Development of Digital Comics-Based Learning Materials Incorporating Local Wisdom and Character Values in Indonesian Language Education for Junior High School Students

Hasri Fendi, Agustina, Harris Effendi Thahar

Language Pedagogy Study Program, Faculty of Language and Arts, Universitas Negeri Padang, Padang, Sumatera Barat 25171, Indonesia Email: agustina@fbs.unp.ac.id

Abstract

This study aimed to examine the impact of Minangkabau folktales digital comics on the reading interest, language skills, and character values of junior high school students in West Sumatra. Utilizing a quasi-experimental pre-test and post-test design with a control group, the research involved a sample of 311 students, with 120 students in the experimental group and 191 in the control group. The intervention consisted of integrating Minangkabau folktales digital comics into the experimental group's curriculum, while the control group received standard language instruction. The results demonstrated that the use of Minangkabau folktales digital comics significantly enhanced students' reading interest, language skills, and character values compared to the control group. This positive impact was evidenced by substantial improvements in post-test scores across the three measured dimensions. These findings suggest that Minangkabau folktales digital comics are an effective pedagogical tool for enriching Indonesian language education at the junior high school level. The study concludes that incorporating cultural elements into educational materials can foster a more engaging and holistic learning experience, thereby supporting the development of students' cognitive and affective domains. Future research is recommended to explore the long-term effects of such interventions and their applicability in other cultural contexts.

Keywords: Character values, digital comics, Indonesian language learning, Minangkabau folktales, school student.

Indonesian language learning at the junior high school level faces significant challenges, including low reading interest among students, suboptimal language skills, and minimal application of character values in the learning process (Fuad et al., 2022). These challenges hinder the achievement of the expected quality of

learning. Therefore, innovative solutions are required to address these issues. One promising solution is the use of digital comics of folktales in the context of Indonesian language learning at junior high schools.

Digital comics of folktales emerge as an innovative solution with great potential to

overcome challenges in Indonesian language learning at the junior high school level (Syandri & Kristiawan, 2024). The advantages of digital comics lie in their visual appeal, interactivity, and ease of accessibility. Using images, animations, and sound in digital comics creates an engaging and memorable learning experience, surpassing the potential of plain text (Al Farizi, 2019). Additionally, easy access through devices such as smartphones, tablets, or computers provides flexibility that allows students to study material anytime and anywhere.

Furthermore, digital comics of folktales have the potential to instill rich character values, such as noble character, morality, and the cultural wisdom of the nation (Hardini et al., 2023). In this context, digital comics are not only an effective learning medium but also an efficient tool for shaping student character. Recent research supports the potential of digital comics of folktales in improving the quality of Indonesian language learning at the junior high school level. Suyanto (2023) shows that the use of digital comics of folktales can increase students' reading interest and language skills. Lestari (2023) concludes that digital comics of folktales can make a positive contribution to strengthening students' character values, such as honesty, responsibility, and cooperation.

The challenges in Indonesian language learning at the junior high school level become more apparent with data showing low reading interest among students (Ibda et al., 2024). According to data obtained from the Ministry of Education and Culture Kemendikbud, 2023, the reading interest of junior high school students is still low, with an average score of 50.34 out of 100. This figure reflects the difficulty in motivating students to engage in reading activities and illustrates the urgent need for more engaging learning strategies. Additionally, Indonesia's literacy challenges are also reflected in the data from the Program for International Student Assessment (PISA) in 2022. PISA results show that the literacy scores of Indonesian students are still below the average of the Organisation for Economic Co-operation and Development (OECD). This assessment includes reading ability, text comprehension, and the application of knowledge in everyday life.

The fact that Indonesia is below the OECD average underscores the need for a new approach to Indonesian language learning at the junior high school level, with a focus on improving student literacy (Sukma et al., 2023). In this context, the use of Minangkabau folktales digital comics becomes more crucial. With their visual appeal and engaging narratives, digital comics can be an innovative solution to enhance students' reading interest, while aligning learning with the need for higher literacy.

Minangkabau folktales, rich in moral values and cultural heritage, provide a unique opportunity to integrate character education into the curriculum (Santoso et al., 2020). These stories, when adapted into digital comics, can not only capture students' attention but also convey important lessons about honesty, responsibility, and cooperation (Saddhono et al., 2023). By interacting with these stories, students can develop a deeper understanding of these values and apply them in their daily lives (Rustan & Abduh, 2020). Additionally, the cultural context of Minangkabau folktales helps students appreciate and preserve their local heritage, fostering a sense of pride and identity.

