

**SYSTEMATIC LITERATURE REVIEW: THE EFFECTIVENESS OF
LOCAL CULTURE-BASED E-COMIC MEDIA IN IMPROVING
THE LEARNING OUTCOMES OF PANCASILA
EDUCATION FOR ELEMENTARY
SCHOOL STUDENTS**

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Abstract

This study aims to examine the effectiveness of the use of e-comic learning media in improving the learning outcomes of Pancasila Education in elementary school students. This study uses the Systematic Literature Review (SLR) approach by referring to the PRISMA protocol as a guide for literature selection and analysis. Data was obtained through searching for scientific articles published in the 2021–2025 range through the Scopus and Google Scholar databases. From the results of the identification, screening, and feasibility process, as many as seven scientific articles were obtained that were relevant to the focus of the research. The results of the analysis show that research on the implementation of e-comic media in learning Pancasila Education has been carried out in various regions in Indonesia with diverse designs and contexts. In general, the findings of these studies show a positive impact on the use of e-comic media on improving student learning outcomes, both in cognitive aspects, learning motivation, and active involvement in the learning process. In addition, e-comics that are developed by containing elements of local culture or wisdom are considered more contextual and able to instill Pancasila values in a more meaningful way. This study concludes that local culture-based e-comic media has a significant effect on improving the learning outcomes of Pancasila Education for elementary/MI students.

Keywords: Implementation, E-comic Media Local Wisdom, Learning Outcomes, Elementary School Students



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INTRODUCTION

The advancement of science and technology in the era of the industrial revolution 4.0 has caused technology to be needed in all aspects of human life. Industry 4.0 is a new industrial revolution that focuses on digitalization and integration of value chains. The era of the industrial revolution 4.0 has an impact on the world of education.¹ Technology plays an important role in the world of education without exception. The use of technology in the learning process is urgently needed at this time. Technology is used to solve and solve problems that arise in the world of Education.²

Educational Technology has an important role in overcoming learning problems, fostering interest in learning, and simplifying the learning process.³ This statement is in accordance with the definition of educational technology according to the Association for Educational Communication and Technology (AECT), namely Educational Technology is an ethical study and practice about facilitating learning and improving performance by creating, using, and managing appropriate technology processes and resources. Based on this definition, it can be concluded that educational technology has a role in solving learning problems. Learning problems can be overcome by applying the principles of educational technology.⁴

Pancasila education is a subject that focuses on the formation of citizens who understand and are able to carry out their rights and obligations to become intelligent, skilled and character Indonesian citizens mandated by Pancasila and the 1945 Constitution.⁵ This educational framework aims to foster students' understanding of their roles and responsibilities as citizens, thereby contributing to the development of a cohesive national identity and a well-functioning democratic society.⁶

¹ Hussien Alakrash and Norizan Razak, "Education and the Fourth Industrial Revolution: Lessons from COVID-19," *Computers, Materials & Continua* 70, no. 1 (2021), <https://doi.org/10.32604/cmc.2022.014288>.

² Luis M. Sánchez-Ruiz et al., "ChatGPT Challenges Blended Learning Methodologies in Engineering Education: A Case Study in Mathematics," *Applied Sciences* 13, no. 10 (January 2023), <https://doi.org/10.3390/app13106039>.

³ Nataliia Prykhodkina et al., "The Role of Interactive Technologies in Improving the Quality of Learning and Development of Scientific Competences in Modern Education," *Periodicals of Engineering and Natural Sciences* 13, no. 1 (January 2025), <https://doi.org/10.21533/pen.v13.i1.253>.

⁴ Kathy Smith et al., "Principles of Problem-Based Learning (PBL) in STEM Education: Using Expert Wisdom and Research to Frame Educational Practice," *Education Sciences* 12, no. 10 (October 2022), <https://doi.org/10.3390/educsci12100728>.

⁵ Nurasharaeni Mardania Darmawan, Abdul Azis, and Rismawati, "Pengaruh Penerapan Model Pembelajaran Crossword Puzzle Terhadap Hasil Belajar Siswa Pada Mata Pelajaran Pkn Kelas Iii Upt Spf Sd Inpres Minasaupa I," *Didaktik: Jurnal Ilmiah PGSD STKIP Subang* 11, no. 03 (August 2025), <https://doi.org/10.36989/didaktik.v11i03.7752>.

⁶ I. Made Aditya Dharma et al., "Effectiveness of Digital Storybooks Based on Balinese Culture for Enhancing Cultural-Civic Literacy and Pancasila Education Outcomes," *Journal of Education and E-Learning Research* 12, no. 2 (June 2025), <https://doi.org/10.20448/jeelr.v12i2.6749>.

