



# Digital Comics Based on Local Wisdom: An Innovative Approach to Enhancing Elementary School Students' Reading Comprehension

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## ABSTRAK

Rendahnya pemahaman dan literasi membaca siswa disebabkan oleh kurang optimalnya penggunaan media pembelajaran yang inovatif. Penelitian ini bertujuan menganalisis kebutuhan pengembangan komik digital berbasis kearifan lokal sebagai media pembelajaran yang dapat meningkatkan pemahaman dan minat membaca siswa sekolah dasar. Penelitian ini merupakan bagian dari tahap analisis kebutuhan dalam penelitian dan pengembangan (Research and Development) dengan menggunakan model Design Thinking. Pengumpulan data dilakukan melalui wawancara, observasi dan kuesioner yang disebarkan kepada guru dan siswa, kemudian dianalisis menggunakan analisis tematik. Hasil penelitian menunjukkan siswa sangat tertarik menggunakan komik digital sebagai media pembelajaran. Sebagian besar siswa mengungkapkan bahwa komik digital membuat belajar menjadi lebih menyenangkan dan menarik dibandingkan dengan buku teks biasa. Selain itu, siswa mengapresiasi fleksibilitas komik digital yang dapat diakses melalui perangkat seperti ponsel atau laptop. Fitur tambahan seperti animasi, efek suara, atau kemampuan untuk memperbesar detail gambar juga menjadi daya tarik yang membuat siswa lebih antusias menggunakan komik digital. Simpulan dari penelitian ini adalah bahwa pengembangan komik digital berbasis kearifan lokal sangat diperlukan untuk meningkatkan pemahaman dan motivasi siswa dalam pembelajaran bahasa Indonesia di sekolah dasar.

## ABSTRACT

The low level of students' reading comprehension and literacy is caused by the less than optimal use of innovative learning media. This study aims to analyze the need for the development of digital comics based on local wisdom as a learning medium that can improve the understanding and interest in reading of elementary school students. This study is part of the needs analysis stage in research and development (Research and Development) using the Design Thinking model. Data collection was carried out through interviews, observations and questionnaires distributed to teachers and students, then analyzed using thematic analysis. The results of the study showed that students were very interested in using digital comics as a learning medium. Most students said that digital comics make learning more fun and interesting compared to regular textbooks. In addition, students appreciate the flexibility of digital comics that can be accessed via devices such as cellphones or laptops. Additional features such as animation, sound effects, or the ability to enlarge image details are also attractions that make students more enthusiastic about using digital comics. The conclusion of this study is that the development of digital comics based on local wisdom is very much needed to improve students' understanding and motivation in learning Indonesian in elementary schools.

## 1. INTRODUCTION

Language is an important aspect in the development of students' thinking, social and emotional abilities, and contributes to their achievements in various educational fields (Rulyansah, 2022; Sa'diyah, 2017). Indonesian language learning plays a significant role in helping students understand themselves, their culture, and the environment around them better. Reading literacy also has a very important role for elementary school students (Hakim, 2021; Ria et al., 2023). Reading is not only an academic skill, but also a

very important everyday life skill. Students who have good reading literacy are more likely to be successful in processing instructions, reading directions, and understanding information encountered in everyday life (Hakim, 2021; Ria et al., 2023). are the basic skills needed to understand and succeed in almost all subjects in elementary school.

Reading literacy helps students develop a deeper understanding of the concepts being taught. The ability to comprehend text helps them structure knowledge and develop complex understanding. Reading fiction and non-fiction can open the door to imagination and creativity. Students who read a lot tend to have stronger imaginations, are more creative, and are better able to think outside the box (Anjani et al., 2019; Jatnika, 2019). Reading allows students to explore the world beyond their immediate experiences. Through reading, they can understand different cultures, views, and experiences, broadening their perspectives on the world. Good reading literacy at the elementary level is a strong foundation for further education. Students who have good reading skills tend to be more successful in learning at higher levels (Ria et al., 2023; Trisiantari, 2019). Good reading skills are closely related to speaking and writing skills. Students who have good reading literacy tend to be better able to organize and communicate their ideas effectively. Reading literacy empowers students to become independent learners (Ria et al., 2023; Rosdiana et al., 2021). They can explore topics that interest them on their own, expand their knowledge, and become more confident in expressing their thoughts and ideas. In the face of these problems, a teacher must innovate learning as an effort to improve the learning process of his students. The low level of understanding and literacy of reading students is caused by the lack of quality of learning (Khofifah & Ramadan, 2021). As a facilitator, teachers have an important role in optimizing students' basic abilities so that they can develop effectively. With the right approach, teachers can help students avoid difficulties and boredom during the learning process (Afriyanti et al., 2018; Sipatu & Silitonga, 2022). Teachers need to pay attention to all components of learning, including the learning tools used, including interesting digital-based learning media.

