Development of Children's Comics to Improve Elementary School Students' Reading Comprehension Ability

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Abstract: The study aims to provide instructional materials, such as children's comics, to help students become more proficient readers. The four steps of the 4-D model used in this research are defined, designed, developed, and disseminated. It is a research and development (R&D) study. Student learning outcomes following the usage of comic media, teacher and student questionnaires, validation questions from media experts, and material experts are all used in the research data collection process. This research was conducted on 11 class III students at MIS Hubbul Wathon. The research results by media experts obtained 96% of the category (very valid), and the assessment by material experts was 91% of the category (very valid). In comparison, the assessment by teacher responses received a score of 98% in the category (very practical), and student responses received a score of 98% in the category (very practical). The use of comic media in learning impacts increasing reading comprehension skills by 0.6 or the medium category. Comic learning media is suitable for learning because it can improve students' reading comprehension.

Keywords: Development, Children's Comics, Reading Comprehension

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A. Introduction

Language is vital to human existence. Humans may engage, communicate, and grow as individuals through language (Devianty, 2017). Therefore, efforts need to be made to improve the quality of Indonesian language learning in elementary schools by developing students' language skills. As explained by Tarigan, the language includes four aspects: listening, speaking, reading, and writing. Interconnectedness in teaching (Istiqoh, 2021). One of the skills that must be possessed in learning Indonesian is reading comprehension. Reading comprehension is an important skill that helps students understand texts in depth, identify main ideas, draw conclusions, and develop critical thinking skills.

Reading, life-changing instructions, and common knowledge are the key to learning everything. By being able to read, a person can live his life better. Reading comprehension is a continuation of initial reading. Suppose a reader has gone through the stage of reading comprehension or further reading. A reader is no longer required to pronounce letters correctly and assemble each language sound into words, phrases, and sentences. However, it requires understanding the content of the reading (Lestari, Shinta, Susilo, &
Khoirulloh, 2022). The goal of reading comprehension is to have the ability to read well and correctly according to reading rules and to understand reading well, but many students still have not achieved this goal. Indicators related to reading comprehension abilities include (1) information in the form of facts, definitions, or concepts, (2) the meaning of terms and expressions, (3) relationships in discourse, including relationships between things, cause and effect relationships, similarities, and differences between things, (4) organisation of discourse about main ideas, explanatory ideas, main sentences, and explanatory sentences, (5) theme or topic and title of discourse, (6) concluding things, concepts, problems or opinions (Nisa, Enawar, & Latifah, 2022).

Many students are unaware of the importance of reading comprehension in learning activities and outside of learning. Most recent United Nations Educational, Scientific, and Cultural Organization (UNESCO) information supports this, which has revealed that Indonesian people's interest in reading is only 0.001 percent or one in 1,000 people who like to read. The Program for International Student Assessment (PISA) 2022 was recently announced on December 5, 2023, and Indonesia is ranked 68th with a score of math (379), science (398), and reading (371). Apart from that, although technology can increase interest in reading, many children prefer playing games or watching videos rather than reading. This is why teachers develop media so children are interested in reading.

Learning media is the most effective tool in the teaching and learning process to achieve learning goals, and learning media can be used to increase student attention, motivation, and adjustment to student development (Putri Pramestia Ningrum & Dahlan, 2023). Media use in learning also needs to be considered, especially when it must be adapted to the material to be taught. Apart from being adapted to the material, the choice of learning media must also pay attention to the child's developmental stage (Devianty, 2017). Learning activities, instruction, and material can all function effectively in the classroom. The use of learning media helps the learning process to be effective and interesting, as well as conveying the message or content of the lesson material to make learning quality and improve student learning outcomes (Brilliananda, Winarni, & Sriyanto, 2022). One of the learning media that is effective, interesting, and able to improve students' reading comprehension is comics. Comics are a medium that combines images and text that attract students' attention. The pictures in comics help explain the story's context, making it easier for students to understand the content of the reading.

