Educational Comic-Based Digital Media to Increase Reading Interest of Elementary School Students

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Abstrak

Diperlukan upaya lebih untuk menjadi pribadi yang integral, salah satunya melalui pendidikan. Diperlukan kebijakan pemerintah dalam mewujudkan pendidikan yang relevan dan terus berkembang mengikuti perkembangan zaman. Penelitian ini bertujuan untuk mengembangkan media pembelajaran berbasis komik edukasi untuk meningkatkan minat baca siswa. Jenis penelitian ini menggunakan metode research and development (R&D), dengan model ADDIE (Analysis, Design, Development, Implementation, dan Evaluation). Subyek penelitian adalah siswa kelas III sekolah dasar. Data penelitian diperoleh melalui observasi, angket, dan validitas. Data yang diperoleh dan dianalisis menggunakan data kuantitatif. Jawaban tersebut kemudian diukur menggunakan skala likert berupa checklist dengan skala lima. Berdasarkan hasil penelitian, media digital menjadi tempat belajar yang lebih praktis dan mudah diakses, menjadikan pengalaman belajar siswa lebih natural, dan meningkatkan aktivitas dan minat. Hasil validitas setiap ahli materi, ahli media, dan ahli bahasa menunjukkan bahwa media digital berbasis komik edukatif sangat layak dijadikan alternatif media bagi siswa untuk meningkatkan minat baca.

Kata Kunci: minat baca, media digital, komik pendidikan.

Abstract

More effort is needed to become an integral person, one of which is through education. Where government policies are needed in realizing education that is relevant and continues to grow following the times. This study aims to develop educational comic-based learning media to increase students' reading interest. This type of research uses the Research and Development (R&D) method, with the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). The research subjects were third grade students in elementary school. Research data obtained through observation, questionnaires, and validity. The data obtained and analyzed using quantitative data. The answer is then measured using a Likert scale in the form of a checklist with a scale of five. Based on the results of the study, digital media has become a more practical and accessible place for learning, making the learning experience of students more natural and increasing activities and interests. The results of the validity of each material expert, media expert and linguist, indicate that digital media based on educational comics is very feasible for alternative media for students to increase interest in reading.

Keywords: Reading Interest, Digital Media, Educational Comics.

1. INTRODUCTION

Indonesia positions education as an important thing that becomes the basis for nation building. The facilities provided by education are also believed to be able to shape students to become completer and more perfect. Therefore, Indonesia makes education a basic step in developing the country. Industry 4.0 which is digital-based cybernetics, with large networks and data that is connected quickly and has a wide reach (Amaliyah, 2021; Astuti et al., 2019; Nurtanto et al., 2019). As time goes by, the development of media is getting more sophisticated. Learning media is needed, to complete a teaching and learning process, which is packaged to be more interesting and innovative. This step also involves teachers in the teaching process using technology in the 4.0 era. Learning media has great use in supporting

the effectiveness of learning (Astra et al., 2020; Suwartono & Aniuranti, 2019; Triana Tarigan, 2018). Therefore, it is necessary to choose teaching materials according to teaching topics, because students' the learning process is an expression of providing information and achieving goals educational in the learning program process (Elshami et al., 2021; Sukmanasa et al., 2017; Susilawati et al., 2019). Previous study reveals that learning media are everything that can facilitate the delivery and dissemination of messages from sources quickly and in a structured manner, which makes the learning environment conducive and the recipient of the message also efficient (Pranata & Yulianti, 2021).

According to UNESCO research in 2016, reading interest in Indonesia is one of the lowest, only reaching 0.001% of all Indonesian people who are interested in reading. Research conducted by IKAPI (Indonesian Publishers Association) in 2015 stated that the book publishing industry in Indonesia no longer reaches 100%, only 80%, because 20% of that part has been converted into the e-book market (electronic book), the market changes. This also indicates that the transition from conventional books to e-books is still ongoing in Indonesia and will continue to grow (Antara & Dewantara, 2022; Suryaningtyas et al., 2020). Previous research revealed that interest is a tendency of the heart towards something, while reading is spelling, reciting and understanding the content of writing (Mahayanti et al., 2017). Reading is a window to the world, meaning that having an interest in reading allows individuals to increase intelligence, access information and also expand knowledge and insight within a person. And conversely, reading less often makes one's knowledge limited (Korat & Falk, 2019; Nasution, 2019).