The purpose of learning Pancasila Education in elementary school is to make good citizens, namely citizens who are aware of their rights and obligations and always think critically about citizenship issues in their country and are willing to follow modern technological advances. Pancasila education plays an important role in enabling individuals to understand and respond to emerging social issues, especially those exacerbated by digital communication technology.

The implementation of Pancasila Education will be more meaningful if it is contextualized with the local culture where students grow and develop so that students can more easily understand and appreciate it through real examples that are familiar in their daily lives.⁷ Integrating regional culture in learning is not only to inherit regional culture, but can also foster the character of students. Teachers, as the spearhead of the world of education, need to play an active role in inheriting regional culture while fostering the character of students. This effort can be done through culture-based learning. Culture-based learning is a strategy to integrate local culture into the environment and learning activities of students.⁸

Problems in learning Pancasila education have been raised by several studies, including research conducted by Reinita, which states that there are still problems in the implementation of the learning process of Pancasila Education, including teachers prioritizing teaching the cognitive realm which is only impressed by rote learning so that it makes students bored. As a result, Pancasila values are not implemented in students' attitudes and actions.⁹ This can be seen from the negative behaviors that still appear in students' daily lives, such as fighting, not worshiping, and being lazy to learn, teachers find it difficult to develop indicators and assessments for the affective domain in civic learning, the application of value-based learning approaches or strategies in learning has not been implemented. This can be seen from the learning implementation plan carried out by teachers who have not used learning approaches or strategies in the learning steps.

As a result, the implementation of learning tends to be conventional, teachers do not try to develop teaching materials that can help students understand good attitudes and actions as citizens. Learning still relies on textbooks. Even today, it is known that textbooks are not accurate to meet learning needs. In accordance with the opinion that traditionally, civics education requires students to memorize facts, textbooks as a source of literacy have not always been accurate or inclusive. The research conducted by Reinita is a development research. The outputs produced are

⁷ Arneta Dwi Cahyan and M. Hum Drs. Paulus Wahana, "Penanaman Nilai Toleransi Melalui Kearifan Budaya Lokal Dalam Pembelajaran Pendidikan Pancasila Kelas V SD Negeri Sinduadi Timur," *Pendas : Jurnal Ilmiah Pendidikan Dasar* 10, no. 02 (June 2025), <https://doi.org/10.23969/jp.v10i02.27003>.

⁸ Margaretha Lidya Sumarni et al., "Integrasi Nilai Budaya Lokal Pada Pembelajaran Di Sekolah Dasar," *Journal of Education Research* 5, no. 3 (2024).

⁹ Reinita Reinita, "Designing Civics Literacy Learning to Promote Elementary Students to Become Good Citizens," paper presented at Proceedings of the 1st International Conference on Innovation in Education (ICoIE 2018), *Proceedings of the 1st International Conference on Innovation in Education (ICoIE 2018)*, 2019, <https://doi.org/10.2991/icoie-18.2019.62>.

in the form of learning designs, learning plans, and citizenship literacy teaching materials based on the VCT matrix model approach as an effort to realize good citizenship in grade 5 of elementary school.¹⁰ The limitation of this study is that the researcher did not carry out all stages of his research, where the researcher used the ADDIE model but only at the stage of product analysis and design, the product was not tested, there was no expert validation, so the product was considered incomplete.

Another study conducted by Dharma et al., entitled "The effectiveness of Balinese culture-based digital storybooks to improve cultural-civic literacy and Pancasila educational achievements" found that there is still a lack of facilities and infrastructure that can support the learning process of Pancasila Education, teachers still use the lecture method in the delivery of teaching materials, and there is no integration of local culture in the teaching materials of Pancasila Education.¹¹ From the data from teacher interviews, the researcher found several obstacles in learning Pancasila Education, including 1) there are not many teachers and principals who understand the citizenship literacy skills of students in elementary schools or how to measure them. 2) Some teachers have measured students' citizenship literacy skills but the results are still not optimal. 3) The implementation of Pancasila education has been delivered orally and has not utilized the media or learning model. 4) The learning outcomes of Pancasila education are not optimal. 5) Some students are less motivated during Pancasila education learning because teachers do not use learning media, and 6) the learning resources used by teachers are limited to textbooks provided by the government. To overcome this, researchers are trying to develop digital storybooks based on local culture to improve students' civic literacy. This study shows that incorporating digital storybooks based on local culture into the curriculum has a positive impact on civic literacy and academic achievement among elementary school students.

From these two studies, it can be concluded that one of the factors that can affect learning outcomes is determined by the quality of educators such as teachers. Teachers are required to master skills, the ability to adapt to new technologies and global challenges. According to Janah et al., learning media plays an important role as an intermediary in the educational communication process that is able to change the mindset of students.¹² Attractively designed media can encourage learners to think critically, interpret visual messages, and relate learning content to

¹⁰ Reinita, "Designing Civics Literacy Learning to Promote Elementary Students to Become Good Citizens."

