

Canva-Based e-Comic Development on Pancasila Education Subjects for Grade IV Elementary School

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Abstract

Along with the development of the times, the curriculum in Indonesia continues to undergo changes to adapt to global needs. This research aims to develop a Canva-based e-comic media design for the Pancasila Education subject for grade IV elementary school. Testing the validity, practicality, and effectiveness of Canva-based e-comic media in the Pancasila Education subject for grade IV of SD Negeri 49 Lubuklinggau. This form of investigation is categorized as Research and Development utilizing the ADDIE framework for development. The participants involved in this examination were fourth graders from SD Negeri 49 Lubuklinggau. Techniques for gathering data involved the use of questionnaires and assessments. According to the findings from the validity evaluation of the Canva-based e-comic media employing Aiken's V, the score given by the language validator was 0,94 the score from the media validator was 0,88 and the score from the material validator was 0,94. The evaluation of the practicality assessments conducted by both teachers and students indicated that the e-comic media designed through Canva for the Pancasila Education course achieved a high practicality rating, receiving an average score of 92% Furthermore, the effectiveness evaluation resulted in an N-Gain score averaging 0,7 which falls within the high category. From the findings of this study, it can be determined that the Canva-based e-comic media for the Pancasila Education course for fourth-grade elementary students is demonstrated to be valid, practical, and effective. Thus, it is deemed appropriate for implementation in the Pancasila Education subject for fourth grade at SD Negeri 49 Lubuklinggau.

Keywords

Canva-Based E-Comic Development, Elementary School, Pancasila Education Subjects



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INTRODUCTION

Along with the development of the times, the curriculum in Indonesia continues to undergo changes to adapt to global needs. In 2021, the independent curriculum began to be implemented gradually in Indonesia with a focus on encouraging students to think critically, creatively, and emphasize student-centered learning. (Megawati & Sofiroh, 2025) states that the independent curriculum gives teachers the freedom to design digital technology-assisted learning, which encourages a more active, collaborative, and contextual transformation of 21st

century learning. (Kusuma, 2024) argues that with the resources and features provided by the Merdeka Teaching Platform, teachers now have wider access to learning and seek inspiration for innovative and interactive learning. Other opinions of (Reni et al., 2025) stated that teachers play a role in ensuring that technology can be used to enrich student learning, in line with the spirit of the curriculum that gives freedom in learning, by integrating technology, teachers can provide a more dynamic and student-centered learning experience, this is the core of the Independent Curriculum.

This makes it easier for teachers to design engaging lessons and encourages teachers to continue to innovate and adapt to students' learning needs and interests. Learning media functions as a communication tool that helps deliver material so that it is easier for students to understand. (Satria & Ekok, 2020) Learning media is defined as all instruments or means used to distribute instructional messages. The use of this media aims to stimulate students' attention, interests, mindsets, and emotions during learning activities, in order to realize the targeted learning outcomes. While (Dahlan et al., 2024) stated that learning media is one of the learning components that can encourage students' interest in learning. Other opinions of (Daniyati et al., 2023) The essential learning media are all instruments used to distribute educational information through various channels to stimulate students' cognitive and affective aspects, such as thoughts, attention, feelings, and learning motivation. The use of these tools is able to create an effective learning atmosphere, facilitate the internalization of new knowledge, and optimize the achievement of preset instructional goals.

The use of technology-based media has proven to be very effective because as said by (Said, 2023) that technology integration makes it easier to access various digital resources, including electronic books (e-books), learning videos, and other interactive educational materials. It is also added that technology opens up opportunities for students to interact directly with learning content through interactive instruments such as educational games, responsive videos, and online platforms. Through this digital ecosystem, learners can actively participate in the learning process, which in turn facilitates a deeper understanding of concepts. (Syata et al., 2024) It also states that digital media is very helpful for teachers and students in the learning process, because digital media makes learning easier, materials easier to understand, the learning process more efficient, and learning goals are easy to achieve. In line with opinion (Jumraeni et al., 2025) There is a need for innovation in the development of learning media that can increase students' motivation and learning activities and make them active during the learning process. Innovation in the media must include images, videos, text, sound, and media animations, which are usually called multimedia-based learning.

