

Digital Comics Based on Numeracy Literacy to Increase Reading Interest in Primary School High Grades

Bella Emilia Putri¹, Siti Nur Hazizah², Kavita Febian³, Dede Endang Mascita⁴, Mudopar^{5*} 

^{1,2,3,4,5} Faculty of Education and Science, University Swadaya Gunung Jati, Cirebon, Indonesia

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ABSTRAK

Penelitian ini dilatarbelakangi oleh rendahnya minat baca peserta didik kelas tinggi. Penelitian ini bertujuan untuk mengembangkan media pembelajaran berupa komik digital berbasis literasi numerasi yang dapat meningkatkan minat baca peserta didik. Jenis penelitian yang digunakan adalah Research and Development (R&D) dengan model pengembangan ADDIE, yang meliputi tahap Analisis, Desain, Pengembangan, Implementasi, dan Evaluasi. Subjek penelitian adalah peserta didik kelas tinggi, sementara data dikumpulkan melalui angket sebelum dan sesudah penerapan komik digital serta melalui validasi oleh ahli teknologi. Data dianalisis menggunakan teknik deskriptif kuantitatif. Hasil penelitian menunjukkan adanya peningkatan minat baca peserta didik setelah menggunakan komik digital. Validasi ahli teknologi menunjukkan bahwa 95% menyatakan materi komik sesuai dengan kemampuan pemahaman peserta didik, 90% menilai bahasa yang digunakan sesuai, dan 98% menyatakan bahwa komik digital efektif dalam meningkatkan minat baca. Kesimpulannya, komik digital berbasis literasi numerasi dapat menjadi solusi efektif untuk meningkatkan minat baca peserta didik. Penelitian ini berimplikasi pada pengembangan media pembelajaran interaktif untuk meningkatkan literasi di kalangan siswa sekolah dasar.

ABSTRACT

This research was motivated by the low reading interest of high-class students. This research aims to develop learning media in the form of digital comics based on numeracy literacy that can increase students' interest in reading. The type of research used is Research and Development (R&D) with the ADDIE development model, which includes the stages of Analysis, Design, Development, Implementation, and Evaluation. The subjects of the study were high-class students, while the data was collected through questionnaires before and after the implementation of digital comics and through validation by technology experts. The data were analyzed using quantitative descriptive techniques. The results of the study showed an increase in students' interest in reading after using digital comics. The validation of technology experts showed that 95% stated that the comic material was in accordance with the students' comprehension ability, 90% assessed the language used as appropriate, and 98% stated that digital comics were effective in increasing reading interest. In conclusion, digital comics based on numeracy literacy can be an effective solution to increase students' interest in reading. This research has implications for the development of interactive learning media to improve literacy among elementary school students.

1. INTRODUCTION

Education is a very important human activity. From education humans can be educated to become humans who behave well (Agustina et al., 2023; Tri et al., 2021) Education in the industrial era 4.0, every individual must have the skills to adapt to the times. One important skill is numeracy literacy. Numeracy literacy contains skills using mathematical rules and concepts (Andrian, 2023; Saefurohman et al., 2021). Mastery of numeracy literacy skills allows students to effectively adapt to changing times. Numeracy literacy learning can make it easier for teachers to familiarize students with thinking to solve the problems they face. (Rosnelli & Ristiana, 2023; Zainudin et al., 2023). Education is a conscious effort to realize a cultural inheritance from one generation to another. Education is realized with a learning atmosphere and

*Corresponding author

E-mail addresses: mudopar171@gmail.com (Mudopar)

learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character and skills needed by themselves and society (Fingkirani et al., 2020; Kartika et al., 2023). The definition of numeracy literacy by previous research is the ability of students to understand numbers and basic mathematical symbols, analyze numerical information in various forms, and use interpretation to predict and find mathematical conclusions (Aprilia et al., 2023; Kustantina et al., 2022). According to previous research stated that the term "numeracy" is used by the Ministry of Education and Culture of the Republic of Indonesia as a synonym for mathematical literacy (Ayu et al., 2023; Marwiah et al., 2024). Educational researchers in Australia also believe that numeracy literacy includes the knowledge, skills, behaviors, and attitudes required by learners in a variety of situations (Ain, S. Q. et al., 2023; Tanjung, 2024). Numeracy literacy is an important skill that must be developed through an integrated education program from family, school, to society. The importance of mastering numeracy literacy is not only for students, but also for parents and all members of society. Research shows that numeracy literacy-oriented learning is done through a planned curriculum using various assessment instruments, as well as through activities that support numeracy literacy (Banerji & Chavan, 2016; Juniyanto & Nur Mahmudah, 2022).