Learning media is something that distributes subject matter, stimulates the thoughts, feelings, interests and attention of students (Lee, 2016; Mashuri, 2019; Tiarasari et al., 2018). The learning process is very dependent on the teacher as a source of learning, in which conditions like this the teacher does not really determine the existence of the learning process. When science and technology are developing rapidly, students can learn anywhere and anytime according to their interests or learning styles. This allows students to relate directly to the object being studied (Astra et al., 2020; Topolšek et al., 2020). Therefore, the orientation of the use of media is the educators themselves. Education must be designed to be ready to face the times that make a person's behavior change, the world feels in one's hands when someone holds a smartphone. This increasingly rapid technological development can make it easier for everyone to create information, disseminate information, and utilize digital media to attract students' reading interest. Technology is always changing over time. Technology develops in sync with the human brain. Technology changes in line with the human desire to live a better, more flexible and higher quality life. In this situation, the media is needed to provide concrete knowledge that is easy to understand. This allows students to relate directly to the object being studied (Qekaj-Thaqi & Thaqi, 2021; Robandi et al., 2019). Previous study stated that currently development of the era is increasingly making today's technology continues to advance and develop, thus making many changes to human life from the information age to the digital era in all fields (Ruddamayanti, 2019).

In the history of technological development, the United States has begun to develop digital technology in the mid-20th century. Digital technology includes all types of electronic equipment and applications that use information in the form of numeric codes. The longer the repair process, the easier it will be to make changes in technology. The transformation of digital media in education makes the type of school unimportant. However, video conference or web meeting facilities make it easier to access and follow the subject matter (Haryanto et al., 2021; Lusiyani & Dara Anindya, 2021; Mu'awanah et al., 2021). Digital transformation is related to the need to use new technology to stay competitive in the era of the internet, where services and products are delivered online and in real time. Previous study argues that digital media exists as a channel that can be changed, seen, created and even survive in the future

(Wangi et al., 2018). This development is needed so that students can determine how they want to express their learning independently. The existence of digital media makes learning places easier to access by students wherever and whenever they need, by having a learning experience that is much more personal and natural (Ningsih et al., 2019; Patandean & Indrajit, 2020). Previous study argues that digital reading media is one of the visual media that can generalize information obtained by people in cities with people in other areas (Obisuru & Purbani, 2016). Digital media is expected to make it easier for educators in the teaching and learning process in the classroom, because the book format is more attractive, easy to download, and makes it easier to provide material, so that knowledge information is more easily accepted and understood.

This is a potential to develop comics as a learning medium (Mahendra et al., 2021; Sukmanasa et al., 2017). Digital comics is an application in the form of an electronic-based digital format that can display storylines with animation, films, games or others, which makes it easier for readers to receive messages and enjoy each story through a smartphone. Comics have a function as a transmitter of learning messages through visual media that are packaged in an attractive and creative way to make participants unattractive and not bored in the learning process (Daulay & Nurmnalina, 2021; Liniasari et al., 2021). With the current digital transformation, it can provide the potential to increase students' interest in reading, by applying it through digital media based on educational comics. Where we can use it to popularize an interesting reading culture easily and creatively. Through the development of digital media based on educational comics, reading can not only be seen from a few books, but also some online reading materials with ease, such as being clicked, read, discussed, saved or even downloaded. This study aims to develop digital comics that can be considered as well as current references to increase students' reading interest in the 21st century.

2. METHOD

This type of research uses the research and development (R&D) methodology or commonly referred to as research and development, research methods used to produce or develop a particular product, as well as perfecting existing products and testing the effectiveness of these products (Khoir et al., 2020; Sugiyono, 2018). The products produced in the research and development method are in the form of learning materials, learning media, and learning evaluations that are used for school purposes. This research is aimed at low grade or third grade students at the 08 Petang State Elementary School, West Jakarta.