¹¹ Dharma et al., "Effectiveness of Digital Storybooks Based on Balinese Culture for Enhancing Cultural-Civic Literacy and Pancasila Education Outcomes."

¹² Feryana N. Miftahul Jannah et al., "Penggunaan Aplikasi Canva Dalam Media Pembelajaran Matematika Di Sekolah Dasar," *Jurnal Pendidikan Dasar* 11, no. 1 (March 2023), <https://doi.org/10.20961/jpd.v11i1.72716>.

their social and cultural context. Thus, choosing the right media is one of the keys to the success of meaningful learning. One of the learning media that attracts students' attention is comic media.

Comic media is a form of cartoon that expresses characters and applies a story in a sequence that is closely related to the image and is designed to provide entertainment to the reader.¹³ The advantage of using comics is that they are time-efficient because they are media comics that students can use repeatedly to learn independently, and make it easier for students to understand the material presented.¹⁴ The use of comics with color illustrations, a concise storyline, and realistic characters will attract students' attention.¹⁵ This is in accordance with research conducted by Budi and Haryanto which states that comic media can increase students' motivation and reading comprehension skills.¹⁶

Comics as a form of cartoon that reveal characters and apply a story in a sequence that is closely related to images and is designed to provide entertainment to readers.¹⁷ The presentation of comics as visual media is able to provide interesting and more concrete material for students. In addition, it is in line with Piaget's theory which states that students at the age of 7-11 years are in the stage of concrete operational thinking who are able to think systematically about concrete objects and events.¹⁸ The use of direct and simple sentences makes comics easy for elementary school students to understand. The use of comics as a learning medium provides stimulus to students through visuals that can foster better learning outcomes for tasks such as remembering, recognizing, recalling, and connecting facts with concepts.¹⁹

There has been a lot of research done on the effectiveness of e-comic media in learning. Several studies have shown that the use of e-comic media can improve student learning outcomes.

¹³ Federal University of Goiás et al., "Comics, Culture, and Society Contributions from Sequential Narratives for Reader Training," *RDBCI: Revista Digital de Biblioteconomia e Ciência Da Informação* 20, no. 2022 (January 2022), <https://doi.org/10.20396/rdbci.v20i00.8667789/27894>.

¹⁴ Dimitris Apostolou and Gerasimos Linardatos, "Cognitive Load Approach to Digital Comics Creation: A Student-Centered Learning Case," *Applied Sciences* 13, no. 13 (January 2023), <https://doi.org/10.3390/app13137896>.

¹⁵ Sabri Sabri et al., "Visual Narratives in Health Communication: Evaluating Comics as Tools for Health Literacy by the Indonesian Ministry of Health," *CHANNEL: Jurnal Komunikasi* 12, no. 1 (April 2024), <https://doi.org/10.12928/channel.v12i1.723>.

¹⁶ Rizqia Fitri Siregar, Rita Harisma, and Novida Haryana Silitonga, "Enhancing Reading Comprehension Through Comic in Vocational School," *VISION* 19, no. 2 (December 2023), <https://doi.org/10.30829/vis.v19i2.2946>.

¹⁷ Semaria Eva Girsang and Mustika Rini, "Improving the Students' Reading Comprehension by Using Comic Strips at Sma Muhammadiyah-7 Serbelawan Grade XI," *Bilingual: Jurnal Pendidikan Bahasa Inggris* 3, no. 1 (April 2021), <https://doi.org/10.36985/1dsw8a57>.

¹⁸ Sujatha Paranna et al., "Evaluate the Perspective of the Concrete Operational Stage of Piaget's Theory and Its Correlation with Tell-Show-Do: A Comparative Study," *Journal of Scientific Dentistry* 13, no. 2 (November 2023), <https://doi.org/10.5005/jp-journals-10083-1040>.

¹⁹ Humaidah Fatimah Parapat, Salman Alparisi Efendi, and Misman Misman, "Systematic Literature Review: Implementasi Media E-Comic Berbasis Kearifan Lokal Dan Dampaknya Terhadap Hasil Belajar Dan Karakter Siswa Sekolah Dasar," *Cokroaminoto Journal of Primary Education* 8, no. 3 (September 2025), <https://doi.org/10.30605/cjpe.8.3.2025.6839>.