However, the field shows that literacy and numeracy skills are still low, due to the lack of public attention to education and the lack of facilities in schools (Aini & Pramasdyahsari, 2023; Shute & Rahimi, 2017). Numeracy literacy in Indonesia is still very low as evidenced in Mathematics Learning for students is considered a difficult lesson to understand. Another problem from the results of PISA research in the fields of mathematics and reading in 2018, Indonesia ranked 72nd out of 78 countries and 74th out of 79 countries in math, science and reading (Hutajulu & Minarti, 2024; Rahmah et al., 2023). Rank number 2 from the bottom which means that out of 1000 Indonesians there is only 1 Indonesian who reads diligently (Agustina et al., 2023; Rahmawati, 2020). The above problems occur because of obstacles, obstacles proven in similar research states that in learning, currently, especially after the pandemic, many students have gaps in numeracy literacy (Meutia, 2021; Sihaloho et al., 2019). Therefore, learning is currently focused on numeracy literacy. The main obstacle is the lack of interest in numeracy literacy and also because the learning system tends to be conventional and monotonous, this is also an obstacle in improving numeracy literacy. The book used in learning is not maximally utilized. The last obstacle is due to misconceptions, selection of textbooks low reading ability of students and learning that is not contextualized. Teachers' skills in developing learning materials also still need to be improved. These issues create serious challenges in improving numeracy literacy at the primary school level. Therefore, it is necessary to improve and train numeracy literacy activities at the education level. According to previous research which stated that the culture of numeracy literacy can increase if reading materials are developed and provided to learners (Nasution et al., 2023; Piper et al., 2018). Reading literacy is very important because low reading interest will affect the low level of insight and knowledge of students, and students who have high reading intensity will have a broad level of knowledge and insight (Sartika et al., 2020; Taladngoan et al., 2020). To increase reading interest or literacy interest, it is necessary to know the definition according to previous research which states that reading interest is a person's behavior that encourages someone to do something about reading (Asniar et al., 2020; Kamasiah, 2023). The same thing with the opinion of previous research which stated that reading interest is a strong desire along with a person's effort to read (Schenk et al., 2019; Sukirman, S. et al., 2021). Based on the results of observations during the learning process and also conducting interview activities with the fifth grade teacher of SDN Pegajahan 1 Cirebon City that Literacy activities at school are carried out only one day, namely on Saturday with all classes doing reading activities before learning begins, but these activities are still rarely carried out. Teachers at the school still use old media and learning models, so the teacher explains a lot of material compared to the assignments given. It is very important to use new methods so that students become creative and interactive. Not only methods but using effective media is also very important to be applied in learning in order to increase students' interest in learning. Similarly, the age of 7-12 years or when children enter elementary school the use of media as a tool for delivering material is very important, if they do not use interactive media they will have difficulty understanding the material. However, in these schools teachers only use LKS teaching materials as a tool to convey material to students, teachers rarely use infocus media in learning because the school only has 2 infocus so it can be said that it is impractical to use it. If the teacher uses infocus media in his learning he will only display learning videos or PowerPoint.

