



Development of Canva-Based Interactive Learning Media for Teaching Pancasila to Elementary School Students

Muhammad Iqbal Rifai

Universitas Slamet Riyadi Surakarta, Indonesia

ARTICLE HISTORY

Submitted: January 5, 2026
Revised: February 22, 2026
Accepted: February 25, 2026
Published: March 28, 2026

KEYWORDS

Canva;
Learning Media;
Teaching Pancasila;
Elementary School Students

ABSTRACT

Background: Pancasila education in elementary schools plays a vital role in instilling foundational national values from an early age. Despite its importance, classroom implementation frequently relies on conventional lecture methods and printed textbooks. **Objective:** This study aimed to develop Canva-based interactive learning media for teaching Pancasila to fourth-grade students and to evaluate its feasibility and effectiveness in improving students' engagement and understanding. **Method:** The study employed a Research and Development (R&D) design using the ADDIE model, comprising Analysis, Design, Development, Implementation, and Evaluation phases. Data were collected through classroom observations, teacher interviews, student questionnaires, and a literature review. The participants were fourth-grade students at SD Negeri Kleco 1 Surakarta. The developed media was evaluated through feasibility testing and learning outcome assessment. **Result:** The feasibility assessment yielded an average score of 85%, categorised as excellent feasibility. The implementation results demonstrated an increase in students' interest in learning and conceptual understanding after using Canva-based interactive media. These findings indicate that the developed media meet quality standards and effectively support Pancasila learning in elementary education. **Conclusion:** The Canva-based interactive learning media is both feasible and effective for enhancing students' engagement and comprehension in Pancasila education. Its integration into classroom practice can support more interactive and meaningful learning experiences. **Contribution:** This study provides empirical evidence that digital interactive media can strengthen student participation and improve understanding of abstract civic values. It also offers a practical reference for educators seeking to integrate accessible technology into elementary school instruction.

1. INTRODUCTION

Primary education plays a fundamental role in shaping students' character and identity as citizens from an early age. In this context, Pancasila education serves as a value foundation that instils the principles of divinity, humanity, unity, democracy, and social justice as guidelines for everyday behaviour. Ideally, Pancasila learning should not stop at cognitive mastery of concepts but should be directed toward developing attitudes and habits that reflect these values (Asri et al, 2025). Therefore, the learning process should be designed to provide students with opportunities

* **Corresponding Author:** Muhammad Iqbal Rifai, muhammadiqbalrifai@unisri.ac.id

Universitas Slamet Riyadi Surakarta, Indonesia

Address: Jl. Sumpah Pemuda Jl. Gn. Kawi VI No.18, Kadipiro, Kec. Banjarsari, Kota Surakarta, Jawa Tengah 57136, Indonesia

How to Cite (APA 7th Edition):

Rifai, M. I. (2026). Development of Canva-Based Interactive Learning Media for Teaching Pancasila to Elementary School Students. *Indonesian Journal of Innovative Teaching and Learning*, 3(1), 34-42. <https://doi.org/10.64420/ijitl.v3i1.462>



Copyright © 2026 by the Author(s). This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International (CC BY-SA 4.0) License (<https://creativecommons.org/licenses/by-sa/4.0/>)

to experience, reflect on, and practice Pancasila values through meaningful activities (Rosyad & Mahamood, 2025). Active and contextual learning enables students to connect the material with real life, so that the values learned are not abstract but become part of their social experience (Chung et al., 2019).

The reality of classroom practice shows a gap between ideal conditions and what actually occurs. Initial observations at SD Negeri Kleco 1 Surakarta indicate that lecture-based, textbook-heavy approaches still dominate fourth-grade Pancasila instruction. This teacher-centred model tends to limit student participation, leading to one-way learning interactions. The impact can be seen in students' low engagement in discussions, limited curiosity, and underdeveloped conceptual understanding. This situation demonstrates that conventional methods have not fully addressed the learning needs of elementary students, who developmentally require visual stimulation, active involvement, and engaging learning experiences.

