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Strengthening Digital Literacy and AI Ethics for Children and Adolescents through Participatory Approaches and Experiential Learning

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ABSTRACT

The Community Service Program (PKM) "Bijak dan Etis Menggunakan AI" is a collaborative program between the service team of the Faculty of Communication and Business Sciences (FKB) Telkom University and the Bandung Wetan District Government which was held in Tamansari Village, Bandung City. This program responds to social phenomena in the form of increasingly massive Artificial Intelligence (AI) empowerment, accompanied by the increasing use of consumptive AI without critical understanding, thereby encouraging the potential for the spread of hoaxes, a decrease in the quality of social interaction, and the misuse of digital data. The main target of this activity is children and adolescents as an age group that is in the digital transition phase and has great potential to become active users of AI. The methods used in the implementation of this activity include participatory methods, experiential learning methods, mentoring methods, and active involvement-based evaluations. The activity was carried out in the form of interactive workshops, discussions, and mini projects in the form of visualization of ideals using AI assistance. The stages are systematically designed to encourage participants to recognize the basic forms of AI, understand digital ethics, realize the importance of cybersecurity, and implement AI positively in daily life, such as schoolwork and exploration of professional interests. The results of the program show an increase in digital literacy and participants' awareness of the wise and ethical use of AI. Children and adolescents are able to recognize forms of AI generative content, distinguish reality from imagination, and form critical and inclusive digital communities. This program also shows the success of an integrated educational strategy between academics, the community, and local stakeholders as an effort to support the vision of the Sustainable Development Goals (SDGs) in building a digitally smart generation.

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INTRODUCTION

The development of Artificial Intelligence (AI) technology is experiencing a significant escalation around the world, driven by the massive contribution of AI in meeting internet-based needs. AI has now been widely integrated in various digital platforms (Fadilan et al., 2025; Mahendra et al., 2024), providing convenience for users from data crawling to content editing efficiently. In Indonesia, the government's efficiency drive has helped accelerate AI adaptation in various sectors (Rahman, 2024; Simanjuntak et al., 2024). For example, AI has been utilized in digital talent education programs managed by the Ministry of Communication and Informatics, as well as in the transportation sector to integrate and manage data traffic that supports the development of smart city mobility (Suddin et al., 2024; Zakiansyah & Sutabri, 2025). However, this development also presents challenges. The consumptive use of AI without critical understanding also encourages the formation of media content in the form of generative AI. The use of AI can construct an object with the commands given (Herman, 2024; Muhammad, 2024), thus forming hoax content as if it were genuine. This can increase negative potential in the form of technology dependence, decreased quality of social interaction, and potential data misuse.

The use of AI in Indonesia no longer touches the taboo aspect, this can be seen from the shift to the public's concern about the much more significant uses of AI. Data obtained by the Katadata Insight Center (KIC) survey in 2024 with a percentage of 83.6% of respondents stating that they are familiar with AI and 64.7% empower AI as a reference in accessing information (Lucy Maulana, 2025). The use of AI in the form of content creation with AI also intersects with ethical aspects. This is related to how someone configures a data object in the form of a facial image that is integrated with the prompt commands given. AI can bring the imagination to life with the prompts given to it (Paramita et al., 2024).

Tamansari Village is one of the villages located in Bandung Wetan District, Bandung City, West Java. As part of the administrative area of the city of Bandung, this village plays a role in the management of public services and development at the local level. The region is known for its high population density and cultural diversity. The community in Tamansari Village is active in various social and economic activities, with the spirit of mutual cooperation that has been built for a long time. The economic activities of its citizens include trade, micro businesses, and services, which support the dynamics of daily life. The majority of the people of Tamansari village are children and teenagers. In an effort to deal with problems due to the use of digital media, especially in the use of ethics, literacy is needed that can help the people of Tamansari in facing problems due to the lack of ability to filter and evaluate information and minimize the potential for the spread of hoaxes of misleading information.