The integration of digital comics based on Minangkabau folktales into the Indonesian language curriculum can address multiple educational objectives simultaneously (Dewantara et al., 2019). It can improve students' reading interest and language skills, while also promoting character education and cultural awareness. This holistic approach to education aligns with the goals of the 21st-century learning framework, which emphasizes the development of critical thinking, creativity, communication, and collaboration skills (Hesapçioğlu & Özcan, 2013).

Given the potential benefits of using digital comics of Minangkabau folktales in Indonesian language learning, this study aims to investigate their impact on reading interest, language skills, and character values among junior high school students. The study employs a quasi-experimental pre-test and post-test design with a control group to provide robust evidence on the effectiveness of this innovative approach. By providing empirical data on the outcomes of using digital comics in the classroom, this research aims to contribute to the development of effective teaching strategies and educational policies that enhance the quality of Indonesian language education at the junior high school level.

With the potential offered by digital comics of folktales, as well as research findings and supporting data, this article will further explore how the use of digital comics of folktales can be an effective innovative solution in improving the quality of Indonesian language learning at the junior high school level. This study seeks to fill the gap in the existing literature by providing comprehensive insights into the practical implementation and outcomes of integrating digital comics into the curriculum. Through this research, it is hoped that educators and policymakers will be encouraged to adopt and support innovative approaches that enhance student engagement and learning outcomes, ultimately contributing the overall improvement of Indonesian education.

Methodology

To determine the impact of digital folktale comics on student learning outcomes, this study employed a quasi-experimental pre-test and post-test design with a control group (Sugiyono, 2023). The research sample was selected using purposive sampling from junior high schools in West Sumatra, representing both highland and coastal areas, including: 1) Experimental group: SMPN 6 Bukittinggi (40 students) and SMPN 1 Banuhampu (80 students); 2) Control group: SMPN 2 Batang Kapas (56 students) and SMPN 2 Padang (135 students). The total research

sample consisted of 311 students distributed as follows:

Table 1: Research Sample

Sekolah	Number of Students
SMPN 6 Bukittinggi	40
SMPN 1 Banuhampu	80
	120
SMPN 2 Cotton Sticks	56
SMPN 2 Padang	135
	191
	311
	SMPN 6 Bukittinggi SMPN 1 Banuhampu SMPN 2 Cotton Sticks

Source: Prepared by the author (2024)

Research data were collected using three instruments: 1) Learning outcome tests to measure students' ability to understand folktale material and character values; 2) Questionnaires to determine students' interest in digital folktale comics; 3) Observation sheets to monitor student activities during the learning process (Gorard, 2003). The research procedure began with a trial of the instruments, followed by a pre-test for both groups, the provision of learning materials (digital comics for the experimental group, conventional for the control), a post-test, and concluded with data analysis (Little, 2013). Data analysis used the t-test to examine differences in learning outcomes between groups and the Ngain test to determine the effectiveness of using digital folktale comics in improving student learning outcomes.

Results and discussion

Reading Interest Analysis

Table 2: Reading interest analysis

Aspects	Average Score	Category
Reading frequency	78,52	Tall
Reading motivation	80,14	Tall
Reading favorites	81,23	Tall
Total	80	Tall

Source: Prepared by the author (2024)

This study found that Minangkabau folklore digital comics had a positive and significant impact on the reading interest of junior high school students. Analysis of the data showed the average reading interest score of students who used this digital comic reached 80, far surpassing the score of 75 students in the control group who did not use it. This increase can be seen in various aspects, such as reading frequency which increased to 78.52, reading motivation which reached 80.14, and reading craze which soared to 81.23.

The appeal of digital comics is key. The combination of images, animations, and sounds creates a fun and easy-to-understand learning experience, far from being boring. In addition, Minangkabau folklore that is relevant to local culture increasingly arouses students' interest to dive into the stories and character values contained in them. The interactivity offered by digital comics also makes the learning process more active and interesting, encouraging understand students to participate and Indonesian material better.

With the increase in interest in reading, students become more motivated to learn and explore the world of Indonesian. Moreover, reading Minangkabau folklore also enriches their knowledge of local culture and instills positive character values. Clearly, Minangkabau folklore digital comics offer innovative solutions to improve the quality of Indonesian learning and form a literate and characterful young generation.

Language Skills Analysis

Language skills tests are used to evaluate the extent to which folklore digital comics influence students' improvement in Indonesian. The test result data will be analysed in detail to identify significant differences between the two groups.