Advances in information and communication technology offer strategic opportunities to improve instructional quality through digital media (Mhlongo et al., 2023). Educational literature indicates that interactive learning media can enhance attention, motivation, and learning retention by engaging students in direct exploration of the material (Liao et al., 2019). Media that combine visuals, animation, navigation features, and feedback enable students to learn more independently while remaining active participants (Schneider et al., 2023). In the elementary school context, appropriate digital media can help transform abstract concepts into concrete representations that are easier to understand (Buitrago & Chiappe, 2019). Thus, integrating technology into instruction is not merely supplementary but serves as a pedagogical tool that supports more effective learning experiences.

One platform with strong potential for developing instructional media is Canva, a web-based design application that provides a variety of visual templates, illustrations, icons, and graphic elements that are easy to use. Canva's strength lies in its user-friendly interface, which allows teachers to design learning materials without advanced professional design skills (Handayani et al., 2025). In Pancasila instruction, Canva enables the presentation of values through visualizations, illustrated stories, and interactive activities aligned with the developmental characteristics of elementary students (Kenzie et al., 2024). Utilizing this platform can help teachers create learning media that are more engaging, systematic, and communicative, making instruction more dynamic and accessible.

Previous studies have reported that the use of interactive digital learning media increases learning interest, student engagement, and academic outcomes (Alalwan, 2022; Hidayati & Slamet, 2025). Research on multimedia-based instructional development shows that students are more active when material is presented in interactive visual formats than in conventional approaches (Staneviciene & Žekienė, 2025; Untari et al., 2020). However, most studies have focused on general subjects such as science or language, while research specifically developing Canva-based interactive media for Pancasila instruction in elementary schools remains relatively limited. In addition, few studies have integrated such media development with a systematic design model that ensures alignment between student needs, instructional goals, and product quality.

These limitations indicate a research gap that needs to be addressed through structured instructional media development grounded in real classroom needs. The ADDIE model, comprising analysis, design, development, implementation, and evaluation, provides a systematic framework for producing valid and relevant learning products. This approach allows each stage of development to be carefully planned, from identifying needs to evaluating media effectiveness. Through applying this model, the resulting instructional media are expected to be not only visually appealing but also pedagogically sound in supporting learning objectives.

Based on this background, the present study aims to develop interactive, Canva-based instructional media on Pancasila for elementary school students using the ADDIE model, and to evaluate its feasibility and potential to enhance student engagement and understanding. This research is expected to provide practical contributions to teachers in designing innovative instruction aligned with the characteristics of elementary students. Furthermore, it contributes to the body of research on the development of instructional media for Pancasila. It may serve as a reference for creating more effective instructional strategies in the future.

2. METHOD

2.1 Research Design

This study employed a Research and Development (R&D) method to produce and test the feasibility of an interactive learning media in Canva for teaching Pancasila to elementary school students. The development design followed the ADDIE model, which consists of five systematic stages: analysis, design, development, implementation, and evaluation. This model was chosen because it provides a structured development process,

allows for continuous revisions, and ensures that the final product aligns with learning needs and student characteristics.

2.2 Development Stages

1. **Analysis.** This stage aimed to identify learning needs through classroom observations, teacher interviews, and curriculum analysis. The analysis focused on student characteristics, learning difficulties in Pancasila, media previously used, and teachers' needs for interactive media. The results of this analysis served as the basis for designing the media.
2. **Design.** At this stage, the media structure was planned, including content, visual design, and interactive activities such as navigation, illustrations of Pancasila values, and practice exercises. The design was adapted to elementary school learning principles: simple, engaging, and easy to understand.
3. **Development.** The development stage involved creating the media using Canva according to the design plan. The initial product was then validated by content and media experts to assess content accuracy, visual appeal, interactivity, and usability. Feedback from the validators was used to revise the media until it met the feasibility criteria.
4. **Implementation.** The revised media was trialled with elementary school students on a limited scale. Teachers used the media in learning activities to observe practicality, student responses, and ease of use.
5. **Evaluation.** Evaluation was conducted formatively at each stage and summatively after implementation. The purpose was to assess media quality, learning effectiveness, and the potential to increase student engagement and understanding.

