile photos in the WhatsApp application was data that must be protected. The seniors were aware of the fact-checking application only recently, but already showed enthusiasm in using it. Moreover, not all seniors understand the importance of protecting their privacy and personal data. Based on our observation, among the examples of unprotected personal accounts is that few participants set their profile pictures as private and can only be viewed by their contacts. Most of the pictures can still be publicly viewed. Rather than concealing, privacy refers to controlling which information to be shared with the public, limited audience, or oneself (Turculet, 2014).

Before participating in the activity, seniors were asked to fill out a pre-test. At the end of the activity, they were again asked to fill out a post-test. The questions given in the pre and post-test are the same. There are 10 questions covering various aspects such as knowledge of conversation applications, the benefits and risks of conversation applications, the importance of personal data protection, how to conduct fact checks, and what to do if they receive or accidentally spread hoaxes.

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1 Kalimasada is an anti-hoax chatbot developed by MAFINDO in its collaboration with WhatsApp.
Based on the pre-posttest results, it is evident that there have been changes in knowledge and awareness regarding various aspects of digital literacy. Here are excerpts from some of the question items in the pre and post-test.

Figure 3 represents participants’ answers during the pre-test, while Figure 4 displays participants’ answers during the post-test regarding the benefits of conversational applications. During the pre-test, 16.7% of participants stated that the benefits of conversation applications were solely for friendship and clarification. However, in the post-test, 100% of seniors provided the correct response, acknowledging that conversation applications are not only for friendship and clarification but also for transactions, business, information, and education.

Figure 5 represents the summary of answers from the pre-test, while Figure 6 displays the results of the post-test regarding activities that participants should avoid during fact-checking. In the pre-test, 6.3% of participants still did not compare hoax information obtained with other trusted media, and another 6.3% did not reach out to relevant institutions when encountering hoax news. However, in the post-test, 100% of participants provided the correct answer that one should not directly share received hoax news on platforms like WhatsApp and other social media while conducting a fact-check.

Based on the post-test results, it is evident that not all questions yielded 100% correct answers from participants. Some questions even showed a decrease in results compared to the pre-test. One such question asked participants what they should do when they have already spread hoax news. In Figure 7, 80% of participants provided the correct answer, which is to clarify the news and apologize, while 20% chose to remove the hoax content. However, in Figure 8, representing the post-test results, the number of correct answers decreased to 75%, with 18.8% of participants opting to delete their hoax content and 6.2% considering deleting their accounts.

Figure 7 and 8. Changes in tackling the spread of hoax news

Another noticeable decrease in correct answers can be observed in the question concerning the principle of fact-checking, which appears to be confusing for seniors. However, other knowledge-based questions, such as the types of conversational applications, types of personal data, and the benefits and risks of online activities, all demonstrated an increase in correct answers, reaching up to 100%. The results of this pre and post-test serve as evidence that seniors require sufficient time and a more intensive learning process in order to develop the necessary skills for establishing a digitally resilient state.

Non-formal learning programs that are flexible and adaptable, such as this Digital Academy for Seniors, are well-suited for seniors. Recognizing the ongoing support needed by seniors, this program addresses the requirement for facilitators to provide post-training assistance for a minimum of 2 weeks, instead of limiting the support to a single training session.

Becoming happy and digital literate seniors

Seniors gave various responses when asked about the benefits of participating in the Digital Academy for Seniors. They generally stated their excitement in participating in it as it allowed them to safely use digital media without the concern of hoaxes or scams. They
were also happy because they could meet other seniors and the facilitators. The responses were as follows:

After participating in Tular Nalar, I realize I don’t know much about social media. Praise Allah, I have become more aware and cautious when using social media. Thank you so much for this guidance. This is so valuable for us. We also get to know other people. (FGD, February 10, 2023)

Now we know how to use our smartphones properly with useful applications. We also know how to face or receive hoaxes by checking the facts in Kalimasada application. (FGD, February 10, 2023)

Thank you, Mrs. W. Thanks to the training, I’m now more cautious in sharing information in WhatsApp group or posting information in WhatsApp status. I will also socialize this to my family. Thank you. (Interview, March 5, 2023)

All praise to Allah. Thank you, Mrs. M, For the knowledge. May Allah grants you the best reward. I hope I am no longer technology illiterate. So long, Mrs. M. Hope to see you again. (FGD, February 10, 2023)

The participants’ heartening responses have indeed been evident since the training invitation was sent to several senior communities. The number of registered participants exceeded the quota. They came on time and were enthusiastic about answering questions and sharing their experiences using instant messaging applications, particularly WhatsApp. Some participants said they frequently received WhatsApp messages saying they won a certain sweepstake. When a participant shared a story of a scam experience, with modus of an accident involving her child at school, another participant replied that he also had the same experience.