Digital comics are a form of comics that are presented electronically or digitally. Unlike traditional printed comics that are printed in the form of books or magazines, digital comics can be accessed and enjoyed through electronic devices such as computers, tablets, or smartphones (Jannah & Atmojo, 2022; Marlina & Subrata, 2023). This digital format allows readers to enjoy comics with various interactive features and flexibility that are not possible with the printed format. The use of digital comics in elementary schools can bring various benefits, both for the learning process and the development of student skills. Digital comics can increase reading interest among students because they present text in an interesting and visual way (Hikmah et al., 2020; Made et al., 2022). Interesting images and fun narratives can make learning more enjoyable. Digital comics can introduce students to multimodal learning, which combines various types of media such as text, images, and sound (Dopo & Ismaniati, 2016; Mufarola & Murbowo, 2019; Sukmanasa et al., 2017). This can help students with different learning styles to better understand and respond to learning materials. Digital comics, with their visual narratives and engaging presentation styles, can stimulate reading interest among readers, including students. The images that illustrate the story help create a more enjoyable reading experience, captivate readers' attention, and help them engage in reading (Demirbaş & Şahin, 2022; Udayani et al., 2022). Digital comics require a stronger visual understanding, as the story is told through a combination of text and images. Students will learn to recognize symbols, character facial expressions, and visual sequences of events to understand the overall story.

Design thinking is a creative approach to solving problems and designing new solutions, especially in the context of designing products, services, or user experiences. The application of design thinking in creating learning media in elementary schools provides space for innovation, creativity, and adaptation that is appropriate to the specific needs of students and the learning environment (Cer, 2018; Karakaita Putri et al., 2019). This process can also encourage student engagement and increase the appeal of learning media. With the presence of digital comic learning media based on design thinking in elementary school learning, there are several advantages that can support students' learning experiences, including encouraging creativity and innovation, being user-centered (students), understanding local contexts, being interactive and participatory, being able to develop critical thinking skills, strengthening collaboration skills, helping to provide contextual learning experiences, being flexible and adaptive, encouraging students to have social responsibility, and building self-confidence (Akbar, 2017; Johan et al., 2022).

The implementation of learning media based on design thinking in elementary schools not only provides meaningful learning experiences but can also help build essential skills and attitudes for future success. As an initial stage, this study aims to analyze the need for the development of digital comics based on local wisdom as a learning medium that can improve elementary school students' understanding and interest in reading. The novelty of this study lies in the integration of interactive technology to make local story elements more alive and more interesting for students' learning motivation.

## 2. METHOD

The use of the method in this study is the research and development method, or Research and Development (R&D), which is oriented towards the process of developing and validating educational products. R&D begins with research and continues with development (Danuri & Maisaroh, 2019). In this study, researchers used the Design Thinking model to develop digital comics based on local wisdom, with the aim of improving students' reading literacy. In the research process carried out using the Design Thinking development model. In this article, the research will focus on the first stage, namely needs analysis. In this study, data collection methods were carried out through questionnaires, observations and interviews. Observations aim to obtain a direct picture of field conditions, including activities, facilities, or systems that are relevant to the needs analysis. Researchers recorded important things using observation sheets and carried out documentation to ensure that the data obtained was accurate and complete. In addition, in-depth interviews were conducted with purposively selected informants, namely individuals who have relevant knowledge or experience to the research topic. Interviews were conducted with semi-structured guidelines to provide flexibility in exploring issues that emerged during the data collection process.