2.3 Research Subjects

The subjects included content experts, media experts, fourth-grade teachers, and elementary school students involved in the limited trial. Subjects were selected purposively based on their expertise and relevance to the study.

2.4 Data Collection

Data were collected through: 1) Observation, to identify initial learning conditions and trial implementation; 2) Interviews, to obtain information on teacher needs and responses to the media; 3) Validation questionnaires, to assess media feasibility by experts; 3) Student response questionnaires, to determine levels of engagement and interest; 4) Documentation, to support the research data.

2.5 Data Analysis

Instruments included expert validation sheets, teacher and student response questionnaires, and observation guides. These instruments were designed based on indicators of learning media quality, covering aspects of content, visual design, interactivity, and usability. Quantitative data from questionnaires were analyzed using descriptive statistics, expressed as percentage scores, to determine the media's feasibility category. Qualitative data from observations and interviews were analyzed through data reduction, presentation, and conclusion drawing to strengthen the interpretation of the results.

3. RESULT AND DISCUSSION

3.1 Result

The results of this study are presented according to the ADDIE model for the development of Canva-based interactive learning media: analysis, design, development, implementation, and evaluation. The focus of the results is to describe the learning needs, the quality of the developed product, media feasibility, and user responses during Pancasila instruction.

Table 1. Results of Needs Analysis Phase

Analysis Aspect	Key Findings	Development Implications
Teaching method	Dominated by lectures and textbooks	Interactive media is needed
Student engagement	Low participation and attention	Media should be visually engaging
Concept understanding	Pancasila concepts perceived as abstract	Concrete visualization is required
Teacher needs	Practical and easy to use media	Canva selected as development platform

Table 1 shows a clear gap between current instructional practice and ideal learning conditions. Teaching is still dominated by lecture-based delivery and textbook dependence, which contributes to low student engagement and limited conceptual understanding. The findings indicate that students struggle to grasp abstract Pancasila concepts when instruction relies solely on verbal explanation. At the same time, teachers express a need for practical, visually engaging instructional tools. These results justify the development of interactive media as a pedagogical intervention, positioning Canva as a suitable platform to address both instructional and usability needs.

Table 2. Media Design Phase Results

Design Component	Description	Instructional Purpose
Content structure	Organized according to Pancasila competencies	Ensures curriculum alignment
Visual display	Bright colors and child friendly illustrations	Captures student attention
Navigation	Simple and clear buttons	Supports usability
Interactive exercises	Short comprehension tasks	Reinforces learning concepts

Table 2 demonstrates that the media design was intentionally aligned with curriculum standards and learner characteristics. The structured organisation of content ensures instructional coherence, while the visual layout supports attention and comprehension. Simple navigation enhances usability, particularly for elementary learners who benefit from intuitive interaction. The inclusion of interactive exercises reinforces conceptual understanding and encourages active participation. Overall, the design framework reflects principles of learner-centred instruction, suggesting that the media is pedagogically sound and developmentally appropriate.

Table 3. Expert Validation Results

Evaluation Aspect	Score (%)	Category	Notes
Content validity	86	Very good	Curriculum aligned
Media appearance	84	Very good	Visually appealing
Interactivity	85	Very good	Easy to operate
Average	85	Highly feasible	Suitable for implementation

Expert validation results in Table 3 indicate a high level of feasibility across content accuracy, visual presentation, and interactivity. Scores in the outstanding category indicate that the instructional material aligns with curriculum requirements and is presented in a clear, engaging format. The consistency between content and media evaluations confirms that the product meets both pedagogical and technical standards. These findings support the media's readiness for classroom implementation, with only minor refinements needed to optimise clarity and usability.