Comics come from the word comic, which comes from English and means funny. If you look at the Greek language, the word comic comes from the word kosmos, which originates from kosmos, and this word appeared around the 16th century. Initially, comics aimed to depict stories about funny things (Mulyati, Kusumadewi, & Ulia, 2021). Comics are illustrations arranged in sequence so that they are easy to read and the story's message can be conveyed to the reader. At the same time, Comics are narratives with cartoon characters connected by images that are meant to amuse readers (Puspananda, 2022). It can be concluded that comics are stories acted out by cartoons connected with pictures in the most interesting way possible that can attract the reader's attention.
When conducting interviews with class III teachers at MIS Hubbul Wathon, problems were found related to students' low understanding of the material. One of the causes was the teacher's inability to incorporate innovative learning media. The use of Indonesian language learning media is limited to text in books. This then makes students less interested in following lessons. Based on these reasons, the researcher wants to develop comic media to improve the reading comprehension skills of class III students at MIS Hubbul Wathon Silau Malaha.

Previous research shows that using comics as a learning medium can increase students' interest and understanding of the subject matter. For example, research by Mujawal, Bani, & Nani (2018) found that comic media can increase student motivation and learning outcomes in learning Indonesian. In addition, research conducted by Purwanto & Widodo (2022), shows that using comics in science learning can help students understand abstract concepts more easily. Research by Puteri et al. (2022) also revealed that comic media effectively improves students' reading comprehension skills at the elementary school level.

The difference between this research and the previous one lies in the development of comic media, specifically designed to improve the reading comprehension skills of class III students at MIS Hubbul Wathon Silau Malaha. In contrast to previous research that may be more general or focus on other subjects, this research will develop and test comic media adapted to the curriculum and specific needs of class III students at MIS Hubbul Wathon Silau Malaha. Based on this explanation, this research aims to develop and implement effective comic media to improve the reading comprehension skills of class III students at MIS Hubbul Wathon Silau Malaha.

B. Method

This falls under the category of R&D. The method or procedures used in development research are intended to create or enhance a new product that can be explained (Torang Siregar, 2023). The product developed is a comic learning medium to improve reading comprehension skills. This research adopts the 4-D model (define, design, development, disseminate). The field trial subjects will be 11 students in class III of MIS Hubbul Wathon in Silau Malaha Village. This comic media was developed in Indonesia about loving plants and animals.

Tests and questionnaires are the methods used in this study to collect data. Data on comics' efficacy, readability, and aesthetic appeal from validation by media professionals, subject matter experts, educators, and students were gathered using a questionnaire sheet. A Likert scale with a range of 1 to 4 is used on the validation sheet (1 being not good, 2 not good, 3 being good, and 4 being very good). Questionnaire data was analysed using descriptive statistics, which were converted into percentages to see the distribution of assessments and average scores with the interpretation of media suitability criteria (see Table 1) and media practicality criteria (see Table 2) (Ningtiyas, Wenda, & Wiguna, 2024).
For reading comprehension skills, the instrument used is a learning outcome test that measures students’ understanding of the material about loving plants and animals before and after using comics. Data Collected: Pre-test and post-test scores to evaluate improvement in reading comprehension skills. Data analysis uses N-Gain Value Qualification with Table 3 categories (Hake, 1998).

<table>
<thead>
<tr>
<th>Table 1. Media Eligibility Criteria</th>
<th>Table 2. Media Practicality Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale (%)</td>
<td>Criteria</td>
</tr>
<tr>
<td>76% - 100%</td>
<td>Valid</td>
</tr>
<tr>
<td>51% - 75%</td>
<td>Fairly Valid</td>
</tr>
<tr>
<td>26% - 50%</td>
<td>Less Valid</td>
</tr>
<tr>
<td>0% - 25%</td>
<td>Invalid</td>
</tr>
<tr>
<td>0% - 40%</td>
<td>Very bad</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3. Qualification of N-Gain Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Gain Value</td>
</tr>
<tr>
<td>0.0 &lt; g ≤ 0.3</td>
</tr>
<tr>
<td>0.3 &lt; g ≤ 0.7</td>
</tr>
<tr>
<td>0.7 &lt; g ≤ 1.0</td>
</tr>
</tbody>
</table>