METHOD

The place of implementation of the activity program is in Tamansari Village, Bandung Wetan District, Bandung City.The implementation methods used are the Participation Method, the Experimental Learning Method, the Mentoring Method and the Evaluation Method. The method used is an adjustment to the results of observations and observations by the team. The participation method is an active engagement approach of the participants (Mentayani et al., 2025; Munthe et al., 2024) , the team can efficiently target the segmentation of participants, namely children and adolescents. Children's participants were chosen because it is expected to be a form of preventive effort in the environment and family, as well as the role of children and adolescents who are beginning to feel the transition phase of glocalization with digital media and AI that is also integrated into it. The experiential learning method is an approach that emphasizes learning through direct experience and reflection (Limbong, 2025; Suleman, 2024), This method is seen as in line with the program's objectives, particularly in a practice-based approach using AI. There are Telkom University Lecturers and Students, Bachelor's Degree Communication Science Study

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Program and Master's Degree Communication Science Study Program who take part in the program is also a form of mentoring methods, Mentoring has a crucial role because it acts as a bridge between theory and practice, and provides a sense of security and confidence for participants in the learning process or self-development (Fazli et al., 2025). The existence of this component is a facilitator of literacy transformation in discussion forums sessions of participants in efforts to implement knowledge that has been obtained directly. Furthermore, there is an Evaluative Method that is used as a benchmark in the form of understanding and the form of participant acceptance efficiently (Firmansyah & Hadi, 2024; Hurriyah, 2024).

FIGURE 1. Comprehensive Implementation Framework of the Digital Literacy and AI Ethics Program

The stages used in this program are with the support of the Bandung government, Bandung Wetan District with the service team of the Faculty of Communication and Business Sciences (FKB) Telkom University. The existence of this collaboration refers to efforts to respond to the social phenomenon of AI empowerment and ethics in its use, which focuses on efforts to improve skills and digital literacy, strengthen awareness of ethics and digital security, access to the latest technology and innovation, the formation of an inclusive digital community and this is in line with Telkom University's SDGs vision which has a significant and long-term impact.

The efforts made by the team in realizing this by integrating field facts, namely participants in the form of strategies and actions in efforts to increase digital literacy, understanding the ethics of using AI, and community empowerment. The concept carried out in the implementation of the program refers to solution efforts by increasing digital literacy and understanding of AI, instilling awareness of digital ethics and cybersecurity, providing practical skills through workshops and simulations, forming a critical and inclusive digital community, collaboration and monitoring and evaluation.

RESULTS AND DISCUSSION

The community service program (PKM) carried out makes the participant method a reference in the success of the program carried out, this is also in line with efforts to adjust to the conditions and potential of the community in Tamansari Village. Based on that, the segmentation of participants is focused on children and adolescents as a form of preventive efforts from the consumptive turnover of the use of

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artificial intelligence-based information technology with ethical use. In the initial stage, the activity focused on forms of participation aimed at encouraging the improvement of digital literacy and understanding of AI. This emphasis on fundamentals will be a solid foundation that makes children understand and understand that AI is inevitable in their daily existence. So that the form of rejection of negative stigma in the form of impulsive use needs to be aligned with wise behavior in its use. At this early stage, information is also given on what the form of AI is, so that it can provide a clear border between AI and search engines in general, this becomes more interesting because through the interaction carried out during the workshop and simulation, it is known that not all participants are aware that they have empowered AI itself. Efforts to access AI are emphasized by the Accompanying Mentors, namely Lecturers with the help of Student direction to provide understanding efficiently. The main locus is by introducing examples of AI found such as Chat Gpt, Gemini AI, AI integration with media platforms such as Tiktok to the Meta AI platform which is integrated with communication applications, namely Whatsapp.

The next stage is to emphasize awareness of Digital Ethics and Cybersecurity when participants use AI. This is one of the parts of the program's achievements which is supported by active evaluation carried out with participatory methods and experimental learning methods, through discussions which are forms and indicators in the implementation of the program in the form of participant interactivity by providing feedback on participants' personal experiences and direction efficiently through the experience of mentors. At this stage, it began to lead to 2 segmentations of adolescent and child participants so that the presentation could be more efficient. Child participants have a greater consumptive tendency to the results of AI which then go viral on social platforms. The existence of imaginative figures such as "anomalous" figures is one of the references in providing direction that not all imaginative figures are real. This emphasis encourages awareness of reality as it should be. In this case it is also a relevant example that not all results from AI can be believed for free. Awareness of ethical aspects subtly can be understood and accepted for children's segmentation. In the segmentation of adolescent participants, it becomes much interactive, this is because the consumptive factors that encourage adolescent participants to integrate AI are much more intense. The use in the transformation of "search engines" is one of them. Adolescent participants make AI a more efficient search engine crawler. This experience is used as a concrete example of understanding the form of cybersecurity, namely providing access to information or contacts as a condition when accessing certain AI. The existence of consent to data access is one of the fundamental elements emphasized, so that there is a preventive direction to use AI to be safer. In addition, because of this consumptive condition in the aspect of media-based entertainment on social media platforms, it is directed to be able to use AI ethically with the use of AI more efficiently such as the development of mind mapping when completing schoolwork or making imaginative prompts in shaping visualizations according to the mapping that has been done. This became interesting, as participants realized that the usefulness of AI is more efficient in helping them complete schoolwork more imaginatively.