The school studied had provided a reading corner for students, but could not increase students' interest in reading. There are many media to increase interest in reading in numeracy literacy The first media, namely using the Quizizz application, is effective for increasing interest in numeracy literacy conducted on grade III elementary school students, getting 56% results showing effectiveness. Not only that, Quizizz can also load numeracy literacy learning materials. The second media is using Kahoot can increase interest in numeracy literacy, especially in mathematics learning. The third media is to improve

students' numeracy literacy by using Augmented Reality, because to attract the attention of elementary school students to the 3D shape they see. but the weakness of this media is that not all teachers can create 3D objects in Augmented Reality, and little material can be conveyed from using Augmented Reality media, and also not all smartphones can access it. The use of learning media has been done in several learning opportunities, but it is still not optimal. This is unfortunate because learning media can increase student learning motivation well (Hidayati et al., 2023; Wahyuni et al., 2023).

The most effective media to increase reading interest in numeracy literacy is to use digital comics, digital comics are a composition of images that tell stories and provide messages to readers. According to another opinion, digital comics are comics that are published digitally, contain images arranged in several parts, have a synchronous reading flow, have frames, have word balloons, and have a writing style that communicates the meaning of the image. The application of digital comics as learning media can increase the value of religious character and have a positive effect on thematic learning in elementary schools, digital comic media has proven effective if used for learning because there are visual elements.

The novelty of this study is the focus of research on the development of digital comics based on numeracy literacy to increase the reading interest of high-grade students in elementary schools, which has not been widely explored in academic literature. This study examines how the use of digital comic media can affect students' reading interest, especially in the context of numeracy literacy, which is important for the development of basic education. This study aims to explore and explain the effectiveness of digital comics as an interactive and engaging learning tool, as well as its impact on the increase in reading interest among elementary school students. By identifying challenges and opportunities in the implementation of digital comics, it is hoped that this research can provide new insights into innovative ways to support numeracy literacy, while encouraging increased student involvement in a more fun and effective learning process.

2. METHOD

The method in this study is to use Research and Development (R&D), which is a product development method to validate. To get certain products using research that needs analysis and also tests the effectiveness so that it can function as a learning media. In addition to using the Research and Development (R&D) research method, in R&D researchers use the ADDIE model. The stages of the ADDIE model are 1. Analyze, 2. Design, 3. Develop, 4. Implement and 5. Evaluate. Evaluation results in using the ADDIE model can bring development in learning to move to the next phase. The stages of the ADDIE model can be seen in Figure 1.

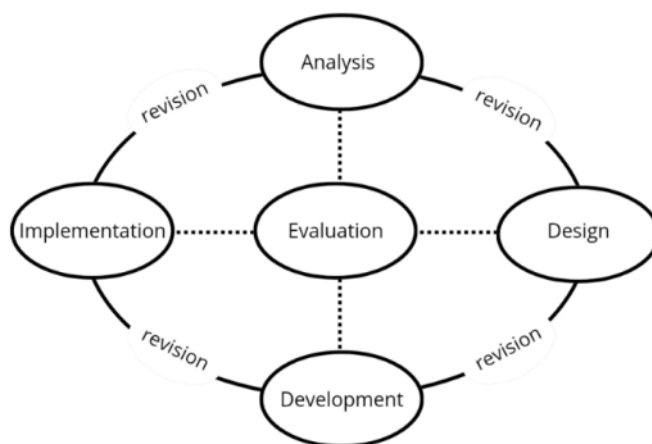


Figure 1. ADDIE Model Development Stage (Branch, 2021)

Data in this development research was obtained through questionnaires, observations, interviews, and documentation. Observations were conducted in class V SDN Pegajahan Cirebon City, interviews were conducted with the homeroom teacher of SDN Pegajahan Cirebon City at the analysis stage to find out the problems of low numeracy literacy in reading interest, and documentation was used to collect photos during the research. The learner questionnaire sheet was used when analyzing the basic abilities of students, the development of students in reading, the expert validation questionnaire And teacher questionnaire.

The data analysis techniques used are qualitative descriptive analysis and inferential analysis. Qualitative descriptive is the screening of opinion data from experts and students. Meanwhile, inferential

analysis is a statistical technique used to analyze sample data and the results can be concluded as a population. In [Table 1](#) we can see list of assessment criteria.