Based on the results of observations and interviews conducted at SD Negeri 49 Lubuklinggau, it is known that teachers still rely on conventional learning media in the form of pictures and textbooks and have not used digital media in the learning process due to limited time to develop them. In addition, the level of interest and enthusiasm of students is relatively high in the use of digital visual-based learning media. This condition affects the low level of concentration and understanding of students during learning. This is evidenced by the results

of the Pancasila Education test which shows that as many as 72% of students have not met the Learning Goal Achievement Criteria (KKTP) that have been set.

One alternative that can be applied is the use of digital comics (e-comics). Digital comics can present material in an engaging and communicative way, helping students understand the concept of learning. Previous research from (Wiraguna et al., 2025) It shows that comics can be used as an effective learning medium because they can make it easier for students to understand the content of the lesson, comics can also be used as a communication tool to convey information in an interesting and communicative way. Comic learning media can also increase students' interest and learning outcomes, as evidenced by research conducted by (Fitri et al., 2023) received a very positive response, that digital comics facilitate understanding of concepts, increase interest in learning, and support the learning process in elementary schools. E-comic media has also been proven to have a positive impact from previous research (Wijayanti et al., 2025) This research received a positive response from students. They feel more interested, motivated, and easy to understand the material taught, and the learning process becomes more active and communicative.

This e-comic research was developed using the Canva application. (Yulistyanti et al., 2026) stated Canva also provides features and amplets that are complete enough to allow users, including beginners, to create designs in a practical and attractive way without the need for professional design skills. According to (Harahap et al., 2022) stating that Canva is a digital design platform that provides a variety of templates such as posters, graphics, brochures, presentations, logos, videos, and book covers. In addition to being integrated with social media, this application can be optimized by educators to compile interesting learning media by utilizing various ready-to-use designs that are available. Other opinions of (Ismayani et al., 2024) Canva's presence as a technological innovation makes it easy for educators to produce digital teaching materials that are engaging and appropriate to the characteristics of today's students. Without having to be proficient in graphic design, teachers can take advantage of Canva's handy features to turn material concepts into various visual formats, such as e-modules, infographics, posters, and interactive presentations. The novelty of this research lies in a short animated video of about one minute in each part of the e-comic story to strengthen the understanding of the material concept. Through this approach, students not only study text-based materials and static images, but also interact with audiovisual media that are much more interesting and interactive. Based on this urgency, this research is oriented to develop a product in the form of Canva-based e-comics in the subject of Pancasila Education for grade IV students of SD Negeri 49 Lubuklinggau.

METHODS

The methods applied in this study are research and development (*Research and Development*) by adopting ADDIE's development model. According to (Scott, 2025) R&D research is a structured method applied to create effective solutions through a proven process. The research steps to develop the ADDIE model include: Analysis, Design,

Development, Implementation, and Evaluation. The ADDIE development model was chosen because it is one of the structured learning design models, so that every step in the learning media development process is designed in detail and prepared well.