First, research conducted by Priamada et al., with the research title "Development of Comic-Based Flipchart Media on Pancasila Precepts to Increase Learning Motivation of Grade II Elementary School Students".²⁰ This research produced a comic flipchart media containing material on the precepts of Pancasila in which there is an interesting story and accompanied by picture characters with the aim of increasing learning motivation. The results of the study showed that the validation results of the experts, namely media experts with an average score of 91.33% and material experts with an average score of 93.75%. Then from the students' responses, they got an average score of 90.9% so that the media could increase the motivation of students with an initial score of 66%, increasing to 73%. Second, the research conducted by Wulandari with the research title "Pancasila Illustrated Comics as Life Values: Efforts to Improve Students' PPKn Knowledge Competency".²¹ This research produces illustrated comic media developed specifically for Pancasila material as a Source of Life in the subject of Pancasila and Citizenship Education (PPKn) in grade IV of elementary school in accordance with the Independent Curriculum with a focus on essential Pancasila material and the use of illustrated comic media, this research not only fills gaps in the availability of interesting and relevant teaching materials, but also adapting to the latest curriculum approach that is more flexible. The results of this study show that pictorial comic media with PPKn content developed based on the stages of the ADDIE model is very effective in increasing students' interest and motivation to learn. The third research is a research conducted by Dewi with the research title "Contextual-Based Digital Comic Media PPKn Content for Practicing Pancasila Precepts for Grade III Elementary School Students". This research resulted in the development of contextual-based digital comic media for PPKn learning which is specifically designed for grade III elementary school students. This research combines interesting visual elements with the context of students' daily lives, so that Pancasila values can be conveyed in a more relevant and easy-to-understand way. This comic media is designed not only to convey the subject matter in an informative manner, but also to facilitate the practice of Pancasila values in real situations that are close to students' lives. This approach has not been widely explored in previous research, especially in the context of basic education, so it makes a new contribution to improving the effectiveness of PPKn learning through innovative digital media. The results of the study show that contextual-based digital comic media for the practice of Pancasila precepts in grade III elementary school students succeeded in significantly increasing students' interest and understanding.

²⁰ Ayu Inggrit Priamada and Arief Cahyo Utomo, "Pengembangan Media Flipchart Berbasis Komik Pada Materi Sila-Sila Pancasila Untuk Meningkatkan Motivasi Belajar Siswa Kelas II Sekolah Dasar," *Didaktika: Jurnal Kependidikan* 13, no. 2 Mei (May 2024), <https://doi.org/10.58230/27454312.550>.

²¹ Ni Kadek Ayu Nanda Wulandari, Ni Nyoman Ganing, and I. Komang Ngurah Wiyasa, "Komik Bergambar Pancasila sebagai Nilai Kehidupan: Upaya Meningkatkan Kompetensi Pengetahuan PPKn Siswa," *Jurnal Media dan Teknologi Pendidikan* 4, no. 2 (2024), <https://doi.org/10.23887/jmt.v4i2.66332>.

Based on the above problems, the author is interested in conducting a systematic review of scientific publications to understand and determine the role of Local Wisdom-Based E-comic Media on the Learning Outcomes of Pancasila Education in Elementary / MI. The results of the systematic review are expected to find empirical evidence regarding the effectiveness of the use of local wisdom-based e-comic media in improving the learning outcomes of elementary school students.

The novelty of this research lies in the e-comic media based on local wisdom, an indicator that still receives less attention than previous studies. This research will also make an important contribution to the basic education literature, especially in understanding the importance of learning media, one of which is the use of ecomic media based on local wisdom, so that students can get to know the culture in Indonesia. Theoretically, this research makes an important contribution by offering a new perspective on how the effectiveness of local culture-based e-comic media can improve the learning outcomes of Pancasila Education in elementary schools.

RESEARCH METHODS

This study uses a Systematic Literature Review (SLR) approach which is systematically compiled based on the guidelines of PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) as developed by Moher.²² The SLR approach was chosen because it is able to collect, evaluate, and synthesize various relevant studies that discuss e-comic learning media in improving the learning outcomes of Pancasila education for elementary school students. With this approach, the literature selection process can be carried out strictly and objectively, and allows for the drawing of evidence-based conclusions.

The search for literature sources is carried out through two main credible databases, namely Scopus and Google Scholar, with a publication time range between 2021 and 2025. The search uses a combination of keywords in English and Indonesian, including: "e-comik, civic education, local culture, learning media of Pancasila education".

The inclusion criteria are set as follows:

1. An article that discusses e-comic learning media based on local culture in learning.
2. Focus on the level of basic education or madrasah (MI/SD).
3. Contains empirical data or conceptual studies relevant to technology in the world of education.
4. Published in scientific journals indexed by scopus or SINTA, both in English and Indonesian.

²² Puti Andam Suri et al., "Systematic Literature Review: The Use of Virtual Reality as a Learning Media," *Procedia Computer Science*, 7th International Conference on Computer Science and Computational Intelligence 2022, vol. 216 (January 2023), <https://doi.org/10.1016/j.procs.2022.12.133>.

While the exclusion criteria include:

- 1. Articles that don't go through the peer-review process.
- 2. Writings that only present general theories with no direct relevance to educational practice.
- 3. Studies with a medium or high level context.

