

Development of AI-Based Learning Media to Enhance Understanding of Human Rights in Pancasila Education

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Abstract

This study will examine how the development of artificial intelligence (AI)-based learning media can enhance students' understanding of human rights in the Pancasila Education course. The background of this study stems from students' limited understanding of human rights and the lack of variety in the learning media used by teachers in the Pancasila Education course. Therefore, the use of AI-based learning media serves as an alternative solution in line with current trends, especially given the increasingly widespread use of AI. This study is based on the constructivist learning theory developed by Piaget. In addition, this study also employs a research and development (R&D) methodology. The results of this study will take the form of an AI-based learning media product that will be integrated into the Pancasila Education curriculum. The integration of this learning media is expected to enhance students' understanding of human rights. From this study, it can be concluded that the development of AI-based learning media can serve as an alternative solution to improve students' understanding of human rights.

Keywords: learning media; human rights ; artificial intelligence.

Introduction

One of the subjects that must be taught to students through school-based learning activities is Pancasila Education. The mandatory nature of the Pancasila Education subject aims to strengthen the character and morals of each student, which will later be applied in their daily lives. The primary focus of Pancasila Education is to convey the values of Pancasila to students; this is intended to ensure that every student understands that Pancasila serves as the foundation for guiding, determining, and regulating how each individual behaves when interacting with others in the context of social, national, and civic life (Lestari & Kurnia, 2022). According to Maysaroh and Ndonga (2025), Pancasila Education plays a crucial role as a solution to various social problems arising within society; in this context, Pancasila is not merely a state ideology but also functions as a value system

internalized into all aspects of life, including morality and ethics. Through the development of a curriculum and instructional materials that are well-structured and relevant to students' daily lives during Pancasila education lessons, it is hoped that the values of Pancasila can be internalized through various approaches, such as thematic project-based activities and extracurricular activities designed to foster students' attitudes that embody the values of Pancasila in their daily lives. Furthermore, this addresses how students understand and exercise human rights, as embodied in the values of Pancasila.

Human rights are one of the key areas that teachers must focus on with their students; this is done to help students understand and comply with the principles of human rights. Human rights are the fundamental and essential rights inherent in every human being from birth; they are naturally and inalienably attached to every individual and cannot be

infringed upon, as they are a gift from God the Almighty (Aswandi & Roisah, 2019). Based on this explanation, instruction on human rights must be provided, both theoretically and through direct, practical application.

Based on research conducted by Atmojo et al. (2016), it is evident that in the world of education, there are numerous human rights violations, such as students frequently engaging in inter-school fights, bullying, criminalizing their teachers, using illegal drugs, engaging in promiscuous behavior, and committing other crimes. A real-life example of human rights violations frequently committed by students is bullying, whether in person or via social media, as cited from the official website of the Ministry of Women's Empowerment and Child Protection (KemenPPPA), which discusses a case of bullying involving elementary school students in Malang Regency. Based on these findings and the context of the student environment, this serves as evidence that students have not yet fully grasped the concepts and understanding of human rights.

Based on research conducted by Azfar and Sutiah (2024) titled "Development of Artificial Intelligence (AI)-Based Avatar Video Learning Media for Elementary School Students," the development of Artificial Intelligence (AI)-based avatar video learning media using the ADDIE model (Analyze, Design, Development, Implementation, Evaluation) indicates that this medium is suitable for elementary school students because it accommodates their predominantly visual and auditory learning styles. The integration of several AI platforms—such as ChatGPT, TTS Maker, ToonMe, and D-ID—results in interactive, engaging, and accessible learning media that enhance students' motivation, interest, and engagement in the learning process. Furthermore, the use of avatars resembling real-life characters is considered effective in visualizing learning materials, making it easier for students to understand concrete concepts in accordance with Piaget's concrete operational stage of development.

Another study titled "Development of the 'Yubahaki' Audiovisual Media Based on Canva Magic AI on the Topic of Rights and

Obligations to Improve Learning Outcomes of Elementary School Students," conducted by Fifit et al. (2025), the "YUBAHAKI" audiovisual media based on Canva Magic AI was proven to be of very high quality in terms of validity, practicality, and effectiveness in teaching Pancasila education on the subject of rights and obligations in elementary schools. The validation results showed that the media received a score of 85.71% from media experts, 77.5% from subject matter experts, and 97.92% from teachers, thus deeming it suitable for use. In terms of practicality, the media received a positive response rate of 92.94%, indicating that it is easy to use, engaging, interactive, and aligned with the characteristics of elementary school students. Meanwhile, effectiveness testing using a pretest–posttest design revealed a significant improvement in learning outcomes in the experimental class, with an N-Gain value of 79.70% (effective category), far higher than that of the control class, which achieved only 18.38% (ineffective category). Furthermore, student learning mastery in the experimental class increased from 0% on the pretest to 100% on the posttest, indicating that the use of the YUBAHAKI media is capable of optimally enhancing students' understanding, motivation, and learning outcomes. These findings confirm that the integration of Canva Magic AI features into audiovisual media is an effective learning innovation for creating a learning experience that is more interactive, contextual, and aligned with the characteristics of elementary school students.