Table 1. List of Assessment Criteria

Score Criteria	Description
20%- 40%	Needs Improvement
41%-60%	Improvements
61%- 80%	Simply
81%- 100%	Very good

3. RESULT AND DISCUSSION

Result

The purpose of this research is to produce digital comic media based on Numeracy Literacy to increase reading interest. This research was developed using the ADDIE development model which consists of five stages (1) Analysis; (2) Design; (3) Development; (4) Implementation; and (5) Evaluation.

The first stage is needs analysis. This stage is carried out to identify and obtain information as support in the preparation of digital comics. The activities carried out at this stage are observation and questionnaire. Observations were made directly by researchers during classroom learning, while questionnaires were given to teachers and students. Based on the results of the needs analysis data, information was obtained that students' interest in reading activities was very low. This is evidenced by the results of the questionnaire for the first statement 52%. The first statement is reinforced by the second statement, which is related to students' reading interest in the reading material presented. In the second statement, learners responded 62%, which shows that teaching materials that are interesting to them are teaching materials that have pictures. And the third statement regarding digital comics, states that 76% of students do not know digital comics and in digital comics can contain many images and colors.

The needs analysis questionnaire was also given to teachers as users. Giving questionnaires to teachers to obtain information related to students' reading interests obtained 50% of teachers responding to students who like to read. The second statement is still related to reading, namely related to the habituation of numeracy literacy students at school, obtaining 60% of numeracy literacy habits carried out at school but students do not like these activities because the reading material presented is student worksheets or about learning, so there is a lack of interesting pictures. The next question is in the form of a solution provided by the author to overcome the above problems in order to increase students' interest in reading, namely offering to develop interesting media and combined with technological advances. 100% of teachers responded strongly agreeing to the solution provided by the author. The media development that the author suggests is because after making observations, researchers found students' preferences with interesting images in comic books. From this, researchers made the development of numeracy literacy-based digital comic media to increase students' interest in reading. The percentage of data from the needs analysis can be seen in [Table 2](#) and [Table 3](#).

Table 2. Results of Analysis of Learner Needs for Reading Interest

No.	Statement	Percentage
1	Learner Reading Interest	52%
2	Need for Reading Interest	62%
3	Knowledge of digital comic media	76%

Table 3. Results of Teacher Needs Analysis on Reading Interest

No.	Statement	Percentage
1	Factors inhibiting reading interest	50%
2	Habituation of Reading Interest through Numeracy Literacy	60%
3	Use of Digital Comics Learning Media	100%

[Table 2](#) and [Table 3](#) are the results of observations and distribution of questionnaires, observations were made directly by researchers during classroom learning and questionnaires were distributed to students and teachers. Distributing both questionnaires to strengthen the answers of the respondents. After conducting a needs analysis, the next process is the Design stage, the design stage is the second stage in media development through planning activities for making numeracy literacy-based digital comic media to

increase reading interest in high school classes. The media is designed with several stages, including the stage of determining the application for making digital comic media and determining the content or material in the comic. The application used in designing digital comics is by using the canva application, while the material presented in the comic contains the water cycle. The canva application is used to design digital comics to make them more attractive while the water cycle material aims to provide understanding to students through literacy activities. This is in accordance with the learning objectives to be achieved, namely learners can explain well how the water cycle occurs and connect it with efforts to maintain water availability. The digital comic design developed includes a cover, preface, biography, content and cover The following presents the design of the digital comics that have been developed.



Figure 2. Digital Comic Cover, Numeracy, Literacy

The Figure 2 will be explained in Table 4.

Table 4. Design Explanation

Design characteristics	Description
Cover	The cover of the digital comic that the researcher designed, the title of the digital comic on the cover is "The Adventure of the Water". This title was chosen because the content of the story in the comic explains the origin of water. The illustrations are designed with a natural theme because water comes from nature. In the cover there are also characters in the story to increase students' interest in reading.
Numeration	In this section, numeracy activities are presented by displaying some symbols and numbers. Money and number symbols are used because money is a concrete object that is more easily recognized by learners. This will make it easier for learners to learn to count and understand the storyline well.
Literacy	Explained about the origin of water. The explanation of the water cycle and maintaining the availability of water is in accordance with the learning outcomes of grade 5. In this section, cloud and water characters are used in the story because they are concrete examples of illustrations that explain the origin of water, making it easier for students to understand the material.