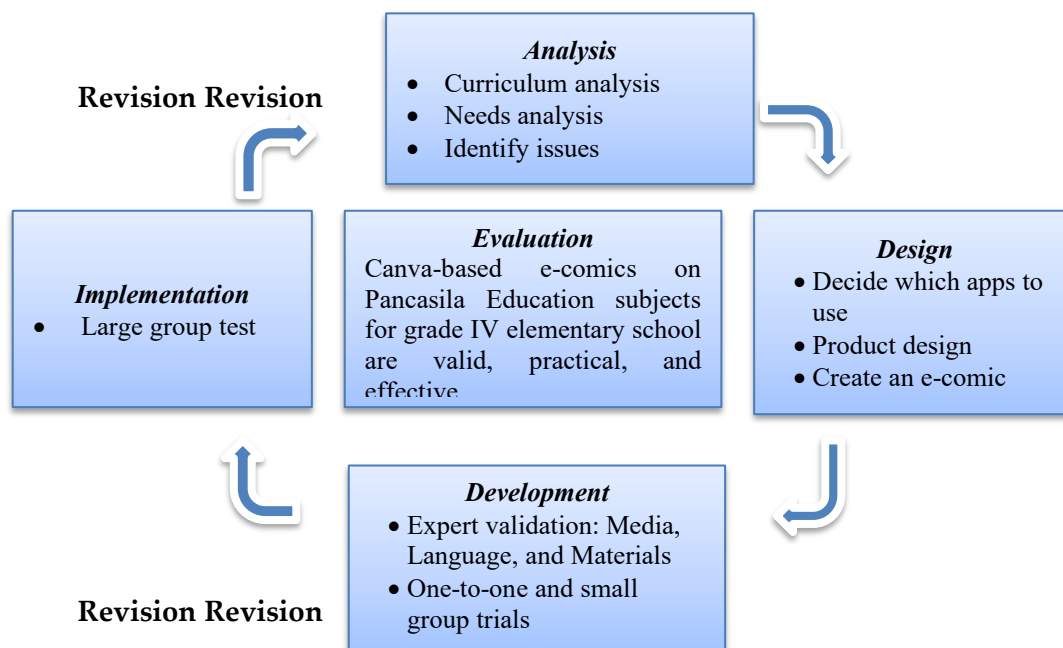


Figure 1. Stages of the ADDIE Model Source: (Branch, 2009)

The first stage is analysis, which aims to analyze the curriculum, needs, identify problems, and analyze the material that will be used as an e-comic. The analysis stage was carried out through data collection through interview and observation techniques with teachers and grade IV students at SD Negeri 49 Lubuklinggau. The next step is the design stage, which is to construct learning media based on the findings in the analysis phase. In this phase, the researcher designed a product in the form of a Canva-based e-comic learning media specifically for the Pancasila Education subject grade IV SD Negeri 49 Lubuklinggau. The activities carried out at this stage include several important things, such as determining characters, choosing character names, creating stories, arranging plots, arranging image layouts, choosing appropriate colors for the content of the comic, and determining the material used as a story in the comics. In addition, at this stage, the researcher also made questionnaire instruments for the validity and practicality of the media as well as test questions for pretest and posttest.

The third stage is development, which is the stage where Canva-based e-comics learning media are developed according to a pre-prepared plan. This development process includes the design and creation of e-comics using the Canva application. Next, the next stage is the validation process carried out by three experts, namely: material, media, and language experts. This validation intends to evaluate the feasibility of e-comic media from various points of view to ensure its effectiveness and quality in the learning process. The validation results are used as a reference for revision so that the media can be used at the

trial stage. The validity of e-comic media is analyzed using Aiken's V formula (Azwar, 2015) as follows:

$$v = \frac{s - r - lo}{\frac{\sum s}{n(c - 1)}}$$

The fourth stage is the implementation stage, the e-comics developed that have been declared valid by experts and practical by teachers and students are then tested in real life in the large group scale learning process. This trial was carried out to test the effectiveness of Canva-based e-comic media in supporting classroom learning activities. The media effectiveness test was carried out on grade IV students of SD Negeri 49 Lubuklinggau through direct learning activities. Effectiveness testing is carried out by providing *pre-test* and *post-test* questions before and after the learning process using e-comics.