Cases of digital fraud experienced by seniors in this study also surfaced in the activities of the Digital Academy for Seniors in other cities. Fraud experienced generally involves banking activities where seniors are asked to submit personal data and are asked to make certain transactions (Bata, 2023). Online fraud cases in Indonesia are indeed quite concerning. The Ministry of Communication and Information of the Republic of Indonesia (Kominfo) said that during 2020 there were at least 110,000 accounts indicated to be involved in online fraud (Kementerian Komunikasi dan Informasi, 2021). In 2021, Kominfo received 115,756 complaints of online fraud cases (CNN Indonesia, 2021).

Research by the Center for Digital Society Universitas Gadjah Mada (CfDS UGM) revealed the community’s high vulnerability to digital fraud amounting to 98.3% of the respondents (1,671 people) who had received one or more digital scam messages. Prize scam (91.2%) is the most frequent fraud modus, followed by illegal loans (74.8%), a link containing malware/virus (65.2%), family emergency scam (59.8%), and illegal investment (56%) (Kurnia et al., 2022). Research results indicated that the seniors participating in the training often became the targets of various scam modus. Thus, it can be said that the Digital Academy for Seniors has become an alternative to improve their quality of life by enhancing their digital resilience.

The participants were happy not only for meeting their peer seniors but also for improving their digital skills. Several changes in their knowledge and awareness to be responsive to various digital issues are categorized in the following Table 2.

<table>
<thead>
<tr>
<th>Competency Aspect</th>
<th>Learning outcomes at the Digital Academy for Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Seniors gain awareness about various features on smartphones, types of personal data, types of hoaxes, types of fact-checking tools, types of transactions and online business, as well as the benefits and risks associated with conversational applications, digital transactions, and digital entertainment.</td>
</tr>
<tr>
<td>Responsive-ness</td>
<td>Seniors have acquired knowledge on handling hoax news, safeguarding their accounts and personal data from misuse, and demonstrating increased awareness of the negative impacts and risks associated with online activities.</td>
</tr>
<tr>
<td>Skills</td>
<td>Seniors have developed the ability to utilize fact-checking applications, practice reporting hoax content, protect their accounts and personal data, and assess the accuracy of information before sharing it with others.</td>
</tr>
</tbody>
</table>

Source: Results of data analysis obtained from the study

Continuous learning, an additional value from the Digital Academy for the seniors

One advantage of the Digital Academy for Seniors Tular Nalar compared to other training or counseling programs is the facilitators’ requirement to assist the seniors for at least two weeks post-training. The seniors’ characteristics and capability to adopt new knowledge, particularly digital skills, require longer time and process than people from other age groups. Thus, post-
training learning is available in the form of assistance, provided online through WhatsApp group. The training committee created several WhatsApp groups (WAGs) with ten members and one facilitator for every group. Such assistance through WAGs was aimed at ensuring the achievement of the learning goal, i.e., improvement of digital resilience and quality of life among the seniors. These WAGs also reminded them to keep applying newly acquired knowledge and skills, and share them with their family members or other communities. A senior stated the following in one of the WAGs:

And peace, grace, and blessing from Allah be upon you. All praise to Allah, we have shared the knowledge we got with the residents and our relatives at the Neighborhood Association (RT) meeting. Their response was positive. It turns out they distrust (the hoax). They would just ignore it.

Activity in the group has an informal nature. Conversations within the groups do not necessarily relate to the digital literacy theme, but all are under the umbrella topic of literacy. For example, a member of a WAG shared a piece of news on earthquake prediction in a region. The facilitator responded to the news by asking, “Are you sure the information is true?” A discussion was developed from this point by reiterating the lesson on a hoax. In addition, the facilitator reminded about the tools to check the truth of information. When a group’s activeness is poor, its facilitator must be more active than other members, for example, by regularly greeting the members. To create a pleasant environment, the facilitator can share old songs or funny images related to the seniors. In a more pleasant environment, the members usually felt more comfortable and believed that the WAGs were actually beneficial for them.