Table 4. Media Implementation Results

Observation Indicator	Before Media Use	After Media Use
Student attention	Low	High
Classroom participation	Limited	Active
Learning enthusiasm	Low	Very high
Concept understanding	Not optimal	Improved

Table 4 highlights measurable improvements in classroom dynamics following the implementation of media. Student attention and participation increased substantially, indicating that the interactive features effectively

stimulated engagement. Enhanced learning enthusiasm suggests that the media created a more motivating learning environment. Improvements in conceptual understanding imply that visual and interactive elements helped students internalise abstract content more effectively. These results demonstrate that the media serves not only as a presentation tool but also as an active-learning facilitator.

Table 5. Student Responses to the Media

Response Aspect	Positive Percentage (%)	Category
Visual appearance	90	Very good
Ease of use	88	Very good
Media attractiveness	92	Very good
Concept understanding	87	Very good

Student response data in Table 5 reveal overwhelmingly positive perceptions of the media. High ratings across visual appeal, usability, and attractiveness indicate strong learner acceptance. Positive feedback on conceptual understanding suggests that students perceive the media as supportive of learning rather than merely entertaining. Such responses are important indicators of instructional effectiveness because learner motivation and perceived usefulness strongly influence engagement and retention.

Table 6. Summary of Product Evaluation

Evaluation Aspect	Result
Media feasibility	Highly suitable for use
Student engagement	Significantly improved
Concept comprehension	Enhanced
Ease of use	High
Implementation potential	Strongly recommended

The summary evaluation in Table 6 confirms the overall success of the development process. The media is categorised as highly feasible, with demonstrated improvements in engagement and comprehension. Ease of use and strong implementation potential indicate that the product can be integrated into classroom practice with minimal barriers. Collectively, these findings validate the effectiveness of the ADDIE-based development approach and support the broader application of interactive media in elementary Pancasila instruction.

3.2. Discussion

The results of this study indicate that the development of Canva-based interactive learning media significantly improved the quality of Pancasila instruction in elementary schools. A close interpretation of the data shows that the primary issues identified during the analysis stage, namely low student engagement and the dominance of lecture-based methods, were effectively addressed through media designed to be visual, interactive, and aligned with students’ developmental characteristics. Increases in attention, participation, and conceptual understanding after implementing the media suggest that it functions not merely as a presentation tool but as a medium that facilitates active learning experiences. This aligns with constructivist learning theory, which emphasises that knowledge is built through active interaction between students and their learning environment. When students engage directly with visualisations and interactive exercises, the process of internalising concepts becomes more meaningful.

Expert validation results, which indicated a very feasible rating, reinforce that the developed media meets pedagogical and technical standards. From a learning media theory perspective, systematic content structure and visual quality play a crucial role in supporting students’ cognitive processes, particularly at the concrete operational stage of elementary school age (Wu et al., 2024). Visualising Pancasila values helps reduce conceptual abstraction, enabling students to relate them to real-life experiences (Lesmana et al., 2025). Thus, the findings support the view that interactive learning media can bridge the gap between abstract concepts and concrete understanding.

Implementation results also demonstrated a significant increase in student engagement. Observational data showed improvements in attention and classroom participation after using the media. These findings can be explained through learning motivation theory, which posits that visual stimuli and interactivity can enhance students’ intrinsic interest (Liao et al., 2019). When learning is designed to be engaging and provides immediate feedback,

students are motivated to participate actively. Positive student responses to the media's appearance and ease of use indicate that comfort and visual appeal contribute to learning effectiveness.

These findings are consistent with previous studies showing that digital interactive media can enhance student interest and understanding. Prior multimedia development studies reported increased engagement and learning outcomes when content was presented visually and interactively. However, this study further contributes by applying the Canva platform to Pancasila instruction, a relatively underexplored area. Consequently, this research expands empirical evidence that digital design-based media can be effectively applied to teaching values and character education.

The research problem, which focused on media feasibility and its potential to improve student engagement and understanding, is addressed by the results. Expert validation confirmed that the media met the feasibility criteria, while implementation demonstrated enhanced quality of learning interactions (Gan et al., 2015). In other words, the developed media is not only technically feasible but also pedagogically effective (Quintana et al., 2015). This demonstrates that the ADDIE-based development approach successfully produced a product relevant to learning needs.