Digital comics developed by researchers also have different characteristics from other comics. These characteristics are indicated by the presence of musical accompaniment on each page. The musical accompaniment aims to increase the motivation of students in understanding the contents of the comic. Other characteristics possessed by digital comics that have been developed by researchers also have practicality in access. The third stage is Development. The development stage is the process of validating digital comic media that has been designed by validators. Validators appointed to validate digital comics are material experts and media experts. The validation process aims to test the feasibility of digital comics. The validation instrument contains the accuracy of the material with the competency standards, the clarity of language use and the effectiveness of digital comic media to increase reading interest. The validation results in Table 5 from the validator are explained as follows (a) The first question regarding the material in the digital comic is whether it is in accordance with the material and the ability of students. The answer

obtained 95% from the experts; (b) The second question related to whether the language was appropriate, the experts answered 90% accordingly; (c) The third question related to digital comics to increase students' interest in reading obtained 98% from the experts that the digital comic media could increase students' interest in reading. The percentage results prove that digital comics are feasible to be applied in learning to increase students' interest in reading with a note that there are several parts that must be revised.

Table 5. Expert Validation Results

No.	Statement	Percentage
1	Provision of material with competency standards	95%
2	Clarity of Language Use	90%
3	Digital Comic Media Can Increase Reading Interest	98%

Furthermore, regarding students' responses in Table 6 to digital comics. The first statement related to students' interest in digital comics that 90% were interested in the digital comics they read. The second statement regarding ebagi in digital comics can be understood so that students respond 90%. Not only ebagi but parts of digital comics such as instructions and illustrations in digital comics get a 90% response by students because they are easy to understand and also digital comics can increase interest in reading get a 100% response from students.

Table 6. Instrument for Students' Response to Digital Comics

No.	Statement	Percentage
1	Learner interest	90%
2	Language in Digital Comics	90%
3	Digital comics section	90%
4	Digital Comics can increase reading interest	100%

From the data in Table 6, it shows that most learners agree that digital comics are unique so that they are interested in reading them and cause curiosity to read them to completion. This is a way to increase students' interest in reading by making them like and make them curious.

In Figure 3 are parts of the revised digital comic.



Figure 3. Author's Biography, Foreword, Numeration Section, Bibliography
 In Table 7 we can see explanation of digital comic design revision results.

Table 7. Explanation Table of Digital Comic Design Revision Results

Revised Design	Description
Author Biography	author biography section. Previously designed digital comics did not have an author's biography section. However, after obtaining suggestions and improvements from validators of numeracy literacy-based digital comics, it is necessary to add the author's biography. The biography aims to make readers know the author of the comic.
Foreword	shows the preface section. Previously designed digital comics did not have a preface. However, after obtaining suggestions and improvements from validators of numeracy literacy-based digital comics, it is necessary to add a preface. the preface aims to explain the description or general information of the scientific work.
Numeration Section	is a part of the comic that shows numeracy activities. Based on the validation results from the technology expert, the following improvement suggestions were obtained, the sheep symbol was changed to a money symbol. The replacement of this symbol aims to make it easier for students to understand the storyline in the comic because the money symbol is considered a concrete object that exists in the daily lives of students.
Bibliography	shows the bibliography section. Previously designed digital comics did not have a bibliography section. However, after obtaining suggestions and improvements from validators of numeracy literacy-based digital comics, it is necessary to add a bibliography. the bibliography aims to give appreciation to the authors whose work has been included in the research.

The next stage is Implementation, which is applying it to the learning process to test its effectiveness, whether this digital comic is effective for use in increasing reading interest in high school grades. This effectiveness test was carried out in a limited scale, namely one school, grade V SDN Pegajahan Cirebon City, totaling 20 students. The implementation process was carried out with pretest procedures, learning using digital comic media, and posttest. This activity produces pretest scores as a pointer to the initial ability of students and posttests as a pointer to the results after participating in learning using digital comics. The implementation results can be seen in the following [Table 8](#).