C. Results and Discussion

Results

The comic media development procedure uses the 4-D development model, which consists of four stages:

Define

The stage of identification and definition (define) To examine the initial conditions in the field, this stage observes and interviews Hubbul Wathon, the class III MIS teacher, to analyse learning needs. During the preliminary investigation and data collection, several issues emerged. Several issues that affected the efficiency of the teaching and learning process were discovered based on the findings of observations and interviews conducted during the class III MIS Hubbul Wathon learning activities. Because textbooks are typically the only learning resource teachers use, the teaching and learning process is made tedious by the lack of variation in the learning materials. Students' comprehension of the reading material thus becomes less thorough. In addition, the findings of the class teachers' interviews showed that one of the primary issues preventing pupils from grasping the lesson content was their lack of enthusiasm for reading.

In order to boost students' interest in reading and improve the quality of instruction in class III MIS Hubbul Wathon, teachers must try to employ a wider range of learning resources. Comic books are one option that can be employed. Using comics as a teaching
tool can strengthen students' reading comprehension abilities. Reading comprehension instruction aims to help students comprehend what they read and read properly, following the rules. Students can identify the key themes in the reading and provide answers to questions based on the reading's content by reading comics. This is anticipated to improve student comprehension of the subject matter and make the teaching and learning process more engaging and successful.

**Design (Designing)**

The (design) stage of product design that will be developed in this research is the learning media in the form of comics, comics which are given the title "Let's Love Animals and Plants" which are taken from the Thematic Subject II student book (see Figure 2). The comic is depicted with a story full of interesting, imaginative cartoon images. By developing the comic, it will improve children's reading comprehension.

![Figure 2. Display of Comic Learning Media](image)

**Develop (Development)**

Stage of development (development) Preparing instructional materials for teachers and students according to the product's specifications is part of the development stage. This comic learning media product design aimed to provide engaging learning materials that would help students become more proficient readers. Figure 3 shows how the development flow is implemented.

Media experts and material experts will validate ready comic products by providing a questionnaire including an assessment of comics validated by material expert Mrs. Maya Siti Sakda, M.Pd. The material validation questionnaire includes material assessment, learning methods, learning activities, language, and benefits. The results of the material expert assessment are shown in Table 4.
Figure 3. 4D model comic media development flow

Table 4. Material Expert Assessment Results

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Material</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>Learning methods</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Learning Activities</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Language</td>
<td>19</td>
</tr>
<tr>
<td>5</td>
<td>Benefit</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td><strong>Total score</strong></td>
<td><strong>62</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Percentage</strong></td>
<td><strong>91%</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Category</strong></td>
<td>Very Valid</td>
</tr>
</tbody>
</table>

And media expert by Mr. Ewin Sanjaya Gajah, M.Pd. The comic media expert assessment questionnaire includes image appearance, writing appearance, and implementation. The results are from assessments from media experts following Table 5.

Table 5. Media Expert Assessment Results

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Image Display</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td>Post View</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Implementation</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td><strong>Total score</strong></td>
<td><strong>50</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Percentage</strong></td>
<td><strong>96%</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Category</strong></td>
<td>Very Valid</td>
</tr>
</tbody>
</table>

Field trials were conducted in class III of MIS Hubbul Wathon, conducting lessons and using comic media to improve students' reading skills. The field trial results based on the teacher's assessment of comic learning media obtained a percentage of 98%, with a very practical category. Furthermore, the student response results for comic learning media were 98% in the practical category.
Effectiveness of Using Comic Media

After testing the practicality of this development, testing the effectiveness of the media using pretest and posttest questions given to class III MIS Hubbul Wathon students with the results shown in table 6.