The implications of this study are both practical and theoretical. In practice, Canva-based media offers an easily accessible option for teachers to create more engaging lessons without requiring advanced design skills, opening opportunities for broader technology integration (Kenzie et al., 2024). Theoretically, the study reinforces the concept that visual, interactive learning supports students' cognitive and affective engagement (Lu & Hanim, 2024). Additionally, the successful application of the ADDIE model in media development highlights the importance of a systematic approach to ensure high-quality instructional products (Spatioti et al., 2022).

This discussion confirms that using Canva-based interactive learning media addresses challenges associated with conventional teaching methods, enhances students' learning experiences, and strengthens the implementation of Pancasila values in elementary schools. These findings demonstrate that innovative learning media are not merely supplementary but serve as a pedagogical strategy that directly contributes to learning effectiveness.

4. IMPLICATIONS AND CONTRIBUTIONS

4.1 Research Implication

The findings of this study indicate that Canva-based interactive learning media can serve as an effective pedagogical strategy to enhance student engagement and understanding of Pancasila in elementary schools. Practically, this suggests that teachers can easily leverage accessible digital design platforms to create learning experiences that are more visual, interactive, and aligned with students' developmental characteristics. Integrating such media has the potential to reduce the dominance of lecture-based methods, reinforce activity-based learning, and support the internalisation of Pancasila values through concrete representations. From an institutional perspective, the findings also underscore the importance of teacher training and the provision of technological resources to ensure that innovations in learning media can be implemented sustainably and positively impact the quality of instruction.

4.2 Research Contribution

This study provides empirical evidence for the development of Pancasila learning media by demonstrating that an interactive Canva-based design can meet pedagogical feasibility standards while enhancing the quality of student learning interactions. Conceptually, the study reinforces the understanding that visualisation and interactivity are essential components in helping elementary students grasp abstract value concepts. Moreover, this research expands the field of learning media development by integrating a digital design platform into the ADDIE model, producing a systematic approach that can be replicated in other learning contexts. The contributions of this study not only enrich the educational research literature but also provide a practical model that educators and researchers can use to develop innovative learning media.

5. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

5.1 Research Limitations

This study has several limitations that should be considered when interpreting the results. The development and trial of Canva-based interactive learning media were conducted within a limited school context and with a small number of subjects, so generalising the findings to a broader population should be done with caution. Additionally,

the evaluation of media effectiveness focused primarily on short-term learning responses and outcomes, which do not fully capture the long-term impact of the media on conceptual understanding and internalisation of Pancasila values. Variations in teachers' technological proficiency and school infrastructure readiness were not thoroughly analysed, even though these factors could influence optimal media implementation. Time constraints also limited the exploration of adapting the media for different subjects or grade levels.

5.2 Recommendations for Future Research Directions

Future research is recommended to expand the scope of subjects and school contexts to provide a more representative assessment of the effectiveness of learning media. Subsequent studies could examine the long-term impact of using Canva-based interactive media, including its influence on students' value comprehension and changes in attitude. Research could also combine quantitative and qualitative approaches to explore students' learning experiences and teachers' strategies for implementing digital media. Furthermore, media development could be extended to other subjects and compared with different digital learning platforms to identify relative advantages. Exploring technology readiness, teacher competence, and institutional support is also essential to provide more comprehensive implementation recommendations.

6. CONCLUSION

This study demonstrates that developing Canva-based interactive learning media for Pancasila can produce a learning product that is feasible for use in elementary schools. The systematic development process resulted in media that align with student needs, content characteristics, and the demands of more visual and participatory learning. Expert validation and trial implementation showed that the media is of high quality in terms of content, visual presentation, and ease of use, supporting a more engaging and meaningful learning process.