Table 8. Pre-test scores of students

No.	Participant's score	Total
1	40	1
2	45	3
3	50	3
4	55	3
5	60	2
6	65	1
7	70	3
8	75	1
9	80	1
10	85	2

The initial ability of students in understanding science material about the "water cycle" is still below the passing standard. Of the 20 learners only 7 people who have entered the passing standard or only 35%. So about 65% of learners do not meet the graduation requirements. This also means that the level of interest in reading is still lacking.

Table 9. Post-test Scores of Students

No.	Participant's score	Total
1	60	1
2	65	2
3	70	3
4	75	7
5	80	3
6	85	1

No.	Participant's score	Total
7	90	2
8	95	1

Table 9 post-test results show there is a change. Many learners' final abilities are above the passing standard. Of the 20 learners only 15% or only 3 people did not meet the passing standard. So 85% of learners meet the graduation requirements. This also means that there is an increase in interest in reading.

Based on the results of the t test with the one-sample statistic formula in Table 10, the following calculations can be made.

Table 10. One Sample Statistic

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Pre-test	20	60.50	13.85	3.09
Post-test	20	76.25	8.86	1.98

Table 11. Statistics of t test results

One-Sample Test						
Test Value = 0						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pre-test	19.53	19	0.00	60.50	54.02	66.98
Post-test	38.45	19	0.00	76.25	72.10	80.40

The t-test results in Table 11 shows the average pretest 60.50 and posttest 76.25. The difference of 15.75 indicates an increase from the initial ability. With a confidence level of 95%, the result of the t test is the posttest calculation (38.45) ≥ pretest (19.53). The results show that digital comic media can increase reading interest in numeracy literacy. The successful use of digital comics in learning. The use of digital comic media creates high enthusiasm among students, and they easily understand the material presented because the presentation of the material is interesting and not monotonous. Various interesting images are included in the digital comics, and the use of music as a learning accompaniment also improves the quality of learning.

The last stage is evaluation. The implementation of development research has followed the stages of analysis, design, development, implementation. These stages have been carried out. Based on these stages, it shows that the process of research and development of digital comics in learning science with water cycle material is in accordance with procedures and produces effective products for use in learning. From the validation, the validator gave a feasibility score of 94%. Likewise, the results of students' responses to digital comics showed a good response of 92%. Learners experienced significant ease in understanding the material presented by the researcher, and there was a high level of enthusiasm from students during the learning process. In addition, based on students' responses, it was revealed that the presentation of material in the form of comics was very helpful in their understanding because of the simplicity and visual appeal of the comics. So overall, the numeracy literacy-based digital comic media in science learning about the water cycle developed and implemented in grade 5 SDN Pegajahan 1 Cirebon City shows that it is effective to be used as learning media.

Discussion

Based on the results of the research that has been obtained, students basically do not like reading books, even though reading books has a lot of benefits and the main thing is to add insight, further benefits can relieve stress, can increase empathy, increase intellectual intelligence, drive away loneliness and also according to previous research say from reading students can broaden their horizons, strengthen ideas, and increase creativity (Meutia, 2021; Sihaloho et al., 2019). Reading is a way to understand the content of a reading. The results we obtained can be concluded that students want to read if there are many pictures, the factors that make children like books that have many pictures are caused by family and the surrounding environment, because the child is used to being introduced to books by his parents that have many pictures, so it can be said that his parents rarely make their children read books that have no pictures. And also mentioned that it could also be due to the gadget factor so that the child often plays cellphones and in

cellphones it is not uncommon if there are no pictures found, because in the gadget there are many pictures and the colors also make students interested. From the many uses of gadgets, but the data we obtained, students did not know what digital comics were according to previous research stated that digital comics are media that contain sound and images in them (Oktaviana & Ramadhani, 2023; Syarah et al., 2019).