The fifth stage is evaluation, which is the stage that is carried out before the next step in each stage. The evaluation process was carried out by making product improvements based on suggestions and inputs collected from the three validators, teachers, and students in the practicality trial phase. This evaluation stage aims to ensure that the e-comic learning media developed has met operational feasibility standards and is ready to be integrated into learning activities. The evaluation includes a review of aspects of content, design, materials, language, and the effectiveness of e-comics in supporting students' understanding. The evaluation was carried out by analyzing the *results of the students' pre-test* and *post-test*. The practicality and effectiveness test of Canva-based e-comic media was analyzed using the following practicality level formula and N-Gain formula:

$$\text{Tingkat kepraktisan} = \frac{\text{jumlah skor yang diperoleh}}{\text{jumlah skor total}} \times 100$$

Sources: (Muslimah et al., 2021)

$$\text{Gain } (g) = \frac{S_{\text{posttest}} - S_{\text{pretest}}}{S_{\text{maksimal}} - S_{\text{pretest}}}$$

Sources: (Wahab et al., 2021)

The data analysis is presented in the form of a table, Table 1 contains the category of media validity assessment, Table 2 shows the category of media practicality, and Table 3 contains the category of learning media effectiveness.

Table 1. Kriteria Kevalidan

Correlation Coefficient	Interpretation of Validity
> 0.80	Height
0.60 ≤ v < 0.80	Quite High
0.40 ≤ v < 0.60	Enough
0 ≤ v < 0.40	Low

Sources: (Azwar, 2015)

Table 2. Practicality Criteria

Average Score Interval	Klasifikasi
81% - 100%	Very Practical
61% - 80%	Practical
41% - 60%	Quite Practical
21 % - 40%	Less Practical
0% - 20%	Very Impractical

Sources: (Muslimah et al., 2021)

Table 3. Effectiveness Criteria

Magnitude of N-gain (g)	Category
$g \geq 0.7$	Height
$0.3 \leq g < 0.7$	Medium
$0 < g < 0.3$	Low
$g \leq 0$	Fail

Sources: (Wahab et al., 2021)

This research was carried out over a period of four months, starting from February to May 2026. The subjects involved in this study were 25 students in grade IV of SD Negeri 49 Lubuklinggau. SD Negeri 49 Lubklinggau is located on Jl. Jend. Sudirman RT. 01 No. 03 Kali Serayu Village, North Lubuklinggau II. Grade IV teachers also contribute to needs analysis, validation of learning media, and assessing the effectiveness of learning media. The use of the ADDIE model in the development of learning media is expected to increase student participation, concept understanding, learning interests, and learning outcomes in Pancasila Education.

FINDINGS AND DISCUSSION

Findings

The initial stage in the ADDIE development model is analysis, at this stage the thing is to conduct observations at SD Negeri 49 Lubuklinggau as well as conduct interviews with homeroom teachers in grade IV to get information about the data needed by researchers. From the results of observations and interviews, it was obtained that the curriculum used in the elementary school was an independent curriculum, information was also obtained during the learning process in the classroom that teachers only used textbooks as teaching materials, then when using media, teachers only used photos or pictures and verbal explanations, so that students felt bored during the learning activity process. The results of observations also show that most students have not reached the KKTP in the Pancasila Education subject. It can be seen from the results of the student ability test when given Pancasila Education questions, there are 72% of students who do not complete and 28% of students who complete with KKTP 70. This low learning outcome shows that students still have difficulty in understanding the material, so learning media that is more interesting,

interactive, innovative and in accordance with the characteristics of elementary school students is needed.

These results confirm the importance of learning instruments that can create an interactive and fun learning environment. The selection of Canva-based e-comics is based on its advantages of combining visual and audiovisual elements to make it easier to visualize abstract material. Through this ease of understanding, the effectiveness of this media is expected to contribute directly to improving student learning outcomes. This is in line with research (Sugiantara et al., 2024) Interactive digital comics made with audio visuals can pique children's interest and increase their motivation to learn. Analysis results (Khotimah & Hidayat, 2022) shows that interactive e-comics can increase student involvement in learning, make the learning process more interesting, increase student productivity, make learning easy to understand, make it easier for teachers to direct the student learning process, make it easier for parents to guide their children, and improve student learning outcomes.