The data collected through observation and interviews were analyzed using the thematic analysis method. This analysis process begins with coding the raw data to group information based on certain themes or categories. After that, patterns and relationships between themes are identified to understand the identified needs in more depth. The final step is data interpretation, where the results of the analysis are used to formulate conclusions and provide relevant recommendations in accordance with the research objectives. This analysis method was chosen to ensure that the data produced is systematic, organized, and able to answer research questions comprehensively.

## 3. RESULT AND DISCUSSION

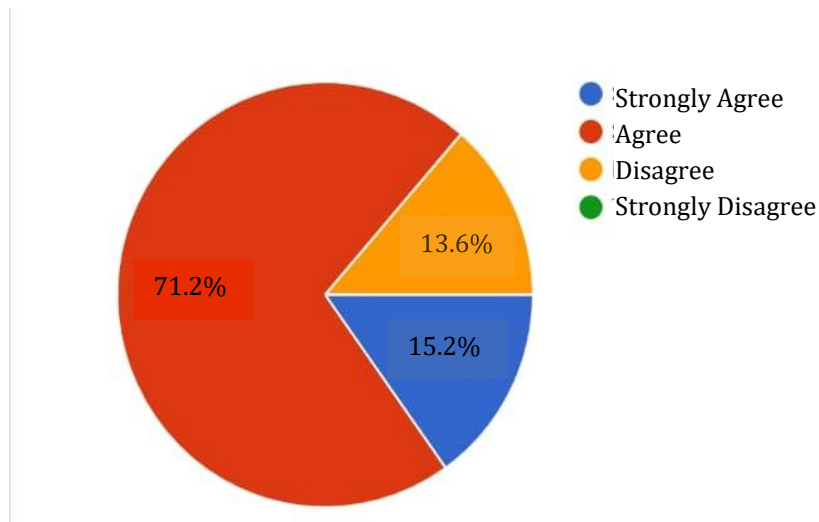
### Result

Describe the design of digital comics based on local wisdom and design thinking, describe the validity of digital comics based on local wisdom and design thinking, describe learning media for digital comics based on local wisdom and design thinking to increase students' sense of nationalism, describe increasing students' interest in reading through digital comics based on local wisdom and design thinking. Design and build digital comics based on local wisdom using the design thinking development model. The development of digital comics based on local wisdom and design thinking is an observation activity that has been carried out, the following are the results obtained from the observation analysis. Problems that often arise in learning are: (1) Students have difficulty learning Indonesian related to the material on adjectives, anonymous, and compound equivalents, (2) Teachers use learning media only at certain times. (3) lack of interest in reading among students. This is explained based on the results of observations of the things that are least shown in Table 4.

**Table 4.** Observation Results

No	Subject of Observation	Presentation Results	Information
1.	Teachers use learning media at certain times	63.6%	Agree
2.	It is difficult to learn Indonesian on the material of adjectives, compound equivalents, and anonymous	40.6%	Agree
3.	Motivating students' interest in reading using digital comics	71.2%	Agree

Based on Table 4 from the results of observations of core problems in schools that have been implemented. Furthermore, researchers designed learning media in the form of digital comics that integrate local wisdom and design thinking approaches. This media aims to increase students' interest in reading in Indonesian language subjects in grade V of Muhammadiyah Elementary School. The following are the results of the analysis that show that students are interested in using digital comics shown in Figure 1.



**Figure 1.** The Results of Student Interest in Digital Comic Media

The interview results showed that students were very interested in using digital comics as a learning medium. Most students said that digital comics made learning more fun and interesting compared to regular textbooks. They felt that the colorful images and stories presented in the comics helped them understand difficult subject matter more easily. As expressed by one student, "The images help me imagine the material. If it's just text, sometimes I get bored, but if I use comics, I can focus more." In addition, students appreciate the flexibility of digital comics that can be accessed through devices such as mobile phones or laptops. This allows them to learn anytime and anywhere, both during study time and in their free time. One student said, "I like it because digital comics can be read on my mobile phone, so even when I'm relaxing, I can still learn." Several students also mentioned that the stories in the comics made it easier for them to remember the material. One student added, "The stories in it are interesting, so I remember the material more easily than if I just read a textbook." Additional features such as animation, sound effects, or the ability to enlarge image details are also attractions that make students more enthusiastic about using digital comics. One student stated, "I really like it because the images are colorful, and if there are interactive features, learning becomes more fun." Overall, this interview shows that digital comics have great potential as an effective learning medium. The combination of attractive visuals, relevant stories, and ease of access make digital comics a preferred choice for students, and can increase their motivation and understanding of the subject matter.