From a total of 112 articles that were successfully collected, a gradual selection process was carried out based on the four stages of the PRISMA flow:

- 1. Identification: initial search based on keyword.
- 2. Filtering: elimination of duplicate and irrelevant articles based on abstracts and titles related to e-comic media, resulting in 92 articles.
- 3. Eligibility: review of the full content of the most relevant articles with the focus of the study related to methods and discussions, the result was 14 articles.
- 4. Final inclusion: selection of the 7 articles that are most relevant to the focus of the study.

RESULTS AND DISCUSSION

Research Results

Based on the results of the research search, 7 journals were obtained with research methods, namely Research and Development with research designs used mostly using analysis, design, development, implementation and evaluation (ADDIE) design. The findings of articles that meet the research criteria are presented in the form of a table below by listing the title, author, year of publication, research location, research objectives, research methods, research samples, and research results.

Table 1. Systematic Review Results

Title, Author, Year	Purpose	Research Results
Digital comic media for civics learning with Pancasila Student Profile for grade II elementary school students. Fihrisi et al., 2025. ²³	The purpose of this research is to find out the process of development, validity, effectiveness, and practicality of digital comics in the discipline of Pancasila Education subjects in grade II	The results of the product validation resulted in a score of 81.4 (very decent). The results of the effectiveness test showed a relative effectiveness score of 42.3% (moderate effectiveness). The practicality test showed a score of 79.7% (practical). Based

²³ Fathan Fihrisi, Fatkur Mujib, and Zetti Finali, "Digital Comic Media for Civics Learning with Pancasila Student Profile for Grade II Elementary School Students," *JP2SD (Jurnal Pemikiran Dan Pengembangan Sekolah Dasar)* 13, no. 1 (2025), <https://doi.org/https://doi.org/10.22219/jp2sd.v13i1.32221>.

	elementary school.	on these results, the digital comic learning media developed is valid, effective, and useful for use in learning.
Anti-Bullying Education Media Innovation through Local Culture-Based Bilingual Audio E-Comic for Elementary School Students. Nahdhiah et al., 2024. ²⁴	This research aims to develop learning media in the form of e-comic with audio in two languages that contain educational messages related to bullying and local culture.	The data collection techniques used in this study were observation, interviews, and questionnaires. The data obtained was then analyzed using quantitative descriptive analysis techniques, namely the results of the validity test of bilingual audio e-comics. The assessment of product validity is carried out by media experts and experts in the material or content of the story. The results of the material expert's assessment obtained a score of 95.64%, which means that e-comics are very valid to use. 100% media expert validation which means the e-comic is very valid to use.
Development of Android-Based E-Comic as a Learning Media for Pancasila Education to Improve Learning Outcomes for Class V	This research aims to fill this gap by developing an Android-based electronic comic that combines storytelling with interactive elements to	The media and material alliance resulted in an average score of 94.37%, which placed it in the "very feasible" category. The validation results obtained were that 97.75% of teachers and

²⁴ Umi Nahdhiah et al., "Anti-Bullying Education Media Innovation through Local Culture-Based Bilingual Audio E-Comic for Elementary School Students," *Jurnal Ilmiah Sekolah Dasar* 8, no. 4 (2024), <https://doi.org/https://doi.org/10.23887/jisd.v8i4.54698>.

Elementary Schools.	improve students' understanding of Indonesian history.	students were in the "very feasible" category in terms of product suitability. The results showed that the average score of grade V students increased after the use of learning media. Thus, the results of research on the subject of Pancasila Education, which carries the material "Getting to Know the History of the Unitary State of the Republic of Indonesia (NKRI)," can be improved through the use of e-comics based on Android devices.
Charisa et al., 2025. ²⁵		
The Effectiveness of E-Comic as Learning Materials for Students' Tolerance Attitude Improvement. Triyanto, 2025. ²⁶	This research aims to develop e-comics as teaching materials to increase student tolerance.	Results: E-comics were categorized very well based on assessments by material and media experts, with scores of 84.27% and 94.79%, respectively. The integration of e-comics into the learning process resulted in a significant increase in the average score of the experimental class, rising from 88.40 to 91.46. This improvement was further reinforced by the t-test results, which confirmed significant differences between pre-test and post-test scores in the

²⁵ Elsa N. Charisa and Moh Fathurrahman, "Development of Android-Based E-Comic as a Learning Media for Pancasila Education to Improve Learning Outcomes for Class V Elementary Schools," *Sekolah Dasar: Kajian Teori Dan Praktik Pendidikan* 34, no. 01 (2025): 81–96, <https://doi.org/https://doi.org/10.17977/um009v34i12025p81-96>.