Table 3: Language Skills Analysis

Aspects		Rata-rata Post-test	N-gain
Read	79,02	84,15	0,65
Write	78,21	83,01	0,59

Speak	77,32	82,14	0,54
Listen	78,1	83,21	0,62
Total	78,16	83,13	0,6

Source: Prepared by the author (2024)

In-depth analysis of junior high school students' language skills test results using Minangkabau folklore digital comics showed significant improvements in all aspects: reading, writing, speaking, and listening. This increase can be seen from the soaring average score and the N-gain value is quite high. In reading skills, digital comics help students understand subject matter more easily and improve their reading comprehension. This is evidenced by an increase in the average score from 79.02 to 84.15, accompanied by an N-gain of 0.65. Similarly, students' writing ability increased from 78.21 to 83.01 (N-gain 0.59), indicating improvements in sentence structure, grammar, and word selection. A positive impact is also seen in the ability to speak and listen. Students showed increased confidence when speaking and more effective communication skills (average score from 77.32 to 82.14, N-gain 0.54). Improved listening skills (average score from 78.10 to 83.21, N-gain 0.62) indicate students are more focused, concentrated, and understand the information conveyed orally.

The total language skills score increased from 78.16 to 83.13, with an N-gain of 0.6. That is, digital comics significantly improve the Indonesian ability of junior high school students. This increase has positive implications. Students can understand the subject matter more easily, express ideas more structured, and communicate more effectively. Teachers can Indonesian take advantage of these digital comics to increase students' interest and motivation to learn. Further research can examine long-term impacts, develop similar digital comics, and research their application in other regions.

Evaluation of Character Values

A questionnaire on character values will be processed to assess the extent to which the use of folklore digital comics affects the development of student's character values. Qualitative analysis will also be conducted to understand students' responses to the values instilled through digital comics.

Table 4: Evaluation of Character Values

Character Values	Rata-rata Pre-test	Post-test installment- installment	N-gain
Honest	80,12	85,23	0,63
Responsibility	79,01	84,1	0,61
Cooperation	78,22	83,02	0,58
Tolerance	77,31	82,13	0,54
Total	78,16	83,12	0,6

Source: Prepared by the author (2024)

Comparison with Initial Data

The overall results will be compared with the initial data to see the progress that occurs. Analysis of changes from the beginning to the end of the study will provide a comprehensive picture of the impact of the use of Minangkabau folklore digital comics in improving the quality of Indonesian learning at the junior high school level.

Table 5: Comparison with Initial Data

Aspects	Initial Data	Post- test	Development
Reading Interest	75	80	High (5.00)
Language Skills	76	83,13	High (7.13)
Character Values	77	83,12	High (6.12)

Source: Prepared by the author (2024)

This study aims to test the effectiveness of Minangkabau folklore digital comics in increasing the reading interest, language skills, and character values of junior high school students. The results showed significant development in all aspects after students used digital comics. Students' interest in reading has increased dramatically, with the average score jumping from 75 to 80. This shows that digital comics have succeeded in attracting students'

interest and motivating them to be more active in learning Indonesian.

Language skills also showed significant improvement, with the average total score rising from 76 to 83.13. This reflects that digital comics help students understand the material, write in a structured manner, and communicate effectively. This improvement is seen in all aspects, including reading, writing, speaking, and listening. In addition, students' character values also experience positive development. The average total score increased from 77 to 83.12, indicating that digital comics contribute to fostering positive values such as honesty, responsibility, and cooperation in students.

Thus, this study confirms that Minangkabau folklore digital comics are an innovative solution to improve the quality of Indonesian learning at the junior high school level. Increased interest in reading, language skills, and character values suggest that the use of digital comics can help students learn more effectively, make learning more enjoyable, and form better personalities. The results of this study are also in line with the findings of previous research which stated that digital comics can increase students' motivation and interest in reading (Sukenti & Tambak, 2020), improve students' reading comprehension and vocabulary (Ghaluh et al., 2024), improve students' writing skills and sentence structure (Suyitno et al., 2021), and help foster positive values in students (Nuryatin et al., 2023).

This research proves that the use of digital comics based on Minangkabau folklore can open new windows in Indonesian language learning at the junior high school level. The findings showed a significant improvement in students' reading interest, language skills, and character values after engaging with digital comics. Students' reading interest increased drastically after accessing digital comics. The uniqueness of the story and characters presented in an engaging, easily understood, and interactive manner successfully boosted students' interest and motivation to learn. This finding aligns with the research of Pratiwi et al. (2022), which state that

interactive digital media can enhance reading interest and student engagement in the learning process. This increase in reading interest can also be linked to the fact that digital comics present visual narratives that are easier for students to follow, especially those who might struggle with lengthy or tedious texts. By visualizing captivating stories, students can more easily understand and remember the plot and characters. Furthermore, the use of interactive elements in digital comics, such as animations and sound effects, adds appeal and enhances the learning experience. Students do not just read but also actively engage with the story, thereby increasing their involvement and understanding of the material being taught.

