Jurnal Tematik

Journal Homepage: jurnal.unimed.ac.id/2012/index.php/tematik

Development of Digital Comic Media Based on Local Wisdom with the Theme of Love Indonesia in Elementary School

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ARTICLE INFO

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ABSTRACT

This study aims to develop digital comic media based on local wisdom that is valid and feasible to use in learning Indonesian in elementary schools. The method used is Research and Development (R&D) with the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) development model. The research subjects in this study were fifth grade students of SDN 2 Tambakrigadung. The instruments used include media expert validation sheets and material validation sheets as well as student response questionnaires and student activity questionnaires. The results showed: (1) material expert validation obtained an average score of 3.78 which is classified as very valid and media expert validation obtained an average score of 3.83 which is also classified as very valid. (2) the student response questionnaire obtained an average score of 3.61 with a very good category, while the student activity questionnaire obtained an average score of 3.80 with a very good category. Based on these results, it can be concluded that digital comic media based on local wisdom is valid and feasible to use in learning Indonesian in elementary schools.

Keywords: digital comics, local wisdom, elementary school

1. Introduction

In today's digital era and rapid technological development, the world of education is required to make innovations to improve the quality of learning. Various efforts have been made to support this, one of which is by changing conventional education to technology-based education (Maghfiroh, 2022).

In this process, the role of teachers as facilitators and managers of learning is very important in the successful use of learning technology (Noverita et al., 2023). Teachers are also required to be able to create interesting learning while introducing good and correct culture to students (Susandi et al., 2023).

Therefore, the use of technology in education must be done wisely in order to increase the effectiveness and efficiency of the learning process. The use of attractive and easy-to-use digital media can help students focus more, understand concepts more visually and contextually, and build greater curiosity (Ayu et al., 2025) According to Arsyad (2015), learning media is anything that can be used to channel messages from sender to receiver so that it can stimulate students' thoughts, feelings, attention, and interest in learning.

Education is also the main foundation in shaping a generation that is smart, characterized, and able to face future challenges (Mardika et al., 2025). The main challenge is how to present learning media that is not only technology-based, but also contextual, interesting, and in line with the characteristics of elementary school students.

Unfortunately, a less supportive learning environment and monotonous presentation of material often cause students to quickly lose focus, lack motivation, and not be actively involved in classroom activities (Khasanah et al., 2025). This condition has an impact on the low interest and involvement of students in the learning process, especially in Indonesian language subjects which are full of cultural values and character education. In fact, the success of learning is determined by the effectiveness of each component, starting from the objectives, teaching materials, methods, tools / media and, evaluation carried out (Noverita et al., 2023). Therefore, innovative learning media is needed that not only utilizes technology, but is also able to present material visually, interestingly, contextually, and relevant to the environment and local culture of students. Moreover, the elementary school age is the right time to instill awareness about regional culture (Khasanah et al., 2024).

One alternative innovative learning media that is in accordance with the characteristics of elementary school students is digital comics based on local wisdom. As an interactive and interesting visual narrative media, digital comics not only provide a fun learning experience, but are also able to convey moral messages in a more contextual way (A'raf & Retnoningsih, 2025). The integration of local wisdom elements in the content of comics also plays a role in instilling cultural values, strengthening national identity, and fostering a sense of love for the country from an early age. Therefore, the development of digital comics based on local wisdom is an appropriate and relevant strategy to increase the effectiveness of Indonesian language education, especially on the theme 'Love Indonesia'.

A number of studies support the effectiveness of this media in learning in elementary schools. For example, research conducted by (Saputri et al., 2023) shows that digital comic media based on local wisdom values of Bangka Belitung for grade IV elementary school students are valid and practical to use. Meanwhile, another study by (Lianasari et al., 2023) which developed Tri Hita Karana comics with the ADDIE model, showed that the media had a very good level of validity, high practicality, and statistically proven effective in improving student learning outcomes. These findings reinforce that local wisdom-based digital comics have great potential as learning media that are contextual, visually appealing, and full of educational values and character building.

