Development of E-Comics "Keragaman Budaya" to Increase Interest and Learning Outcomes in Social Sciences in Elementary

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Abstrak

Kurangnya pemanfaatan media pada proses pembelajaran mengakibatkan siswa kurnang semangat dan kurang tertarik dalam mengikuti pembelajaran, sehingga pembelajaran menjadi terhambat dan tujuan pembelajaran tidak tercapai. Penelitian ini bertujuan untuk mengembangkan E-komik guna memecahkan masalah kurangnya minat dan hasil belajar siswa kelas 4. Penelitian ini menggunakan desain R&D dengan model ADDIE. Hasil validasi yang telah dilakukan oleh ahli media, materi dan guru berada di kategori sangat layak digunakan dengan rata-rata 86,4%. Berdasarkan hasil angket minat, siswa rata-rata memberikan jawaban sangat setuju. Hasil yang didapatkan yaitu 95,6%. Berdasarkan hasil penilaian pretest dan posttest didapatkan n-gain sebesar 0,57 dengan persentase 57% dan masuk kategori sedang. Dapat disimpulkan bahwa terdapat peningkatan minat dan hasil belajar setelah diberikan media pembelajaran E- Komik.

Kata Kunci: e-komik, media pembelajaran, minat dan hasil belajar, sekolah dasar

Abstract

The lack of use of media in learning results in students being less enthusiastic and interested in participating in learning, so that learning is hampered and learning objectives are not achieved. This research aims to develop E-comics to overcome the problem of low interest and learning outcomes for grade 4 students. This research uses an R&D design with the ADDIE model. The validation results carried out by media, material and teacher experts were in the very suitable for use category with an average of 86.4%. Based on the results of the interest questionnaire, the average student agrees. The results obtained were 95.6%. Based on the results of the pretest and posttest assessments, an n-gain of 0.57 was obtained with a percentage of 57% in the medium category. It was concluded that there was an increase in interest and learning outcomes after being given E-Comic learning media.

Keyword: e-comics, learning media, interests and learning outcomes, elementary school

INTRODUCTION

The main sector in development in every country is education. Based on Law Number 20 of 2003, regarding the National Education System, article 1 explains that what is meant by education is a conscious, planned effort to create an environment and learning process that allows students to actively participate in developing their abilities and have strength in religion, self-control, intelligence, and noble personality, skills and can maximize all the abilities he has through the learning process. Technological developments have a big influence on the education sector. Media, methods and learning outcomes are closely related to the learning process. The media used in learning is usually used as an intermediary tool for teachers to explain material to students, with compositional learning methods and material delivery strategies that can be arranged, and learning outcomes are measured effectively and efficiently to determine students' competence and interest in the material presented.

In fact, in every lesson there are many problems found, especially in social studies learning (Kaulan & Ramadhani, 2018). In social studies learning there are several problems such as low student focus and interest caused by just the same or monotonous learning and excessive text making students bored more quickly and less interested in participating in the learning process (Putri & Nurafni, 2021). The lack of use of media in the learning process results in students lacking enthusiasm and being less interested in participating in learning, so that with these problems the learning process becomes hampered and the predetermined learning objectives are not achieved. The method of delivering learning material that only applies the lecture method and too much material in a row causes students to get bored and give the impression of being monotonous.

Based on the results of interviews conducted with teachers at one of the elementary schools in Tasikmalaya City, it is known that the implementation of the learning process still uses lecture methods, practice, and the use of conventional media, so that students sometimes feel bored and less interested when participating in learning. In fact, the existing facilities and infrastructure support the use of digital-based media, such as projector screens and smart TVs which can be used to support the display of digital-based media or other things so that students are more interested and enthusiastic when the learning process takes place. However, teachers prefer to use concrete media.