The methodological model used in this study uses the ADDIE model. This model has five stages including Analysis. Design. Development. Implementation. and Evaluation (Albet Maydiantoro, 2019; Aldoobie, 2015). Data collection techniques researchers used a quantitative approach to obtain data using numbers such as questionnaires and validations given by material experts, media experts, and student responses as research objects. The data obtained and analyzed using quantitative data. The answer is then measured using a Likert scale in the form of a checklist with a scale of five. In analyze the data involving the validation of subject matter experts, media experts, and student trials carried out by comparing scores by the validator (f) with the maximum number of scores that have been determined by the questionnaire (N) and the validation results listed in the validation sheet will be analyzed (Cahyadi, 2019; Widiastika et al., 2020).

3. RESULT AND DISCUSSION

Result

In developing digital media, validation tests were then carried out by experts. In the feasibility test involving 25 students and 3 experts, among others: First by media experts, the validator revealed "Very Eligible" with a total percentage of 89.5%. Second, by material experts, the validator revealed "Very Eligible" with a total percentage of 93%. And the activity by linguists, the validator revealed "Very Eligible" with a total percentage of 100%. Based on data acquisition, it shows that digital media based on educational comics is very feasible to be used in the teaching and learning process as creative, interesting and innovative learning media.

Based on the results of the data above, the researchers developed digital reading media in the form of "Educational Comics" through the ADDIE model. The ADDIE model approach was developed in a structured, programmed and systematic manner. The ADDIE model is an instructional process consisting of five phases, namely dynamic analysis, design, development, implementation and evaluation as follows: phase first *analysis*, this stage is carried out through various aspects of the characteristics of academic ability and experience learners. With the results of observations about how passive and watching teaching and learning activities are with learning media that have not developed and the material in the learning media is aligned with the 2013 curriculum KI & KD in accordance with the provisions of the school. Second *design*. At this stage, to produce products that are suitable for students in developing digital media based on educational comics, it requires several steps.

In the first step, researchers determine the software and software used is pixton.com. pixton is a web application for creating comics, where this platform can choose characters, scenarios, and add speech bubbles to easily create stories. The second step is to design a flowchart. When creating a flowchart there are several symbols that must be known, in order to provide a description of a process from an application, here are some steps to design a flowchart is show in Figure 1.
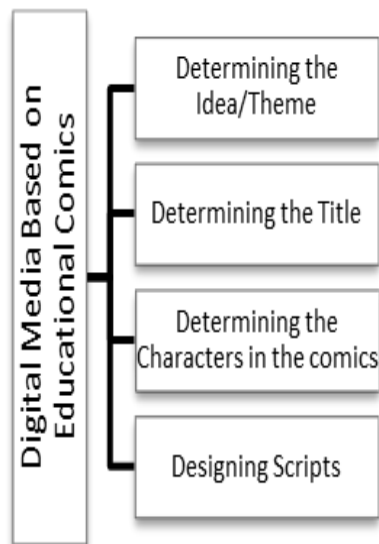
Figure 1. Flowchart of Educational Comics

Next is the *development*, in the third stage of development this includes 3 stages of manufacture, namely the first production, the second editing, and the third. finishing. Production, at this stage everything that was designed in the design stage begins to be developed.
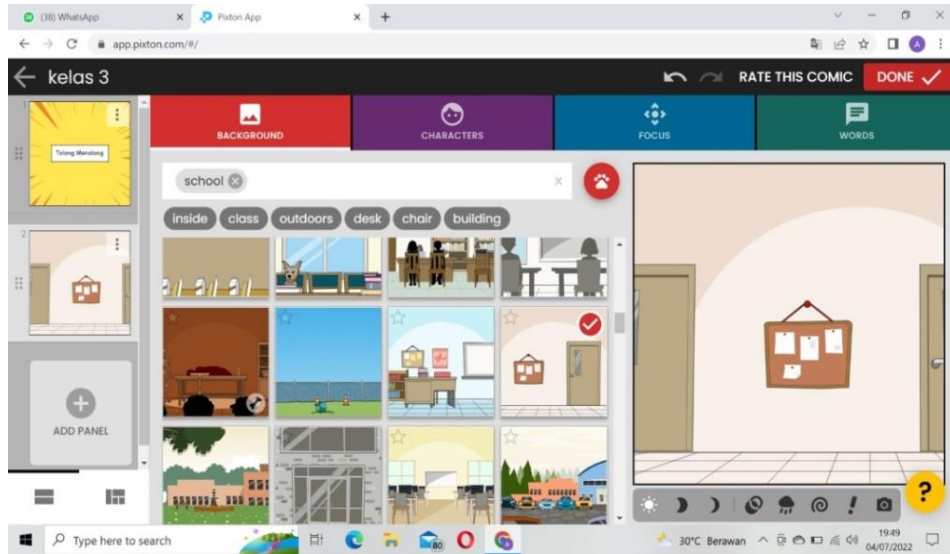
Figure 2. Set Background