However, compared to the research above, this research has a different position, although both are based on local wisdom. The digital comic developed in this study tells a story about Boran Dance, a traditional art from Lamongan, which is used as part of Indonesian language learning with the theme "Love Indonesia". This innovation is not only intended to improve understanding of the material, but also to strengthen regional cultural identity, students' nationalism character, and make learning more contextual and meaningful through the introduction of local culture close to students' lives.

2.   Methods

The research method used is research and development (R&D) with the ADDIE development model. This research is also known as the "research and development" method, which by definition is a research method used to make certain products and test their effectiveness (Sugiyono, 2021). Meanwhile, the ADDIE model is a prominent development framework that can be used in designing instruction and serves as a guide throughout the teaching process. This model consists of five interrelated stages, with each stage interrelated to each other (Bulhayat et al., 2021), namely:

1) Analyze. This activity was carried out in grade 5, SDN 2 Tambakrigadung in the 2024/2025 even semester, to conduct observations and interviews to find out the needs and identify problems that will be the basis for media development.
2) Design. This activity starts designing the structure and content of the learning media to be developed. Starting with the material to be raised, the content of the dialog, the background of the story and the mandate that can be taken by the reader.
3) Development. This activity is the process of making or developing learning media based on the design that has been compiled. After the story structure of each page has been made, then create illustrations or images through AI chatGBT and then develop through canva to add visual elements, dialog bubbles, pages and backgrounds to make the comic more alive. Finally turn the media that has been made into a flipbook through design in the canva application. After completion, the media has to obtain validation from experts.
4) Implementation. This activity was carried out twice. Namely during a small group trial consisting of 10 students and a large group trial consisting of 20 students in the experimental class.
5) Evaluation. This activity was carried out after the trial was completed to determine the results of student responses and student activities during the learning process.

Table 1. Research Instrument

Aspect to be assessed	Instrument	Respondent
Validity	Validity sheet	Material experts and media experts
Practicality	Student response questionnaire and student activity questionnaire	Grade V students and observers

In this study, data were collected through three types of instruments, namely expert validation, student response questionnaire, and student activity questionnaire. Expert validation was conducted by material and media experts to assess the suitability of the content and appearance of digital comics as learning media. The student response questionnaire was conducted by all 20 students which was used to identify the extent to which digital comics attract attention and facilitate student understanding. Meanwhile, the student activity questionnaire was designed to determine the level of student activeness during the learning process. The three instruments complement each other in providing a complete picture of the quality and effectiveness of using digital comic media in learning. The data obtained were analyzed descriptively quantitatively by calculating the average score of each aspect, then categorized based on the eligibility criteria according to (Putri, 2023).

3.   Result and Discussion

Result

This research produces digital comic media based on local wisdom with the theme Love Indonesia on grade V Indonesian language material in elementary schools. The following is an explanation of the data obtained:

1.   Results of digital comic media development

This initial display is the first display that will appear when the digital comic media is opened.
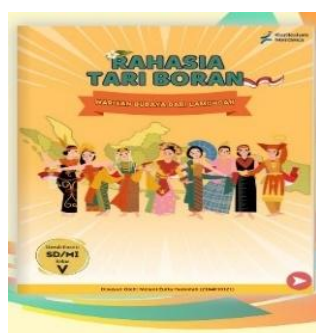

Figure 1. Initial display of digital comic media

This display contains learning outcomes and learning objectives contained in the reading learning material. This presentation aims to provide clear direction in the learning process, as well as facilitate teachers and students so that learning activities take place in a directed, measurable manner, and support the optimal achievement of student competencies.

Figure 2. Display of learning outcomes and learning objectives in digital comic media

This display contains material that will be learned by students in local wisdom-based digital comic media which contains an introduction to Boran dance and a form of Love Indonesia.

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Jurnal Tematik 14 (2015) no.1. Development of Digital Comic Media Based on Local Wisdom with the Theme of Love Indonesia in Elementary School. 2460-7738/© 2025 The Author(s). Published by Universitas Negeri medan. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

Figure 3. Display of digital comic media story material

This display is at the end. Contains a story reflection from digital comic media that students have read. contains a closing sentence in the form of a moral message from the story in the comic. The content of the message invites students to realize the importance of preserving traditions as part of the nation's identity and wealth. The message is conveyed in a narrative manner so that it is easy to understand and imprinted in students' memories.