²⁶ Triyanto, "The Effectiveness of E-Comic as Learning Materials for Students' Tolerance Attitude Improvement," *An-Najah University Journal for Research – B*, 2025.

		experimental group, as well as between the post-test scores of the experimental and control groups. In contrast, the control group showed no significant change between pre-test and post-test scores. Conclusion: Electronic comics have been shown to increase students' tolerance attitudes.
The development of multicultural education comics to embed tolerance character for 4th grade of elementary school. Anggito et al., 2022. ²⁷	This research aims to produce a comic book that can be used to instill the character of tolerance. to grade 4 elementary school students.	The initial field trial involved three students and one classroom teacher. The main field trial involved twelve students and one classroom teacher. The final validation by the subject matter expert received an average score of 4.53, the linguist received an average score of 4.50, and the media expert received an average score of 4.25. The results of the initial field trial got an average score of 4.50 for teachers and an average score of 3.46 for students. The results of the main field trial got an average score of 4.75 for teachers and an average score of 4.74 for students. So, educational comics can be used well to instill the character of

²⁷ Albi Anggito and E. Kus Eddy Sartono, "The Development of Multicultural Education Comics to Embed Tolerance Character for 4 Th Grade of Elementary School," *Jurnal Prima Edukasia* 10, no. 1 (2022).

		tolerance in elementary schools.
A Needs Analysis for the Development of E-Comic Media Based on the Local Wisdom of Sidoarjo's Traditional Foods for Elementary School Students. Prihantini et al., 2025. ²⁸	This study aims to analyze the need for the development of e-comic learning media based on local wisdom of traditional Sidoarjo culinary for elementary school students.	This study recommends the creation of e-comic media that not only increases learning motivation but also fosters appreciation for local culture.
Media Komik Digital Berbasis Kontekstual Muatan PPKn Materi Pengamalan Sila Pancasila untuk Siswa Kelas III Sekolah Dasar. Dewi et al., 2024. ²⁹	This study aims to analyze the effectiveness of contextual based digital comic media on PPKN content on the practice of Pancasila precepts in grade III elementary school.	From the results of the effectiveness test carried out, it can be concluded that the Contextual Based Digital Comic Media PPKn Content of the Pancasila Precept Practice Material is effectively applied to the material for the practice of Pancasila precepts with PPKn content in grade III students in elementary school. The implication of this research is that this comic media can be applied to ongoing learning to improve students' learning competence.

As a result of the systematic review of the review above, it can be concluded that research on the implementation of the use of e-comic media has been carried out in various regions in Indonesia. In general, these studies show positive results related to the impact of e-comic media in learning to improve the learning outcomes of elementary school students. Based on several

²⁸ Mudhachiroh Henik Prihantini, Nurul Istiq, and Wahyu Sukartiningsih, "A Needs Analysis for the Development of E-Comic Media Based on the Local Wisdom of Sidoarjo's Traditional Foods for Elementary School Students," *JURNAL PENDIDIKAN GURU SEKOLAH DASAR* 12, no. 1 (2025), <https://doi.org/10.30997/jtdik.v12i1.18938>.

²⁹ Desak Gede Manik Lerianti Dewi and I. Gusti Agung Ayu Wulandari, "Media Komik Digital Berbasis Kontekstual Muatan PPKn Materi Pengamalan Sila Pancasila Untuk Siswa Kelas III Sekolah Dasar," *Jurnal Media Dan Teknologi Pendidikan* 4, no. 3 (2024), <https://doi.org/10.23887/jmt.v4i3.78869>.

studies, the majority showed a significant increase in learning outcomes with the use of e-comic media in various subjects in elementary schools. For example, research conducted by Fihhrisi on learning Pancasila Education, and research by Nahdhiah.

Their research states that e-comic media applied in learning can improve learning outcomes. The many positive influences of the use of e-comic media in learning are inseparable from the challenges of its implementation. One of them is the use of digital technology. Without understanding and mastery of technology, e-comic media cannot be created and the results may not be optimal. An overview of the use of e-comic media in learning that can improve student learning outcomes based on the latest research from various academic sources in the last five years.

Various studies summarized show that E-comic media is able to facilitate the learning process in a more effective and efficient way. This can be seen from the findings of several researchers who stated that E-comics can save time in their creation and application, provide significant learning outcomes, and can specifically improve students' character. In addition, the use of technology through E-comic media also supports more mature and targeted learning planning, so that it can maximize students' potential in understanding the material while instilling character values. Thus, the use of E-comic media is an innovative alternative that is relevant to be applied to learning in elementary schools in order to improve the quality of learning outcomes while forming a positive character in students.

Based on the results of systematic review, it is known that 7 journal articles stated that the respondents of the study showed that teachers' mastery of technology which was then developed into a learning medium was able to improve student learning outcomes. The results of the research conducted by Angga and Slyvia by analyzing the validity and feasibility of an E-comic Media made through the use of technology such as Canva can improve student learning outcomes in Pancasila Education subjects.