## Discussion

This research and development produced a product in the form of a digital comic based on local wisdom and design thinking to improve literacy in students at Muhammadiyah Elementary School. This product is a digital learning media so that students can read it anytime and anywhere which contains material on adjectives, compound equivalents, and anonymous which are wrapped in nuances of local wisdom of Betawi culture in it so that it can help students in learning the material while getting to know the culture around them (Kumandaş et al., 2018; Numertayasa et al., 2020). The analysis of students' needs was carried out using the observation method through fifth grade students at Muhammadiyah Elementary School Jakarta and it was found that teachers rarely use learning media in providing materials so that students easily get bored in receiving learning. Although using textbooks is sufficient in understanding learning, there are still many students who have difficulty in understanding learning, especially the material on adjectives, compound equivalents, and anonymous (Elbasuony et al., 2018; Irhandayaningsih, 2020). According to students, using digital comics will make it easier for students to understand learning, and more enjoyable to receive learning. The criteria for digital comics that students like are colored comics that are in line with the characteristics of digital comics. This is because many elementary school children prefer illustrated stories because children will be able to add a lot of insight that is in accordance with their real life, and can attract students to improve their reading literacy (Hava, 2019; Musliha & Revita, 2021).

The development of this digital comic was carried out in several stages using a design thinking model to develop digital comics based on local wisdom, with the aim of increasing students' reading literacy (Azizul et al., 2020; Williams et al., 2009). In the research process carried out using the design thinking development model. The development of this digital comic was carried out through several stages by applying the design thinking model, an innovative user-centered approach to create creative and relevant



solutions. In this context, design thinking is used to develop digital comics based on local wisdom, with the main goal of increasing students' reading literacy. With this approach, the research process aims to produce digital comics that not only increase interest in reading, but also strengthen students' understanding of the local values contained therein (Louw & Deacon, 2020; Zuryanty et al., 2019).

The results of this development will then produce a Digital Comic learning media product based on local wisdom. This study provides several implications, including that digital comics based on local wisdom can be an effective learning media to improve elementary school students' reading comprehension skills through interesting visual and narrative content. In addition, the use of local wisdom in digital comics can support the preservation of regional culture while building students' cultural identity from an early age. However, this study also has limitations, this study was conducted in a limited manner at the needs analysis stage, further research is needed to perfect the product development process. In addition, the results of the study may be difficult to generalize to students outside of a particular local or cultural context, because the relevance of the material is highly dependent on the elements of local wisdom used. The results of this study can be a recommendation for the principal to be a suggestion and input to become a guideline for teachers in selecting innovative learning media that should be in accordance with student needs and the development of digitalization that supports teaching and learning activities to be interesting and meaningful for students so that they can obtain maximum results with the habit of reading literacy activities in schools. The results of the study can be used as a reference for further research or as a reference in order to carry out new innovations in learning activities that help students improve reading literacy so that optimal learning goals are achieved.

#### 4. CONCLUSION

Digital comics based on local wisdom designed using a design thinking approach are an innovative solution to improve reading literacy for Grade V students at Muhammadiyah Elementary School. This is very relevant to the results of the needs analysis which show that students need learning media that are interesting, interactive, and in accordance with local culture. Based on the results of observations and interviews that have been conducted, the majority of students gave a positive response to the idea of developing this digital comic. They stated that materials packaged with elements of local wisdom are able to provide a deeper understanding, while also fostering a sense of love for regional culture. In addition, the application of design thinking in the development of this product ensures that students' needs are the main priority, so that the resulting product is not only relevant in content, but also visually appealing and easy for students to understand.

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