Table 6. N-Gain Score Calculation Results

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Mark Pre-Test</th>
<th>Mark Post-Test</th>
<th>Post Test – Pre Test</th>
<th>Ideal Score (100) – Pre Test</th>
<th>N-Gain Score</th>
<th>N-Gain Score (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Aulya</td>
<td>30</td>
<td>100</td>
<td>70</td>
<td>70</td>
<td>1.00</td>
<td>100%</td>
</tr>
<tr>
<td>2.</td>
<td>Arjun</td>
<td>50</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>1.00</td>
<td>100%</td>
</tr>
<tr>
<td>3.</td>
<td>Afkar</td>
<td>30</td>
<td>90</td>
<td>60</td>
<td>70</td>
<td>0.85</td>
<td>85%</td>
</tr>
<tr>
<td>4.</td>
<td>Brian</td>
<td>30</td>
<td>90</td>
<td>60</td>
<td>70</td>
<td>0.85</td>
<td>85%</td>
</tr>
<tr>
<td>5.</td>
<td>Fadhil</td>
<td>30</td>
<td>90</td>
<td>60</td>
<td>70</td>
<td>0.85</td>
<td>85%</td>
</tr>
<tr>
<td>6.</td>
<td>Hadif</td>
<td>20</td>
<td>90</td>
<td>70</td>
<td>80</td>
<td>0.87</td>
<td>87%</td>
</tr>
<tr>
<td>7.</td>
<td>Karin</td>
<td>30</td>
<td>90</td>
<td>60</td>
<td>70</td>
<td>0.85</td>
<td>85%</td>
</tr>
<tr>
<td>8.</td>
<td>Roy</td>
<td>30</td>
<td>100</td>
<td>70</td>
<td>70</td>
<td>1.00</td>
<td>100%</td>
</tr>
<tr>
<td>9.</td>
<td>Rayhan</td>
<td>10</td>
<td>90</td>
<td>80</td>
<td>90</td>
<td>0.88</td>
<td>88%</td>
</tr>
<tr>
<td>10.</td>
<td>Salsa</td>
<td>30</td>
<td>100</td>
<td>70</td>
<td>70</td>
<td>1.00</td>
<td>100%</td>
</tr>
<tr>
<td>11.</td>
<td>Umayroh</td>
<td>30</td>
<td>80</td>
<td>50</td>
<td>70</td>
<td>0.71</td>
<td>71%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amount</th>
<th>320 840</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>29.09 76.36</td>
</tr>
<tr>
<td>N-Gain Value Criteria</td>
<td>Currently</td>
</tr>
</tbody>
</table>

Disseminate

Dissemination stage (disseminate) This stage is the final stage of the research. The researcher will disseminate learning media at the Hubbul Wathon MIS school at this stage. Based on the results of this research and data collection, it can be concluded that interesting media can help teachers and students carry out classroom teaching and learning activities (see Figure 4). It is hoped that the comics developed can motivate teachers to develop media in learning, and students can improve their reading skills. These learning media products can be accessed at the link: https://drive.google.com/file/d/1Qmtf1H1I82X8WZTowIiD2whVgeaKbz2t/view?usp=sharing
Discussion

The development of learning media in the form of children's comics has proven effective in improving the reading comprehension skills of class III students. These findings are supported by validation from media and material experts and assessments from teachers and students, showing positive results in valid and practical categories. This finding aligns with previous theory and research, which reveals that innovative and interesting learning media can increase students' interest and learning abilities.

Reading comprehension is the ability to process text, understand its meaning, and integrate the information obtained with existing knowledge (Muhammad Reizal Muhaimin, Ni’mah, & Listryanto, 2023). Important criteria in reading comprehension include several aspects. First is understanding the meaning of words, where students must understand the meaning of words in a certain context, including the ability to understand synonyms, antonyms, and homonyms. Second is understanding sentences and paragraphs, where students must be able to understand sentences and how they are connected in a paragraph to form a complete meaning. Third, identifying the main idea and supporting details, where students must be able to identify the main idea of a paragraph or text as a whole and find details that support the main idea.

Apart from that, the ability to conclude is also very important. Students must be able to draw conclusions based on the information presented in the text and make inferences from clues. Furthermore, students must also be able to analyse and evaluate texts, where they must be able to analyse the structure of the text and writing style and evaluate the arguments or opinions presented in the text. Finally, the ability to relate text to personal knowledge is essential. Students must be able to relate the information in the text to the experiences and knowledge they already have and apply it in new contexts.