Figure 4. Story reflection display of digital comic media.

The resulting learning media can be accessed through the following link: https://heyzine.com/flip-book/46684e1a0a.html

Figure 5. Barcode of local wisdom based digital comic media

2.   Results of validation of digital comic media

The validation process of digital comic media is an important stage in the development of learning media. At this stage, the involvement of experts, both from material experts and media experts, is the key to assessing the validity and quality of the media that has been made. This validation aims to identify the strengths and weaknesses of the media, as well as obtain suggestions for improvement in order to perfect the product before it is used in learning. The basis for determining the validity criteria on the validation results using a Likert rating scale with a score range of 1 to 4. The assessment category is based on the results of converting the average score into a qualitative scale as follows:

Table 2. Validity Test Index

Validity	Criteria
0 – 1.49	Not Valid
1.50 – 2.49	Less Valid
2.50 – 3.49	Valid
3.50 – 4.00	Very Valid

Source: Putri (2023)

The validation results from the experts are presented as follows:

1) Material expert validation results

Based on the results of validation conducted by material experts on three aspects of assessment, namely curriculum, material and grammar, digital comic media obtained an average score of 3.78 from a maximum score of 4.00. The results given by 2 material experts put the media in the very valid category. With this value, digital comics are considered suitable for use as learning media because they have met the necessary content eligibility standards.

Table 3. Material Expert Validation Results

Assessment aspect	Expert score		Total average	Category
	1	2		
Curriculum	3.50	4.00	3.75	Very valid
Material	3.71	4.00	3.85	Very valid
Grammer	3.50	4.00	3.75	Very valid
Average			3.78	Very valid

Based on the results of this analysis, the average score of 3.78 obtained from the results of the validation of material experts is included in the "Very Valid" category because it is in the range of 3.50 - 4.00.

2) Media expert validation result

Based on the results of validation conducted by media experts on three aspects of assessment, namely appearance quality, software engineering, and implementation, digital comic media obtained an average score of 3.83 from a maximum score of 4.00. The results of the assessment given by 2 media experts show that the media is in a very valid category. Thus, this digital comic is considered suitable for use as learning media because it has met the eligibility standards from the technical side and appearance.

Table 4. Media Expert Validation Results

Assessment aspect	Skor ahli		Total average	category
	1	2		
Appearance quality	3.75	3.75	3.75	Very valid
Media performance	3.50	4.00	3.75	Very valid
Applicability	4.00	4.00	4.00	Very valid
Average			3.83	Very valid

Based on the results of this analysis, the average score of 3.83 obtained from the validation results of media experts is included in the "Very Valid" category because it is in the range of 3.50 - 4.00.

3. Results of practicality of digital comic media

a. Result of small group trial (trial 1)

The small group trial (stage 1 trial) was conducted to measure the level of practicality of using digital comic media in the learning process. Data were collected through two main instruments, namely student response questionnaires and student activity questionnaires. Student response questionnaires were filled in directly by students after the learning activities were completed, while student activity questionnaires were filled in by observers or peers who observed student involvement during the learning process. The results of both instruments are presented in the following table:

1) Student response questionnaire results

Based on the results of the small group trial (stage 1 trial), an average score of 3.21 out of a maximum score of 4.00 was obtained. The score shows that students' responses to digital comic media are in the good category. This finding indicates that the media has been able to attract students' interest and be used quite effectively in supporting the learning process.

2) Student activity questionnaire results

In the small group trial (first stage), observations were made to assess student activities during learning using digital comic media. This observation aims to determine the extent to which students are actively involved in each stage of learning. Data were collected through two instruments, namely student response questionnaires and student activity questionnaires, which were then analyzed and presented in the following table.