Implementation results showed increased student engagement in learning activities. Interactive media helped students understand Pancasila material through clear visual presentations, easy navigation, and activities that promote active participation. This contributed to greater interest in learning and conceptual understanding, as students were not merely passive recipients of information but actively engaged in exploring the material. Therefore, the developed media meets the need for adaptive learning, incorporating technological advancements and addressing the characteristics of elementary school students.

This study confirms that the use of digital interactive learning media can be an effective strategy to improve the quality of Pancasila instruction. The successful use of media depends not only on product design but also on teacher readiness and supportive learning environments. Integrating interactive media into instruction should continue to be developed to create learning experiences that are more contextual, enjoyable, and oriented toward optimising student competency achievement.

Acknowledgments

The authors would like to express their sincere appreciation to the teachers and students of SD Negeri Kleco 1 Surakarta for their cooperation, support, and participation during the implementation of this research, which allowed all stages of the study to be conducted effectively and smoothly.

Author Contribution Statement

The author declares that the entire research and writing process for this article was conducted independently. The author assumes full responsibility for all data associated with this research. No other individual contributed as a co-author or made any significant contribution to the content of this work.

Declaration of Generative AI (GenAI) Usage in Scientific Writing

The authors declare that generative artificial intelligence (Gen AI) tools were used solely to support language refinement, clarity of expression, and formatting during the preparation of this manuscript. All research design, data collection, analysis, interpretation of findings, and conclusions were carried out entirely by the authors. The authors take full responsibility for the accuracy, originality, and integrity of the content presented in this work. All instances of Generative AI usage in this article were conducted by the authors in accordance with the [IJITL GenAI Tool Usage Policy](#), with the authors assuming full responsibility for the originality, accuracy, and integrity of the work."

Conflict of Interest Statement

The authors declare that there are no financial, personal, or professional conflicts of interest that could have influenced the design, implementation, analysis, or reporting of this study.