Comics as a learning medium have several advantages that support students' reading comprehension skills. First, visuals in comics provide visual context that helps students understand the meaning of words and sentences. This visual functions as a contextual clue, making it easier for students to understand the text. Second, comics have a clear
narrative structure with an orderly storyline. This helps students follow the story more easily and understand the relationships between sentences and paragraphs (Budiarti & Haryanto, 2016; Hasanah, 2020; Meidyawati, Rustono, & ..., 2018). Comics often highlight main ideas through prominent images and text, making it easier for students to identify the main idea and understand supporting details. Images in comics also provide visual clues that help students make inferences and draw conclusions. For example, a character’s facial expressions and the background of a scene provide clues about feelings and situations.

The combination of text and images in comics allows students to analyse how visuals support the narrative and evaluate the effectiveness of message delivery. Comics often relate to everyday situations or themes familiar to students, making it easy for them to connect the text to personal experiences.

The results of media validation by media experts show a value of 96%, which is included in the very valid category. This indicates that the comic media developed meets high visual and interactive quality standards. The material expert assessed 91%, which is also in the very valid category, indicating that the content presented in the comic is by the learning objectives and curriculum material.

This assessment is in line with the theory Mayer (2002) Multimedia learning emphasises the importance of visual design and clear material delivery to facilitate student understanding. In learning media, Mayer said integrating text and images can help students process information more effectively through dual-channel processing. Thus, comics as a learning medium have great potential to improve students’ understanding through a combination of interesting text and illustrations.

The assessment by the teacher shows a score of 98%, which is included in the very practical category, and the assessment by students also gets a score of 98% in the same category. This shows that comic media is valid in content and design and practical and easy to use in daily learning.

According to Davis’s Technology Acceptance Model, perceived ease of use and perceived usefulness are the main determinants in adopting new technology (Davis, 2016). In this case, comic media is considered easy to use by teachers and students and provides real benefits in improving reading comprehension. This strengthens the research results that comic media can be well received in the learning environment and effectively achieve learning goals.

Testing the effectiveness of comic media shows a value of 90% in the very effective category. This indicates that using comic media in the learning process can significantly improve students’ reading comprehension skills. This effectiveness can be linked to the constructivism theory by Piaget and Vygotsky, which states that effective learning occurs when students are actively involved in learning and build their knowledge through direct experience (Adams, 2016).

Previous research by Arsyad also supports these findings, where using visual media in learning has been proven to increase students’ interest in learning and understanding
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(Arsyad, 2018). Thus, using comic media in this research improves reading comprehension skills and motivates students to be more active and enthusiastic in learning.

The results of this study are consistent Melati & Dafit (2024) Found that students who studied using comic media significantly improved their ability to read and understand texts. Apart from that, this research strengthens the research Rusmono & Alghazali (2020) Revealed that comic media can be used as an effective tool in improving students' visual and verbal literacy skills. Purnomo noted that comics help students connect text with images, making understanding the storyline and information presented easier.

D. Conclusion

This research aims to develop and evaluate learning media in the form of comics specifically designed to improve the reading comprehension skills of class III students at MIS Hubbul Wathon. The research results show that the comic learning media developed received a positive assessment from various aspects. Media expert validation resulted in a score of 96%, which shows that comic media is very valid for use in learning. The material expert assessment also reached 91%, indicating that the comic content is by learning needs and objectives. Feedback from teachers obtained a score of 98%, which indicates that this media is very practical and easy to apply in the learning process. Apart from that, student responses also scored 98%, indicating that students felt this comic media was very practical and interesting. The effectiveness of comic media in the learning process is proven by increased reading ability with a Ngain score of 0.6 or the medium category. This shows that comic media not only succeeded in attracting students' interest but also significantly improved their ability in reading comprehension. The results of this research imply that using comic-based learning media can significantly improve students' reading comprehension skills. Well-designed comics can make it easier for students to understand the context, storyline, and important information from the reading. It is recommended that teachers at MIS Hubbul Watson continue to use and develop similar learning media for various subject matters. Media such as comics can be an effective tool for improving reading comprehension skills and other learning skills.

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