Reading can increase knowledge and skills that are useful for supporting yourself (Giambona & Porcu, 2015; Sukirman, S. et al., 2021). Increasing interest in reading is not easy because interest in reading will grow from within oneself, interest in reading arises from within oneself and can be assisted by parents and teachers so that students can bring up a sense of desire in themselves to read. Technology is now developing rapidly, enriching our lives with various advanced features. For example, gadgets that make human life easier (Sukirman, S. et al., 2021; Susongko & Afrizal, 2018). Therefore, researchers took steps to increase literate learners in schools by incorporating the digital world because everything is digital, even newspapers and magazines are now digital so that from the many uses of gadgets to be used positively, students can open links to read these digital comics (Kartini & Hermansah, 2021; Sari et al., 2022).

With numeracy literacy-based digital comic media to increase reading interest in high school classes. Numeracy literacy-based digital comic media using the ADDIE model is said to be successful in increasing students' reading interest because it obtains very feasible criteria from all respondents so that this media can be applied to teaching and learning activities, especially learning Natural Sciences in the independent curriculum for grade V SD. Before it is said to be successful, researchers are constantly looking for ways to make students interested first, after he is interested he likes it and from the emergence of his liking he reads the digital comics with curiosity because there is a sense of love from their hearts not from a sense of coercion because if from a sense of coercion they will not like the comic because their hearts are not interested if so then the students will not continue to read the digital comics because they feel bored their hearts don't like it. But finding ways to make students interested in reading also requires digital comic media that is designed as well as possible in terms of images to make it as interesting as possible, in terms of illustrations also made using sounds related to the background in the digital comic. Do not forget the use of language using good and correct language so that it can be understood by readers, and also the material in the digital comics is made according to the level of ability of the students, before making the material it would be nice to trace in advance the background of the class to be addressed, namely in terms of intelligence and ability of students after knowing it can only make material that is in accordance with the ability of the students it targets. Instructions in digital comics are not underestimated, it is the instructions that can facilitate readers in carrying out their activities, therefore they are made as easy as possible so that readers are not confused when understanding them.

Overall, it can be concluded that the development of numeracy literacy-based digital comic media to increase reading interest in high school classes can make it easier for students to understand the learning material in it and can increase students' interest in reading. The making of this digital comic media utilizes technological developments in the era of the industrial revolution 4.0. reinforced by the opinion of previous research which says that the rapid development of technology is an opportunity for the world of education in utilizing it to increase innovation in creative learning, creative is the expertise to create new products that have never existed or modify them by developing existing products (Lavicza et al., 2022; Nguyen et al., 2020). Therefore, researchers take advantage of technological developments by developing digital comic media and combined with overcoming a problem, namely the lack of reading interest of high-class students in elementary schools. This media is based on numeracy literacy because it follows the times.

The results of this study make an important contribution to understanding the influence of the use of digital comics based on numeracy literacy on the reading interest of high-grade students in elementary school. This study shows that digital comics not only play an interactive and interesting learning tool, but are also able to increase students' interest in reading, especially in the context of numeracy literacy. The use of this media is increasingly gaining attention because it can provide a more enjoyable learning experience as well as being effective in improving students' literacy skills. The positive impact of digital comics shows how technological innovations in education can enrich traditional teaching methods, while encouraging student engagement in the learning process. This research also underscores the importance of an inclusive and sustainable approach in increasing students' interest in reading. One of the limitations of this research is the influence of the social environment and technology that may not be fully covered, which can affect the successful implementation of digital comics. Factors such as access to technological devices and support from schools also require further research. Recommendations for further research include a more in-depth examination of how digital comics can be integrated with the curriculum, as well as how these initiatives can support the development of overall literacy at the primary education level.

4. CONCLUSION

The results of the discussion concluded that before the application of digital comic media to high grade elementary school students, the reading interest of high grade elementary school students was very low but there was still hope that they would want to read if there were many pictures, from that hope it made a solution to make numeracy literacy-based digital comics to increase the reading interest of high grade elementary school students, by making it as interesting as possible there are many pictures, there are accompanying sounds and songs of encouragement and there is a very easy way of calculating so that it can be quickly understood by readers or high grade elementary school students.

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