After the researcher determines the title of the comic, then the display on the pixton.com web application for researchers to choose a suitable background according to the material to be discussed in the comic story as show in Figure 2. Then the display of character selection in accordance with the characteristics of students is show in Figure 3.
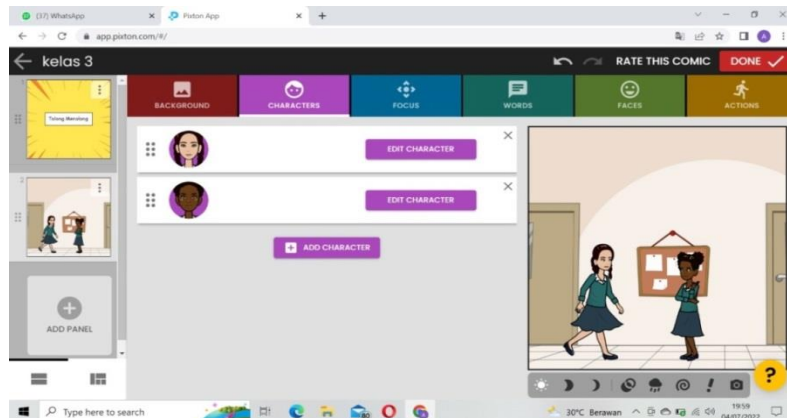

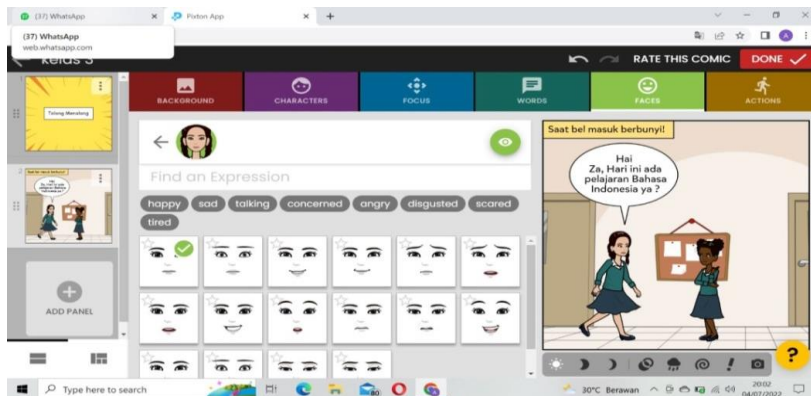**Figure 3.** Define character

Figure 4. Define Facial Expressions

In Figure 4 is a display of the selection of facial expressions that can be adjusted to the character of the students in the educational comic story. Editing, at this stage, we begin to compose and edit each panel in the comic. The editing stage aims to correct errors in writing, mismatches in the background and character placement. Finishing, after the researchers have completed the media to be developed, at this stage a validation test will be carried out from the experts to determine the feasibility of digital media based on educational comics. Media expert validation test results is show in Table 1.

Table 1. Media Expert Validation Test Results

Aspect name	Score Earned	Max Score	Average Percentage	Category
Learning	5	5	100%	so worth it
Quality	32	35	91,4%	so worth it
Media Display	23	24	92%	so worth it
Media Usage	25	30	83,3%	so worth it
Total overall percentage	85	95	89,5%	so worth it

Based on Table 1, the quality of learning media obtained from media experts from various aspects of assessment such as learning gets a percentage of 100% with the "Very Eligible" category, quality and quality aspects get a percentage of 91.4% in the "Very Eligible" category, the media display aspect gets a percentage of 92% with the "Very Eligible" category and the aspect of media use obtained a percentage of 83.3% with the "Very Eligible" category.The results of the assessment by media experts showed that the total score obtained on 19 indicators was 85 out of a total of 95, obtaining a percentage of 89.5% in the "Very Eligible" category. This has received a little revision by media experts, namely the improvement of the repetition of panels at the end of the comic and the error of the word writer on the panel which shows the exchange of sums in the leaf image. Material expert validation test results is show in Table 2.