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FIGURE 2. An interactive discussion session that served as a reflective space for participants to deepen their understanding of digital literacy and AI ethics.

The workshop was accompanied by consultation and simulation sessions by Telkom University Student Lecturers, Bachelor's Degree Communication Science Study Program and Master's Degree Communication Science Study Program and Digital Content Broadcasting Study Program with participants in the form of a mini project in the form of visualization with the participants' goals with AI. This is a form of solution effort with children and adolescent participants. This visualization can help participants in encouraging the use of AI in describing themselves. AI as a tool in presenting information on the prospects of aspiring professional figures. Participants can further identify the desired profession and how effective efforts are in realizing their dreams. It also recognizes the cognitive aspect of the participants that the potential of AI can be well integrated when its users use AI wisely. At this stage, the transformation of imaginative figures with negative connotations such as "anomalous" figures that are contrary to reality is also carried out with new visualizations in the form of visual development of ideals. The effort made is to provide visuals to children in the form of their figures when they grow up and achieve their future. The findings during the process provide feedback in the form of increased participation. Thus, it can be seen that participants are beginning to understand a more efficient form of AI empowerment. Apart from the positive form of AI, this is a relevant example in showing the unwise form of using AI. Presentation in the form of a video with generative voices, figures and prompt gentur is presented. Surprisingly, it is known that the majority of participants have encountered the form of AI videos on social media platforms. The emphasis on hoaxes or lies is introduced to them, based on this the team makes preventive efforts that not everything in the media can be trusted, the need for awareness in the form of critical thinking can be done. In a simple implementation, the team directed and encouraged participants to discuss with relevant adults such as parents, siblings and teachers when feeling confused or verifying findings on social media.

The next stage has integration with the previous process, this preventive prompting is also a reference and fundamental cognition prompt carried out by the team to the participants. This is expected to form a security system by involving participants with their environment. The team realized that natural preventive efforts with the participant center became more effective, besides that participants also could not escape the reality of using technology in the increasingly intense empowerment period at this time. Therefore, the form of a critical, and inclusive digital community is important in becoming a fundamental component of participants in AI literacy and wise efforts when using it. This concept will then encourage direct cooperation such as the partner service team in Tamansari Village, to indirect cooperation with the participants' educational institutions.

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FIGURE 3. A closing group photo, marking cross-sector collaboration in fostering inclusive and ethical digital literacy

During the implementation of the program, it can be known that the indicators of success in this program have an important basis in the form of real reactions of the participants during the workshop and discussion process. The level of active participation is characterized by interactive discussions, enthusiasm and effort in the simulation. In addition, non-verbal responses such as positive expressions provide an image of comfort and material suitability. Spontaneous feedback was also provided by the participation of children and adolescents. In addition, specifically the concepts and strategies developed by the team are relevant to the community in Tamansari Village. The success of the program also focuses on how the methods of participation, experimental learning, mentoring and evaluative run in harmony with the solution efforts from the workshops and discussions that have been carried out.

CONCLUSION

The community service activity (PKM) carried out by the Telkom University Team with the title "Bijak dan Etis Menggunakan AI" for children and adolescents in Tamansari village, Bandung Wetan District, Bandung City aims to increase digital literacy and instill ethical awareness of the use of technology, in order to overcome the challenges of spreading hoaxes and misuse of digital data. Based on the success indicators using the participation method, experimental learning, mentoring to evaluative, it shows 100% success with the acceptance and taste of participants having been involved in the program. This achievement is based on the fulfillment of activity points that stimulate participants on the basics of using AI, digital information analysis, introduction to ethical concepts in the digital era, and strategies to face challenges in disseminating invalid information. This activity was carried out in the form of interactive workshops, discussion sessions, and hands-on practice involving expert speakers in the field of information technology and digital ethics. This program encourages the optimization of improving basic understanding of digital technology and AI to educate participants on the importance of using AI ethically and wisely, foster a critical attitude in processing and receiving digital information and provide practical skills in minimizing the risk of using technology intensely. Based on the results of the implementation, it is known that program participants can use AI to support the needs of schoolwork and conceptualize imaginative visuals through AI-based media platforms, as well as awareness of the need for critical thinking in using AI and the truth of the content produced by AI.

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