The next stage, namely the *design* of Canva-based e-comic media in the Pancasila Education learning subject for grade IV students at SD Negeri 49 Lubuklinggau was carried out based on the results of the previous needs analysis. The design process begins with determining the learning objectives, teaching materials or materials, applications used, designing products, and creating e-comics. This media was chosen because it suits the characteristics of elementary school students who like visual, interesting, and interactive learning. Next, the researcher designed a Canva-based e-comic media by, framing scenes, choosing characters, drafting story concepts, determining the necessary elements, composing a narrative, and adding conversation bubbles. During the design stage, the researchers also developed learning aids and research instruments, such as learning modules, quizzes, and pretest and posttest questions. During the design phase, the researchers also developed learning aids and research instruments, such as learning modules, quizzes, and test questions.



Figure 1. Illustration of E-comic Cover **Figure 2.** Illustration of E-comic Characters

The results of this design stage are the main reference for the next stage of media development to ensure that the products produced are not only appropriate in terms of content and learning goals, but also innovative, interesting, easy to use, fun, and in harmony

with the needs of teachers and students in Pancasila education at SD Negeri 49 Lubuklinggau. As stated by (Feiyue, 2022) Fun learning activities can be created if teachers use various models or methods and utilize learning media that are in accordance with the material, so that students become interested in learning it. Other opinions of (Peng et al., 2021) Various multimedia learning studies show that aesthetically pleasing teaching material designs, such as visual features, layouts, colors, and sounds, can lead to positive perception and motivation in learners.

The next stage is the *development of Canva-based e-comic learning media* which is carried out according to the design that has been prepared previously. This development process includes the design and manufacture of e-comics to suit the needs of the educational press. After the Canva-based e-comics are developed, the next step is a validation process carried out by three experts, namely: linguists, media and materials. The purpose of this validation is to assess the feasibility of e-comic media from various aspects to ensure its effectiveness and quality in the learning process. After the validation stage is completed, it is followed by a practicality test through *a one-to-one* (individual) and *small group* test to find out the practicality of the Canva-based e-comic media developed.

The validation results show that Canva-based e-comic media is considered suitable for use with several suggestions for improvement, such as correcting words, and typing mistakes, adding the author's name to the cover, adding class symbols or logos, fixing conversation bubbles, adding clickable video links, and adding quizzes at the end of each e-comic story. Based on the suggestions of three validators, the researchers revised the media before using it in the trial stage. Once the revision process is complete based on the validators' suggestions, the Canva-based e-comics media are ready for use in the next phase of testing. During this development phase, the researcher also prepared learning aids such as modules, quizzes, and media usage guides to ensure that learning activities ran as intended. Below is a table of the results of the assessment of the three validators, which are as follows:

Table 4. Media Validation Results

Yes	Validation	Nilai Aiken's V	Kriteria Koefisiensi Aiken's V
	Language	0,94	Highly Valid
	Media	0,88	Highly Valid
	Material	0,94	Very valid
	Total Average (V)	0,92	Highly Valid

Based on the results of the Aiken's V coefficient assessment, the e-comic media developed obtained a score from the language validator of 0.94, the media validator of 0.88, and the material validator of 0.94. Referring to the interpretation criteria of Aiken's V scores, the three score achievements are in the range of > 0.80 , which means that this product is included in the classification of high validity or very valid. (Purwasi et al., 2021) Stating the success of learning media in achieving the valid category indicates that the product has met

the eligibility requirements to be implemented at the trial stage, of course after accommodating all the improvement suggestions given.

The next step is to conduct a trial at SD Negeri 49 Lubuklinggau with teachers and students of grade IV. This test is divided into two stages: a *one-to-one* trial involving three students, and a *small group* trial attended by 6 students with varying skill levels. This process aims to measure the practicality of the Canva-based e-comics media that are being developed. The practicality test was conducted after teachers and students used Canva-based e-comic media. Furthermore, teachers and students are asked to fill out a questionnaire to assess the ease of use, media appearance, and content of the learning media. The results of the media practicality test can be seen in table 5.