Table 2. Material Expert Validation Test Results

| Aspect name	Score Earned	Max Score	Average Percentage	Category
Content Eligibility	35	40	87,5%	so worth it
Serving Eligibility	19	20	95%	so worth it
Language Eligibility	24	25	96%	so worth it
Contextual Assessment	15	15	100%	so worth it
Total overall percentage	93	100	93%	so worth it

Based on Table 2, the quality of learning media obtained from material experts from various aspects of the assessment such as content feasibility obtained a percentage of 87.5% in the "Very Eligible" category, the presentation feasibility aspect obtained a percentage of 95% with the "Very Eligible" category, the language feasibility aspect obtained a percentage of 96% with the "Very Eligible" category, the contextual assessment aspect obtained a percentage of 100% with the "Very Eligible" category. The results of the assessment by

material experts which show the total score obtained on 20 indicators is 93 out of a total of 100 obtaining a percentage of 93% in the "Very Eligible" category. The material expert validation test was assessed by the third-grade guardian of SDN Kapuk 08. Linguistic expert validation test results is show in Table 3.

Table 3. Linguistic Expert Validation Test Results

Aspect name	Score Earned	Max Score	Average Percentage	Category
Language Compatibility	5	5	100%	so worth it
Language Clarity	5	5	100%	so worth it
Language Equipment	10	10	100%	so worth it
Language Readability	15	15	100%	so worth it
Total overall percentage	35	35	100%	so worth it

Based on Table 3, the quality of the media obtained from linguists from various aspects of assessment such as language suitability obtained a percentage of 100% in the "Very Eligible" category, the language clarity aspect obtained a percentage of 100% in the "Very Eligible" category, the language completeness aspect obtained a 100% percentage in the category "Very Eligible" and the language readability aspect obtained a percentage of 100% in the "Very Eligible" category. The results of the assessment by linguists which show the total score obtained on 7 indicators is 35 out of a total of 35 obtaining a percentage of 100% with the "Very Eligible" category. The next phase is *implementation*, in the fourth stage the implementation is carried out after going through the validation and revision stages by experts. Digital media based on educational comics was tested in large groups of 25 students consisting of 9 boys and 16 girls, third grade students at SDN Kapuk 08 Petang, West Jakarta, to find out the results of student responses to learning media products. Students trial results is show in Figure 5.
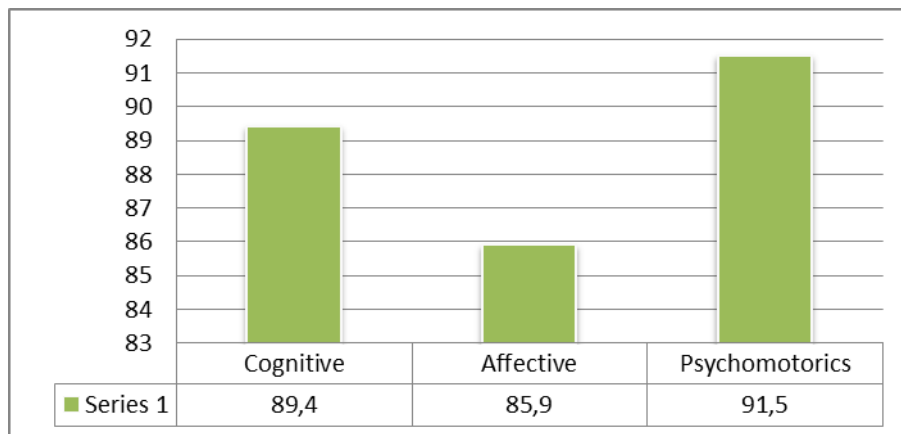
Figure 4. Student Trial Results

Based on Figure 5, the data obtained from the response test of third grade students at SDN Kapuk 08 Petang that the cognitive aspect got an average percentage of 89.4%, the

affective aspect got an average percentage of 85.9% and the psychomotor aspect got an average percentage of 91, 5%. It can be concluded that the overall results of the assessment of student responses which show the total score obtained on 21 indicators is 2292 from a total of 2625 obtaining a percentage of 87.3% in the "Very Eligible" category. So it can be stated that this learning media is suitable to be used in increasing the reading interest of class III students. The last phase is *evaluation,* the fifth phase, namely evaluation, is the final stage, where the previous stages have been completed. After obtaining data from the validators in the form of suggestions or input, through the distribution of questionnaires and after conducting a feasibility test on students and experts. If there are deficiencies in the learning media, the researchers will make improvements in order to improve the quality of the developed media.