The results of the systematic review in table 1 also show that there is an increase in student learning outcomes through E-comic Media. The use of E-comic Media can not only improve student learning outcomes, but can also include character values in it, such as discipline, responsibility, and help. The results of the research conducted by Anggito resulted in an increase in tolerance through E-comic Media. In addition, from the results of the analysis, it was found that there are other factors in the development of E-comic Media, namely the use of technology. The use of a computer or laptop is an important part of making E-comic Media. The creation of E-comic Media must be able to use technology profusely, because colorful, creative and innovative media can attract students' attention, so that the learning materials to be achieved can be carried

out properly. Dewi and Prihatini stated that the use of online platforms can also be combined with E-comic Media, so that students' motivation to learn is increasing.³⁰

Discussion

Implementation of Character Education E-comic Media Based on Local Wisdom

The implementation of e-comic media based on local cultural wisdom is carried out in elementary schools by considering the characteristics of students who are still in the stage of cognitive and affective development. In this context, e-comics serve as a tool that not only conveys information, but also builds emotional connections between students and cultural values.³¹ This is important to create a meaningful and relevant learning experience. E-comics not only serve as a means of conveying information, but also as a bridge to build emotional connections between students and cultural values. The visualization of characters, settings, and dialogues that depict people's daily lives makes e-comic content easier for students to understand and accept.³² Thus, students not only gain cognitive knowledge, but also experience the process of internalizing values such as mutual cooperation, responsibility, tolerance, and love for the homeland.³³

In addition, e-comic media designed with a cultural approach also enriches the learning process in elementary schools. Teachers can use it in various subjects such as Pancasila Education, Indonesian Language, Social Studies, and Cultural Arts to strengthen the integration of character values and local cultural identity. Thus, learning not only emphasizes the cognitive aspect, but also encourages the formation of students' character from an early age through creative and fun media.³⁴ Learning with e-comic media based on local wisdom presents interesting stories in digital visual format, but also contains local cultural values that can shape students' characters

³⁰ Mudhachiroh Henik Prihantini et al., "A Needs Analysis for the Development of E-Comic Media Based on the Local Wisdom of Sidoarjo's Traditional Foods for Elementary School Students," *Didaktika Tauhidi: Jurnal Pendidikan Guru Sekolah Dasar* 12, no. 1 (April 2025), <https://doi.org/10.30997/jtdik.v12i1.18938>.

³¹ Luthfia Devi Romadhoni, Triyanto, and Triana Rejekiningsih, "The Effectiveness of E-Comic as Learning Materials for Students' Tolerance Attitude Improvement," *An-Najah University Journal for Research - B (Humanities)* 9999, no. 9999 (October 2025): None-None, <https://doi.org/10.35552/0247.a2662>.

³² Friska Yuli Wijayanti, Budi Handoyo, and Uuriintuya Dembereldorj, "Contextual E-Comics in Geography: A Modern Pedagogical Tool for Volcanic Hazard Mitigation Awareness," *Future Space: Studies in Geo-Education* 1, no. 1 (January 2024), <https://doi.org/10.69877/fssge.v1i1.6>.

³³ Arifin Arifin, "Internalization of Pancasila Values and Nationalism in High Schools Through Citizenship Education," *AL-ISHLAH: Jurnal Pendidikan* 13, no. 3 (December 2021), <https://doi.org/10.35445/alishlah.v13i3.1238>.

³⁴ Nina Permata Sari, Novitawati, and Hendro Yulius Suryo Putro, "Comiccrafft Media Development: Realizing Superior Character in Early Childhood," *Artseduca, Artseduca*, no. 37 (2023).

in a more profound and meaningful way.³⁵ In order for the implementation of the use of this media to be effective, the right strategy is needed in its use in the learning process. The strategy:

Active Learning Strategies Based on Discussion and Reflection

Discussion and reflection-based active learning strategies are pedagogical approaches that place students as active subjects in the learning process.³⁶ In this strategy, students not only receive information passively, but are directly involved in studying, analyzing, and reflecting on the material learned through group discussion activities and reflective sessions. Discussions encourage interaction between students to exchange ideas, defend opinions, and develop collective understanding.³⁷ Meanwhile, reflection activities provide space for students to reassess their understanding and attitudes towards the topic they have studied, as well as relate them to personal experiences or life values.