DISCUSSION

With the importance of social interactions for seniors, their familiarity with instant messaging applications, especially WhatsApp, is understandable. However, their low digital skills also caused them vulnerable to being exposed to hoaxes and scams from the social media or instant messaging applications they use. Prior research has revealed numerous dark sides of social media believed to be central to spreading fake news. Social media and hoaxes are double-edged swords (Juditha, 2019). This fact underscores the importance of training protocols. It can assist in countering the negative effects of fake news and misinformation. It also protects media users from the adverse impact of fake news and misinformation (Soetekouw & Angelopoulos, 2022).

Based on the results of this study, there are several interesting findings that can be discussed further. First, seniors must be given knowledge that is not only useful for them as content consumers but also provides knowledge for seniors as content producers. Therefore, seniors not only need training on how to deal with fake news as users or consumers, but also need to gain knowledge about fact checks and types of hoax news to equip them when acting as content producers. This is because they have equal potential to be the victims of hoax, scam, and the spreader of hoax.

The vulnerability of seniors to become spreaders of hoaxes also needs to be considered in line with the characteristics of digital media users. Unlike conventional media users who tend to only consume content, digital media users not only consume but also produce content. Therefore, in the context of digital media literacy education, trainees not only need to be provided with knowledge and skills to access media content but also to produce media content (Knau & Knau, 2022). The Digital Academy for Seniors by Tular Nalar has included materials on how seniors can safely produce messages. Through hands-on practice, seniors are informed about the importance of protecting personal data such as their names, addresses, phone numbers, as well as family photos such as those of their children and grandchildren. Seniors are also encouraged to practice fact-checking so that they can verify the accuracy of the information they receive before disseminating it to others.

Result analysis of the Ministry of Communication and Information data of 2018 indicated that hoax was spread mostly by adults above 45 years by forwarding messages they received through WhatsApp without an initial fact check (Kementerian Komunikasi dan Informasi, 2018; Wuriyanti & Febriana, 2022). The ministry’s data will be relevant to the prevailing situation compared to this research result, stating that the seniors are not aware of the method and application to check facts but are eager to share information with their family members and friends. The result that followed was that seniors were often the target of reprimands and even anger from their families or environment because they were considered to be spreaders of hoaxes. By studying fact-checking materials and practices for using the Kalimasada application and Hoax Busting Tools, seniors’ participants of the Digital Academy for Seniors can develop their own digital resilience while improving
their quality of life because they can share information without worrying about being called hoax spreaders.

Tular Nalar’s efforts to raise awareness among seniors about the importance of protecting personal data through the Digital Academy for Seniors curriculum have supported the findings of Audenhove, Broeck, and Marien’s research on the significance of data literacy education (Audenhove et al., 2020). Based on the results of his research, Audenhove provided recommendations that media literacy education should incorporate data literacy materials into its curriculum so that media users can not only understand how to use data but also comprehend the data itself (Audenhove et al., 2020).

Second, the seniors participated in the training are not yet capable of checking facts. This is due to their limited ability in information technology, especially mobile phone technology. Many seniors realized that they lag in technological development. Visual impairment and limitation of the received information caused most of them to use smartphones only to make phone calls or send text messages. In the FGD that was carried out, some seniors said that they had smartphones because they were bought or given by their children or grandchildren. Generally, they are only shown how to use a smartphone to receive or send messages or phone calls. Furthermore, they just dabble in the fear of being wrong. If seniors live in the same house with their children and grandchildren, generally they are helped a lot by children or grandchildren who are considered more skilled in mastering technology. Therefore, seniors welcome the material in the Digital Academy for Seniors program which also teaches seniors the features in their smartphones that they have never used before. Such as block, report, hide or restrict photo access and others.

Third, seniors are the group of people requiring extra attention and support. This finding appeared in the FGD when seniors told that they were helped when there were children or grandchildren who assisted in using their smartphones. Based on the observations in this study also, it appears that the limited vision of seniors is also an obstacle when they have to see or read text on their smartphones. Their decreasing productivity and physical state, limited mobility, and low information and technology mastery cause them to be vulnerable to violence. Seniors are vulnerable to at least six types of violence: physical abuse, emotional abuse (insults, verbal violence, and being snapped at), sexual harassment and rape, financial violence (theft and taking ownership), neglect, and fraud. (Proboisiwi & Suryani, 2022). Various physical limitations experienced by seniors are also a concern in the Digital Academy for Seniors program. Facilitators not only provide assistance during the training process but are also required to offer ongoing support for a minimum of two weeks. This is done with the aim of providing seniors with a space to ask questions and discuss any post-training issues they may encounter.