Table 5. Media Practicality Results

Yes	Appraiser	Total Score	Scores Obtained	Percentage	Category
1	Grade IV teacher of SDN 49 Lubuklinggau	70	65	92,8%	Very Practical
2	3 students in grade IV of SDN 49 Lubuklinggau	42	38	90,4%	Very Practical
3	6 students in grade IV of SDN 49 Lubuklinggau	84	78	92,8%	Very Practical
Average				92%	Very Practical

Referring to the data presented in Table 5, it can be concluded that Canva-based e-comic media for Pancasila Education grade IV SD Negeri 49 Lubuklinggau is very feasible to be applied in the learning process. This is evidenced by the achievement of a percentage of practicality of 92%, which places this product in the "Very Practical" criterion. (Satria et al., 2021) Stating that PMLEARNING media with an average score of 90% has been included in the category of very practical, meaning that the learning media developed is practical to use.

The fourth stage is implementation, namely testing the revised e-comic media for teachers and fourth grade students of SD Negeri 49 Lubuklinggau. In this phase, the researcher conducts a large group test in writing involving all students in the class. This effectiveness test was carried out by providing pretest questions before the use of Canva-based e-comic media in Pancasila Education subjects, followed by a posttest afterwards. The results of this media effectiveness test can be observed in Table 6.

Table 6. Media Effectiveness Results

Aspects	Skor N-gain	Category
<i>pretest - posttest</i>	0,7	Height

Based on table 6 above, it is known that Canva-based e-comic media in the Pancasila Education subject is said to be effective as shown by the calculation in the effectiveness table above, which shows an N-gain value of 0.7 which is included in the "high" category.

The ADDIE model ends with an evaluation stage to assess the success and give weight to the product developed. This evaluation process is divided into two, namely the evaluation of the validation stage and the evaluation of the implementation stage. In the validation stage (development phase), the product is evaluated based on input from language, media, and material validators. Meanwhile, the evaluation of the implementation stage is based on feedback from teachers and students as respondents to ensure that the media meets the standards of instructional feasibility. The research findings showed that this Canva-based e-comic obtained an average practicality score of 92% with the title of very practical based on the completed response questionnaire. Meanwhile, from the aspect of effectiveness, the results of the N-Gain analysis of *the pretest and posttest scores of grade IV elementary school students* produced a score of 0.7. This achievement confirms a significant increase in learning outcomes in the subject of Pancasila Education, as well as confirming that this media is effective in optimizing students' understanding of the material.

Based on the overall evaluation results, it can be concluded that Canva-based e-comic media in the Pancasila Education subject has met all eligibility criteria, namely valid, practical, and effective. Consequently, this product is very suitable for integration in the fourth grade learning activities of SD Negeri 49 Lubuklinggau. In addition to optimizing the quality of the learning process in the classroom, the implementation of e-comics has also been proven to contribute positively to boosting students' motivation to learn. This is in line with the opinion (Syahmi et al., 2022) which states that digital comic media has been proven to be able to increase the ease of learning, and can motivate students to understand the material being taught. In addition, (Pratama et al., 2023) It also explains that digital comics are able to create interest and motivation to learn, and can make readers remember the material and learning formulas for longer. Other opinions of (Ramadana et al., 2025) Comics are an engaging learning medium that helps students understand the material, increases their interest in learning, and motivates them to learn more actively and become an alternative way.

Discussion

This Research and Development *development research* produced a Canva-based e-comic learning media product for the Pancasila Education subject for grade IV elementary school. The development procedure applied refers to the ADDIE model, which includes five systematic stages: *analysis, design, development, implementation, and evaluation*. The Canva platform was chosen as a development tool because of its flexibility in helping educators

create media or teaching materials that are interactive, engaging, innovative, and fun for students.