Discussion

The current technological era is known as the era of the industrial revolution 4.0. Technology is always changing over time, developing in harmony with the development of the human brain. Technology develops under the demands of making it easier for humans to carry out their activities (Patandean & Indrajit, 2020; Qekaj-Thaqi & Thaqi, 2021). Previous research found that there was a difference in the effect of using digital reading media with the use of picture story books on students' reading interest (Sukmanasa et al., 2017).

In other words, reading can help students add insight, knowledge, skills, activities, talents and even interests that continue to develop optimally (Hung & Chan, 2020; Sumaryanti, 2020). Having an interest in reading is a very good investment, and reading is required from all aspects. Interest in reading is not present immediately when we are born into the world. Interest in reading exists and becomes a part of it because of the effort within and environmental factors that also support it (Dewi et al., 2020; Triana Tarigan, 2018). According to previous research revealed that digital reading media is a very flexible medium and has become part of the daily life of students, by adapting it into comic form with genres and visuals that suit taste, can be interesting and information is easier to convey (Sukmanasa et al., 2017).

As one of previous research proved that through the media picture story books can increase interest in reading in children, the more children are often given a stimulus for storytelling activities, the power of imagination and connection will arise by itself (Sumaryanti, 2020). It can be seen that children can develop their imagination and interest in looking at story books and learning simple sentences. And it is renforece by other previous research which proved that digital comics are media that can make it easier to convey material in a practical, dynamic, and interesting way (Nasution, 2019). This makes it easier for students to understand what is conveyed by the teacher with their imagination and character.

Comics can also be used as learning media because comics can be designed according to the teaching material to be delivered. Comic comes from the Dutch language, namely Komiek, which means comedian. In Greek, comics come from the word "komikos" or "kosmos" which means having fun or joking (Batubara, 2021; Liniasari et al., 2021). This is a potential to develop comics as a learning medium (Mahendra et al., 2021; Sukmanasa et al., 2017). Comics are not only entertainment media, but also very good educational media to give to students. This shows that digital media based on educational comics is very feasible to be used in the teaching and learning process as creative and innovative alternative media. And digital media based on educational comics makes the media a communication tool in conveying material content and even learning messages in a clear, interesting and coherent manner so that the teaching and learning process occurs optimally.

Based on the results of the study, to optimally utilize digital media based on educational comics in its use, the researcher provides several suggestions. First, to students are advised to use digital media based on educational comics properly and according to their functions. To educators, digital media based on educational comics can be used as alternative media to help increase students' reading interest, as well as help facilitate digital media based on educational comics so that they are distributed evenly to all students. To the principal to pay more attention to the needs of educators, what is needed in the teaching and learning process in developing learning media in the classroom, both in terms of facilities and infrastructure and To researchers and further development, can be reference material in research and develop it to be even better, with the latest materials in accordance with the needs and developments of the era.

4. CONCLUSION

Digital media makes learning places easier to access and makes the learning experience much more personal and natural. Thus, reading can add insight, knowledge, skills, activities, talents and even interests that continue to develop optimally. The feasibility test involved 25 students and 3 experts, including: one material expert, one media expert and one linguist. The results of the assessment by material experts have a total average percentage of 93% with the "Very Eligible" criteria. The results of the assessment by media experts have a total average percentage of 89.5% with the "Very Eligible" criteria. The results of the assessment by linguists have a total overall average percentage of 100% with the "Very Eligible" criteria. These results indicate that digital media based on educational comics is very feasible to be declared as an alternative media for students to increase reading interest. The response of students to digital media based on educational comics was assessed as "Very Appropriate" to be applied in teaching and learning activities in schools. These results also show that this educational comic-based digital media received a positive response from students, that they were interested in reading books that were more creative and colorful.

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