Tular Nalar, through various media literacy programs, one of which was the Digital Academy for Seniors, formulated a curriculum focusing on three competencies: tahu (knowledgeable), tanggap (responsive), and tangguh (resilient) (Lestari et al., 2021). A closer look at Tular Nalar curriculum revealed that its final objective aligns with the research’s, i.e., building digital resilience. The resilience concept can be understood from the characteristics, process, and output perspective. Digital resilience refers to a person’s ability to maintain, change, or recover technology-dependent operational capability in the face of adversity, as well as the awareness, skills, agility, and confidence to be empowered users of new technologies and adapt to changing digital skill sets.

As an adjective, resilient or tough refers to the individual characteristics to recover from hardship or solve a problem. Individual resilience might be an innate talent or a result of training. Providing knowledge and building the capability to be responsive to numerous digital cases through the Digital Academy for Seniors was expected to develop resilience among all the seniors participating in the training. The process perspective views resilience as adapting and successfully resolving problems disrupting one’s life. Within this context, seniors are expected to be able to adapt to technological and cultural changes that might impact their quality of life. For example, they adapt to the instant messaging application and digital economy technology. Thus, even with limited physical mobility, they can still be connected with the world through digital media. Lastly, from the outcome perspective, being resilient can be viewed as an individual condition or state allowing one to face any problems (How et al., 2022).

Fourth, the media literacy education implemented by Tular Nalar through the Digital Academy for Seniors demonstrates that media literacy education can be conducted for people of all groups and differences. Said by Rasi, to ensure the program’s success, the curriculum design and learning model must be customized for each group. Practical learning materials that are relevant to the daily lives and needs of seniors group and can maintain their social relationships are crucial (Rasi et al., 2019).
Through Digital Academy for Seniors program, Tular Nalar has successfully developed an attractive learning curriculum that brings changes in knowledge and awareness to seniors, empowering them to continue learning without feeling inferior due to their limitations. The program’s development of a digital literacy curriculum that is not burdensome is consistent with findings from research on digital literacy education methods in Australian school students conducted by Guo & Li. The curriculum must demonstrate its relevance to participants’ daily needs, be easy to follow, enjoyable, and not burdensome (Guo & Li, 2022).

CONCLUSION

A conclusion to be drawn from this research result is that the Digital Academy for Seniors can be the best practice to improve seniors’ digital resilience and quality of life. The research result, stating that the seniors were excitedly participating in this activity due to the chance for them to learn and socialize, substantiates prior research revealing that they need not only excellent healthcare to improve their quality of life, but also strong inclusion and social connection with their family members, friends, and surroundings. When their physical state hinders their mobilities, digital media use can be a solution. For seniors to fully benefit from safely and smartly using digital media, developing digital resilience among them becomes urgent.

This research result can have theoretical and practical implications on the definition and programs to improve seniors’ quality of life. Such programs should focus not only on improving healthcare and financial assistance for seniors but also on involving them in various activities to enhance their engagement with their social environment. At this level, digital media literacy education is something that must be integrated with the use of digital media itself, including among seniors. This research also has potential implications for educators and digital literacy advocates. The research findings can provide insights into best practices or practical experiences regarding the role of digital literacy in non-formal learning. Other researchers interested in digital literacy education can also utilize these research findings as a reference for their future studies.

This research is limited in its data collection scope: its result only reflected the observation and FGD regarding the Digital Academy for Seniors held in Purwokerto, Central Java. The remaining ten cities where the academy was organized in 2022 were not included in the data collection. The results of the research on the Digital Academy for Seniors in Purwokerto illustrate this program has been able to enhance seniors’ digital skills, raise awareness among them to protect their personal data and conduct fact-checking, as well as increase their comfort in continuing to interact with their social environment through digital media. To further understand the implementation and learning outcomes of the program, future research should compare seniors from diverse regions and cultural and socioeconomic backgrounds, including those living in big cities.

ACKNOWLEDGEMENTS

Thank you to Tular Nalar and the participants of the Digital Academy for Seniors who have helped with this research. Thanks to Jenderal Soedirman University for facilitating the writing and publishing of this scientific journal article.

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