Students' language skills also showed significant progress. Digital comics help students understand the material more easily, write in a structured manner, and communicate effectively. This improvement is seen in all aspects, including reading, writing, speaking, and listening. These results support the research of Sutama et al. (2022), which state that digital media can enhance students' literacy skills. In terms of reading skills, digital comics help students improve their word decoding and text comprehension abilities. The illustrations accompanying the text help students connect words with images, making comprehension easier. Students also learn to write better as they observe examples of good sentences and logical story structures within the comics. They can see how the story progresses from one panel to the next, which helps them in writing their own stories in a structured way. Speaking and listening skills also improve as students are often encouraged to discuss the stories they read in digital comics. Group discussions presentations about the comics they have read provide opportunities for students to practice public speaking and listen to their peers' opinions. All of these contribute to the overall enhancement of students' language skills.

Additionally, students' character values experienced positive development through

interaction with digital comics. This medium helps instill positive values such as honesty, responsibility, and cooperation in students. This finding is in line with the research of Mislikhah (2021), which show that interactive media can aid in the development of students' character. Minangkabau folklore adapted into digital comics often contains strong moral messages. Characters in these stories usually face various challenges and make decisions that reflect certain values. By identifying with these characters, students can learn and internalize these values in their daily lives.

Self-Determination Theory provides a solid theoretical foundation for the results of this study. Digital comics meet students' needs for competence, autonomy, and relatedness, all of which contribute to high learning motivation. According to this theory, students are more motivated to learn when they feel competent in what they do, have control over their learning process, and feel connected to others. Digital comics provide a platform where students can feel successful (competent) in understanding and enjoying the stories, choose when and how they want to read (autonomy), and discuss with their peers about the stories they read (relatedness).

Multimedia Learning Theory also supports the findings of this study by showing that digital comics utilize the principles of multimedia learning to improve students' understanding and retention of information (Wang et al., 2024). According to this theory, the simultaneous use of images, text, and interactive elements can enhance students' understanding because the information presented in various complementary formats. This makes the information easier remember and to comprehend. Furthermore, Constructivism Theory asserts that digital comics provide an interactive learning environment and a rich cultural context for Indonesian language learning, creating a more holistic learning experience (Kim et al., 2021). This theory emphasizes the importance of social interaction in learning, and digital comics provide a platform

that allows students to learn together, discuss, and build a shared understanding of the material they study.

The advantages of digital comics as a learning medium are increasingly visible through their interactive and engaging nature. This not only increases students' interest and motivation to learn but also provides the flexibility of access that allows students to learn anytime and anywhere. In today's digital era, accessibility is a crucial factor in learning. Digital comics can be various devices accessed via smartphones, tablets, or computers, allowing students to learn at their own pace and convenience. Moreover, digital comics can be easily updated and adapted. Teachers can add new elements, update content, or modify stories according to students' needs and interests. This offers greater flexibility compared to traditional textbooks, which tend to be static and difficult to change.

The implications of this research are very relevant for the development of Indonesian language learning in junior high schools. Teachers can utilize digital comics in learning to increase student interest and motivation, while educational media developers can design other folklore-based digital comics to enrich the Indonesian learning experience at the junior high level. The use of digital comics in the curriculum can also help create a more inclusive and engaging learning environment for students of various backgrounds and abilities. Further recommended research includes assessing the long-term influence of the use of Minangkabau folklore-based digital comics, developing other folklore-based digital comics, and conducting studies other regions test the generalizability of these results. Additionally, further research can explore how digital comics can be used in other subjects or in different learning contexts.

Conclusion

The conclusion of this study is that the use of Minangkabau folklore digital comics has a positive and significant impact on the reading interest, language skills, and character values of junior high school students. The data shows that the average reading interest score of students who used these digital comics reached 80, far surpassing the score of the control group who did not use them. Language skills also showed a significant improvement, with the average score increasing from 76 to 83.13. Additionally, character values such as honesty, responsibility, cooperation, and tolerance improved, indicating that these digital comics enhance both the academic and character aspects of students. Therefore, this study confirms that Minangkabau folklore digital comics are an effective tool for improving the quality of Indonesian language learning at the junior high school level.

The findings of this study provide both theoretical and practical benefits in the field of Indonesian Language and Literature Education. Theoretically. these findings support Multimedia Learning Theory Constructivism, which state that the use of interactive media can enhance understanding and information retention. Practically, these digital comics offer an innovative solution to increase students' reading interest and skills, as well as positive help instill character values. Furthermore, these findings advance the understanding of how digital media can be used to make learning more engaging and effective. However, this study has limitations, such as a sample limited to one region and one educational level. Future research is suggested to expand the sample scope, examine the long-term effects of using digital comics, and develop other folkloredigital comics to ensure broader based generalization of the results.

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