The analysis showed that the digital comic media obtained an average score of 3.50 out of a maximum score of 4.00. This score is included in the excellent category, which indicates that this media is not only well received by students, but also able to create an interesting and effective learning atmosphere.

b.   Large group trial results (trial 2)

The large group trial (second stage) was conducted as a development of the previous trial, involving a larger number of students in order to obtain broader and deeper results. Data collection was carried out using two instruments, namely student response questionnaires and student activity questionnaires. Student response questionnaires were filled in independently after they followed the learning process using digital comic media, while student activity questionnaires were filled in by observers or peers who observed student involvement during the learning process. The data obtained from these two instruments are presented in the following table as a basis for evaluating the practicality of the media.

1)   Student response questionnaire results

Based on the data displayed in the table, the overall average score was 3.61 out of a maximum score of 4.00. This result places students' responses to digital comic media in the excellent category. This finding shows that the media successfully attracts students' interest and is considered effective in supporting the learning process.

2)   Student activity questionnaire results

The results of the large group trial (stage 2) showed that the digital comic media obtained an average score of 3.80 out of a maximum score of 4.00. This score is in the very good category, which reflects that the media is very positively received by students and is able to be used effectively in the learning process. When compared to the results of the small group trial (stage 1), there is an increase in scores, which indicates consistency and reinforcement of the practicality and acceptance of the media by students on a wider scale.

Discussion

This research developed the final product in the form of digital comic media based on local wisdom with the theme Love Indonesia. This media was designed using a combination of the AI ChatGBT site with the canva application, which is a free platform that provides graphic design (Citradevi, 2023). Canva in making comics on various aspects of creativity, including fluency, flexibility, originality, and elaboration (Hayu et al., 2024). Which is very helpful for educators in facilitating the creation of learning media and independently helping the student learning process because it can be accessed via smartphones and leptop and can be accessed anywhere and anytime, which is in accordance with the 12th century learning principles that emphasize flexibility and accessibility.

The level of validity of digital comic media based on local wisdom is obtained through the validation test stage involving experts in their fields. The validation results show that both in terms of material content and media display, this digital comic is declared very feasible to use in learning. The assessment from the material expert resulted in a score of 3.78 which is included in the very valid category, while the media expert gave a score of 3.83 which is also in the very valid category. These achievements show that this media has met the eligibility standards of 2 severe experts. Thus, it can be concluded that this local wisdom-based digital comic is very appropriate to be used as learning media on the theme of Love Indonesia for grade V elementary school students.

The practicality aspect of local wisdom-based digital comic media can be seen through the results of trials conducted in two stages, namely in small groups (trial 1) and large groups (trial 2). This test aims to assess students' responses and their activeness during the learning process using the media. In trial 1, students' responses to the media obtained an average score of 3.21 and were included in the good category. The score of student activity during the learning process reached an average of 3.50, which indicates a very good category. Furthermore, in trial 2, students' responses to the use of media increased with an average score of 3.61, while student learning activities obtained a score of 3.80; both were in the excellent category. These results reflect that digital comics based on local wisdom are practical to use in learning on the theme of Love Indonesia for grade V elementary school students.

Based on the results obtained, it can be concluded that the use of digital comics based on local wisdom is classified as very valid, practical, and able to provide real support in helping students understand the concept of fractions with the same denominator. These results are in line with the findings of (Noverita et al., 2023), which revealed that a significant increase in student learning outcomes after the use of Canva-based comic learning media expansion was proven valid, practical, and effective in his research.

4. Conclusion

This development is one of the educational innovations that is relevant to the learning needs of the 21st century. This media is designed to support the learning process, especially on the theme of Love Indonesia in grade V elementary school. Through attractive visual displays and content that is close to student culture, this digital comic is able to increase interest in learning and encourage active student involvement in the learning process.

From the overall results of the assessment by the experts, it can be concluded that this digital comic media based on local wisdom with the theme Love Indonesia is a valid and practical media to be used as an alternative to fun and meaningful learning. This finding also strengthens the results of previous research which states that a significant increase in student learning outcomes after the use of Canva-based comic learning media for expansion is proven to be valid, practical, and effective in its research.

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