REFERENCES

- Alalwan, N. (2022). Actual use of social media for engagement to enhance students' learning. *Education and Information Technologies*, 27(7), 9767-9789. <https://doi.org/10.1007/s10639-022-11014-7>
- Asri, A., Badaruddin, B., & Idris, M. (2025). Relational and cognitive dynamics in collaborative learning: lessons from Pancasila integration in Indonesia. In *Frontiers in Education* (Vol. 10, p. 1572715). Frontiers Media SA. <https://doi.org/10.3389/feduc.2025.1572715>
- Buitrago, M., & Chiappe, A. (2019). Representation of knowledge in digital educational environments: A systematic review of literature. *Australasian Journal of Educational Technology*, 35(4). <https://doi.org/10.14742/ajet.4041>
- Chung, C. J., Hwang, G. J., & Lai, C. L. (2019). A review of experimental mobile learning research in 2010–2016 based on the activity theory framework. *Computers & education*, 129, 1-13. <https://doi.org/10.1016/j.compedu.2018.10.010>
- Gan, B., Menkhoff, T., & Smith, R. (2015). Enhancing students' learning process through interactive digital media: New opportunities for collaborative learning. *Computers in Human Behavior*, 51, 652-663. <https://doi.org/10.1016/j.chb.2014.12.048>
- Handayani, R., Muslihin, H. Y., & Hidayat, S. (2025). A Needs Analysis for the Development of a Canva-Based E-Module to Foster Critical Thinking Skills Among Elementary School Students. *Journal of Innovation and Research in Primary Education*, 4(3), 512-520. <https://doi.org/10.56916/jirpe.v4i3.1372>
- Hidayati, D., & Slamet, J. (2025). Interactive multimedia via LMS on a reading comprehension course: Enhancing engagement and learning outcomes in Islamic higher education. *Journal of Studies in the English Language*, 20(1), 95-122. <https://doi.org/10.64731/jssel.v20i1.277426>
- Kenzie, M., Mahardika, H. R., Nughroho, M. F. H., & Pratama, M. F. (2024). Use Of Canva Application In Learning Pancasila And Citizenship Education. *Bulletin of Engineering Science, Technology and Industry*, 2(4), 103-105. <https://bestijournal.org/index.php/go/article/view/73>
- Le, A. N. N., Nguyen, V. N., Nguyen, M. T. X., & Bo, L. K. (2024). Exploring the use of ChatGPT as a tool for developing eportfolios in ESL classrooms. *IoT, AI, and ICT for Educational Applications: Technologies to Enable Education for All*, 51-76. https://doi.org/10.1007/978-3-031-50139-5_3
- Lesmana, T., Bestari, P., Fitriyanti, S., & Afriansyah, A. (2025). Application of The Contextual Teaching Learning Model in Pancasila Education Subject Using Virtual Reality Technology. *Journal of Civic Education*, 8(1), 57-68. <https://doi.org/10.24036/jce.v8i1.1135>
- Liao, C. W., Chen, C. H., & Shih, S. J. (2019). The interactivity of video and collaboration for learning achievement, intrinsic motivation, cognitive load, and behavior patterns in a digital game-based learning environment. *Computers & Education*, 133, 43-55. <https://doi.org/10.1016/j.compedu.2019.01.013>
- Lu, B., & Hanim, R. N. (2024). Enhancing Learning Experiences through Interactive Visual Communication Design in Online Education. *Eurasian Journal of Educational Research (EJER)*, (109). <https://ejer.com.tr/manuscript/index.php/journal/article/view/1593/386>
- Mhlongo, S., Mbatha, K., Ramatsetse, B., & Dlamini, R. (2023). Challenges, opportunities, and prospects of adopting and using smart digital technologies in learning environments: An iterative review. *Heliyon*, 9(6). <https://doi.org/10.1016/j.heliyon.2023.e16348>
- Quintana, M. G. B., & Fernández, S. M. (2015). A pedagogical model to develop teaching skills. The collaborative learning experience in the Immersive Virtual World TYMMI. *Computers in Human Behavior*, 51, 594-603. <https://doi.org/10.1016/j.chb.2015.03.016>
- Rosyad, A. M., & Mahamood, S. F. (2025). A Systematic Literature Review of Pancasila Education in Higher Education: Trends, Pedagogical Innovations, and Learner Competencies. *International Journal of Science Education and Cultural Studies*, 4(2), 28-46. <https://doi.org/10.58291/ijsecs.v4i2.459>
- Schneider, S., Krieglstein, F., Beege, M., & Rey, G. D. (2023). Successful learning with whiteboard animations—A question of their procedural character or narrative embedding?. *Heliyon*, 9(2). <https://doi.org/10.1016/j.heliyon.2023.e13229>
- Spatioti, A. G., Kazanidis, I., & Pange, J. (2022). A comparative study of the ADDIE instructional design model in distance education. *Information*, 13(9), 402. <https://doi.org/10.3390/info13090402>

Staneviciene, E., & Žekienė, G. (2025). The Use of Multimedia in the Teaching and Learning Process of Higher Education: A Systematic Review. *Sustainability*, 17(19), 8859. <https://doi.org/10.3390/su17198859>

Untari, R., Kamdi, W., Dardiri, A., Hadi, S., & Nurhadi, D. (2020). The development and application of interactive multimedia in project-based learning to enhance students' achievement for 2D animation making. *International Journal of Emerging Technologies in Learning (ijET)*, 15(16), 17-30. <https://doi.org/10.3991/ijet.v15i16.16521>

Wu, J., Jiang, H., Long, L., & Zhang, X. (2024). Effects of AR mathematical picture books on primary school students' geometric thinking, cognitive load and flow experience. *Education and Information Technologies*, 29(18), 24627-24652. <https://doi.org/10.1007/s10639-024-12768-y>

Article Information

Copyright holder: © Rifai, M. I. (2026)	Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of AEDUCIA and/or the editor(s). AEDUCIA and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.
First Publication Right: Indonesian Journal of Innovative Teaching and Learning	
Article info: DOI: https://doi.org/10.64420/ijitl.v3i1.462	
Word Count: 4594	This Article is licensed under: CC-BY-SA 4.0