This strategy has been shown to be effective in improving learning outcomes because it helps students build meaning more deeply, develop critical thinking and communication skills, and strengthen their emotional and cognitive involvement in the learning process.³⁸ In the context of using ecomic media for character education, this strategy is very relevant because stories and characters in e-comics can be a spark for discussion and reflection on the character values and local culture conveyed.³⁹

In order to deepen students' understanding of character values in e-comics, the learning strategies used are small group discussions and reflective activities.⁴⁰ After reading the e-comic, students are invited to discuss the content of the story, the values shown, and how they can apply those values in real life. These activities not only train critical thinking and communication skills, but also encourage students to reflect on their own behaviour in the context of local cultural values. Teachers can ask provocative questions such as: "What would you do if you were in the position of the main character?" or "How can we show concern for our friends in the school

³⁵ Tutuk Ningsih et al., "Shaping Students' Character through Edutainment Strategies," *Journal of Educational and Social Research* 11, no. 6 (November 2021), <https://doi.org/10.36941/jesr-2021-0138>.

³⁶ Peter Doolittle, Krista Wojdak, and Amanda Walters, "Defining Active Learning: A Restricted Systemic Review," *Teaching and Learning Inquiry* 11 (September 2023), <https://doi.org/10.20343/teachlearninqu.11.25>.

³⁷ Majid Zamiri and Ali Esmacili, "Strategies, Methods, and Supports for Developing Skills within Learning Communities: A Systematic Review of the Literature," *Administrative Sciences* 14, no. 9 (September 2024), <https://doi.org/10.3390/admsci14090231>.

³⁸ Kevin A. Nguyen et al., "Instructor Strategies to Aid Implementation of Active Learning: A Systematic Literature Review," *International Journal of STEM Education* 8, no. 1 (December 2021), <https://doi.org/10.1186/s40594-021-00270-7>.

³⁹ Nontje Deisy Wewengkang et al., "Development of E-Comic Teaching Materials with a Local Wisdom Theme to Enhance High School Student's Historical Awareness," *AL-ISHLAH: Jurnal Pendidikan* 16, no. 4 (October 2024), <https://doi.org/10.35445/alishlah.v16i4.5974>.

⁴⁰ Brian Priyangga, Sarwi Sarwi, and Arif Widiyatmoko, "Implementation of E-Comics to Grow Environmental Literacy Using Outdoor Learning Methods in the New Normal Time," *Eduvest - Journal of Universal Studies* 2, no. 9 (September 2022), <https://doi.org/10.59188/eduvest.v2i9.584>.

environment?" This strategy is effective in developing moral awareness and building a positive attitude gradually.

E-comic media based on local wisdom can be designed not only as a means of visual literacy, but also as an educational instrument to internalize noble character values that come from culture. Through stories that depict the daily lives of local people, various main characters can be grown contextually and relevantly. Through the delivery of stories that are full of moral and cultural meaning in an interesting way and touches the emotional side of students, e-comics based on local culture not only strengthen students' cognitive understanding of character values, but also encourage a deeper and meaningful internalization process.⁴¹ The characters developed are not abstract, but are alive and real through characters and storylines that are close to the lives of students, so that character formation occurs naturally in a familiar and relevant context.

CONCLUSION

Based on the results of systematic review research, local culture-based E-comic media has an influence on improving the learning outcomes of Pancasila Education for elementary/middle school students. Not only illustrations of interesting pictures and stories, teachers must also be able to integrate learning objectives with the content of the E-comic media created, so that learning materials can be conveyed to students. E-comic media facilitates the learning process through the presentation of interesting, contextual, and easy-to-understand material, which is in harmony with the cognitive development stages of elementary school students. Various studies show that the use of technology in the development of E-comics, such as the use of the Canva and Cartoon Story Maker platforms, has succeeded in helping students understand teaching materials more effectively, thus having a direct impact on improving students' academic achievement. In addition to the cognitive aspect, the use of E-comic media also significantly supports the strengthening of students' character. Character values such as responsibility, discipline, honesty, confidence, and tolerance can be internalized by students through the characters, storylines, and moral messages contained in E-comics, especially when presented in the context of local culture that is close to their lives. The implementation of this media is also able to increase the motivation, enthusiasm, and active participation of students in learning, which ultimately forms positive behavior and social attitudes in accordance with the goals of national education.

Research related to E-Comic media still has a number of limitations, including the limited scope of research with a small number of samples that make it difficult to generalize, a greater focus on cognitive and character aspects while other skills such as critical thinking, creativity, and

⁴¹ Yenni Hasnah et al., "A Probe into Local Cultural Values in Locally Produced EFL Textbooks in Indonesia," *Humanities, Arts and Social Sciences Studies*, November 8, 2024, <https://doi.org/10.69598/hasss.24.3.268564>.

collaboration are rarely studied, the use of simple platforms that limit design and interactivity variation, and the limitations of teachers' competence in mastering technology. Therefore, further research is recommended to expand the study at different educational levels, integrate E-Comic with interactive technologies such as Augmented Reality (AR) or Virtual Reality (VR), develop local culture-based content to strengthen character while preserving local wisdom, and conduct trials on a larger scale by involving teachers as co-creators so that the results are more applicable in learning practices in schools.

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