In the analysis stage, observations were made at SD Negeri 49 Lubuklinggau as well as conducting interviews with the homeroom teachers of grade IV to obtain information about the data needed by the researcher. The design stage is carried out based on the results of the previous needs analysis, the process begins with determining the learning objectives, teaching materials or materials, applications used, designing products, and making e-comics. The next stage is the development of the design and manufacture of e-comics to suit the needs of the education sector. After the Canva-based e-comics are developed, the Canva-based e-comics media go through a validation process by three validators consisting of material experts, media experts, and linguists. The step was followed by a practical test through one-to-one (individual) and small group trials. Entering the fourth stage, namely implementation, the revised product was then widely tested to teachers and all fourth grade students of SD Negeri 49 Lubuklinggau through a written test on a large group scale. This series of procedures is closed with an evaluation stage that aims to ensure that the developed media meets the eligibility standards and is ready to be integrated into learning in schools.

Canva-based e-comic media is validated by three experts, namely: linguists, media, and materials. The purpose of linguists is to ensure that the use of language in e-comics is clear and easy to understand, and in accordance with the level of understanding of students. Media experts aim to assess the suitability of the presentation of the material with the design of e-comics so that it is more effective in its use in the learning process later. Meanwhile, the subject matter expert aims to assess whether the content of the e-comic is in accordance with the Learning Outcomes, Indicators, and learning objectives. The measurement of the validation process was carried out through the collection of data from questionnaire instruments filled in by each expert. The accumulation of average ratings shows that the e-comic media is at the "Very Valid" criterion, which confirms its feasibility to be integrated into learning activities. Following up on comments and constructive input from experts, the researcher made improvements to improve the functional quality of the product. The results of the Canva-based e-comic learning media revision come with a more effective and attractive visual presentation to support the optimization of learning in the classroom.

Furthermore, after being revised, tests were carried out on a one-to-one scale (individual) and small group to measure the practicality of Canva-based e-comic media directly from the perspective of teachers and students. This practical aspect was evaluated using a questionnaire of teacher and student responses. Referring to the data in Table 5, the practicality test resulted in an average score of 92% which is included in the "Very Practical" category. The researcher then made improvements to the final product based on suggestions and comments from respondents, before finally moving on to the large group trial stage. The implementation of this large-scale trial is oriented to test the effectiveness of Canva-based e-comic media by involving all fourth grade students of SD Negeri 49 Lubuklinggau. The effectiveness parameters were measured through a comparison of evaluation results in the

form of *pretest questions* before media intervention and *posttest* after the use of e-comics. Through the trial, the accumulated average pretest and *posttest* scores were obtained which were calculated using the N-Gain formula of 0.7 with the category "High", as stated in Table 6.

CONCLUSION

The findings of this study confirm that the product developed is at a very feasible criterion based on the accumulation of assessments from material, media, and language validators. In addition, the level of practicality of this media was verified to be very high referring to the positive feedback given by teachers and students throughout the trial stage. The media's real contribution in maximizing learning outcomes is also strengthened by the acquisition of a significant increase in scores between the results *Pretest* and *posttest*. (Sari et al., 2022) He said that one way to improve the quality of education through technology is to organize digital literacy. The development of information technology is very influential in the world of education, so it can be used as a learning medium. One example of learning media is digital comics that can improve students' literacy skills. The use of Canva-based e-comics can help teachers in the learning process, making the learning process more engaging and interactive and encouraging students to be more active in understanding the learning material. (Ayudianingsih et al., 2026) Say when students read a comic, they not only look at the text, but also pay attention to images that clarify the context. Pictures help them imagine the setting, understand the actions of the characters, and predict the storyline. This process allows students to build reading comprehension gradually. In other words, digital comics provide a bridge between visuals and text, thus facilitating the process of constructing meaning. Thus, the use of Canva-based e-comic media in the Pancasila Education subject for grade IV elementary school using an attractive design can increase students' understanding, learning outcomes, and motivation in the learning process.

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