This study is grounded in the constructivist learning theory developed by Piaget. Constructivist learning theory posits that knowledge does not merely originate from what is directly imparted by the teacher to the student, but is also actively and concretely constructed by the student through critical thinking, experience, and interaction with their environment (Angglepi et al., 2025).

Given these findings, a strategy relevant to students' daily lives is needed. One alternative solution is the use of artificial intelligence (AI)-based learning media, which is currently gaining widespread use. The use of AI-based learning media is believed to spark students' interest in further deepening their understanding of human rights. Given the

current widespread use of AI to assist with daily life needs, this can be effectively leveraged to address the issues described earlier. One type of AI-based learning media that can be created consists of AI-generated images, which are abundant and easily accessible online.

Method

This study employs a research and development (R&D) approach using the methodology popularized by Sukmadinata. Research and development is a type of research conducted to create or develop specific products, which are then tested to assess their effectiveness (Slamet, 2022). According to Sukmadinata (2008), research and development is a process aimed at developing a new product or improving an existing one, which can be justified. These products are not always physical objects or hardware, such as books, modules, or learning aids used in classrooms or laboratories; they can also be software, such as computer programs for data processing, classroom instruction, library services, training, guidance, evaluation, management, and other applications. According to Sukmadinata (2008), there are three stages in research and development: (1) Preliminary Study; (2) Product Development; (3) Product Testing. In this study, only two stages will be conducted due to time constraints: the preliminary study and product development.



Figure 1. Stages of Research and Development

Result and Discussion

This study was conducted with eighth-grade students in Class VIII A at Polokarto State Junior High School No. 1. At the beginning of the study, the researcher conducted a preliminary study in accordance

with the method developed by Sukmadinata. In the preliminary study, the researcher distributed a questionnaire to identify the students' learning styles; by understanding these learning styles, it is hoped that the instructional materials developed will align with the students' learning styles and be well-received by them. Based on the results of the questionnaire administered to and completed by the students, the findings were as follows:

Visual	41%
Audio	33%
Kinestetik	26%

Figure 2. Distribution of Student Learning Styles

The results indicated that students in Class VIII A predominantly exhibited a visual learning style (41%), followed by auditory (33%) and kinesthetic (26%).

In addition to the results of the student learning style questionnaire, the study also conducted preliminary interviews with teachers, revealing that not all students' learning outcomes on human rights material met the "good" grade threshold. Furthermore, it was found that the instructional media used by teachers were rather monotonous and, at times, limited to a single medium such as PowerPoint. Therefore, based on the results of this questionnaire and the interviews, the researcher proposes an alternative solution in the form of AI-based learning media to improve understanding of human rights.

Based on the learning style questionnaire results, the researcher will also develop visual-based learning media; this learning media will take the form of a digital comic, and the process of its creation and development will involve and be assisted by artificial intelligence technology, though it will remain under the control of the researcher as the media developer.

Following a needs analysis conducted earlier through interviews with teachers and the distribution of questionnaires to identify students' learning styles, the researcher ultimately decided to develop a digital comic-based learning medium, aided by artificial intelligence technology. This medium will be linked to material on human rights. Subsequently, the researcher will create a

preliminary plan outlining the steps to be taken in developing this learning medium.

1. The initial stage involves identifying the material as outlined in the teacher's guidebook and defining the learning outcomes and learning objectives. This ensures that the material aligns with existing guidelines and is relevant to the students' circumstances, as it is tailored to their grade level. In this stage, Class VIII A was selected as the research sample.
2. The second stage involves drafting the conceptual content for the comic-based learning material to be developed, based on the previously determined content. This stage utilizes artificial intelligence technology by first creating a prompt to be entered into the application; in this case, the Chat GPT application is used. Once the draft is complete, the researcher edits it to determine which parts should be included and which should be removed.
3. The next stage involves creating the comic based on the previous draft concept. After obtaining the initial comic draft, the researcher edits it using the "editable" options available in the application menu. In this stage, the researcher uses the Canva application to adjust the layout and design as desired. The final comic can be seen in the image below,

Figure 3. Comic

The digital comic was developed to enhance students' understanding of human rights. This educational tool will be incorporated into classroom activities for Class VIII A. The use of this educational tool is expected to deepen students' existing understanding of human rights. This aligns with the constructivist learning theory developed by Piaget. This theory posits that knowledge does not originate solely from what is directly imparted by the teacher to the student but is also actively constructed by the student through critical thinking, experience, and interaction with their environment (Angglepi et al., 2025).

Conclusion

One of the subjects that must be taught to students through school-based learning activities is Pancasila Education. Human rights are a key focus that Pancasila Education teachers must address with their students; this is done to help students develop a commitment to and adherence to human rights principles. Based on previous findings regarding the teaching materials teachers have been using, students' understanding of human rights, and the dominant learning styles among students, a strategy relevant to students' daily lives is needed. One potential solution is the use of artificial intelligence (AI) based learning materials, which are currently gaining widespread use. Following a needs analysis conducted earlier which involved interviews with teachers and the administration of questionnaires to identify students' learning styles the researcher ultimately decided to develop a digital comic-based learning medium, aided by artificial intelligence technology throughout its development. The initial stage of product development involved determining the content. The second stage involved drafting the conceptual framework. The third stage involved creating the comic based on the previously established conceptual framework. Almost all of these stages were supported by artificial intelligence (AI) technology.

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