In learning, especially social studies material, the learning process in a more interesting and enjoyable way is highly recommended, because in this way, the learning process carried out by students is able to increase interest and motivation, so that students are able to achieve the specified learning outcomes. Students' lack of interest in learning activities is caused by conventional methods. In learning activities, the media used by teachers with students has not been able to increase motivation. The delivery of material in social studies subjects must be designed in such a way that students are more interested so that they can increase their interest in learning by using media. (Salahuddin et al., 2020)

In general, learning media is a supporting device when delivering learning material. One of the factors that can influence learning outcomes is media. With the media, material can be conveyed so that it can achieve the desired goals. Learning media is used as an intermediary tool that makes it easier for teachers to provide teaching materials to students, so that in learning activities, teachers strive to realize effectiveness in learning, teachers must try to design learning as well as possible so that learning activities are more interesting, foster student motivation and can adapt to following technological developments in learning in schools (Astutik et al., 2021). Learning media must be known and mastered by teachers in providing teaching material, so that the material presented can encourage student acceptance and knowledge.

The purpose of media in the learning process is to facilitate the learning process, increase learning accuracy, maintain alignment with learning objectives, help student focus, stimulate students to learn, convey information or instructional messages, and stimulate student learning activities (Luh & Ekayani, 2021). In the learning process, the use of media is considered to be able to add new motivation and interest to students, encouragement during learning, and can influence students' psychology (Untari, 2017).

Regarding the above, there are several solutions that can solve this problem. One of them is by using media. One of the media that can be used in delivering social studies material, especially material on "Keberagaman Budaya dan Bangsaku" in Elementary School Class 4, is the use of comic media. This media is one of many solutions so that students are more enthusiastic, interested and encouraged to learn.

Comic media is a collection of images ordered according to the author's goals and thoughts in which the message of the story will be conveyed, which aims to add the necessary characters as needed so that the message can be conveyed. Comics are defined as cartoon images designed to explain sequential characters and stories to provide entertainment to anyone who reads them (Nugraheni, 2017). Elementary school students have a high interest in visual media. The learning process that uses comic media is considered to be able to increase student achievement and learning outcomes compared to using ordinary image media (Elly Sukmanasa, Tustiyana Windiyani, 2017). Currently, comic learning media is usually only printed, but currently students are less interested and less interested and have difficulty understanding the material because the images

presented are less colorful and boring. Given these problems, learning media is needed that is able to overcome these problems through e-comics. The comics presented are not in printed form, but are presented with the help of electronic devices or can be called E-comics. By using E-Comics media, students are considered more interested and interested because it contains entertainment and material (Astutik et al., 2021). E-comics is a pictorial media in the form of story text conveyed by character characteristics that can help convey messages or learning materials and packaged digitally (Megantari et al., 2021). Therefore, e-comics are a medium that can convey information in the form of pictorial stories using certain characters through electronic media. The aim of using digital comic media is to increase student interest and learning outcomes. The e-comics used in the learning process are presented with colorful pictures and interesting stories but contain the learning material that will be delivered. With E-comics, it is hoped that it will be able to increase students' interest in learning by developing their imagination through the media presented so that their learning outcomes increase. The digital comics or E-comics presented are packaged more practically so they can be used anytime and anywhere and can help teachers in delivering learning material.

In line with the statement of the results of research conducted (Ais, 2019) it is stated that the comic media used is able to improve student learning outcomes and it can be concluded that comic media is feasible, practical and effective for improving social studies learning outcomes for class III students in elementary school. Based on the results of research (Riwanto & Wulandari, 2018) it is stated that the use of E-comic media can increase the effectiveness of learning in science lessons in elementary school and have a significant influence on the learning process in learning. Research conducted by (Yasa & Chrisyarani, 2018) states that the use of comic media influences the learning outcomes of fifth grade elementary school students. Based on the results of research conducted by (Mujahadah et al., 2021) it is stated that the use of learning comic media can improve students' learning outcomes and interest. Based on the results of research conducted by (Purwatresna Senjaya et al., 2022) it is stated that using E-comic learning media, students feel enthusiastic because the comic display is attractive, and the material can be understood, so it can be said that E-comic media improves students' interest in learning. (Puspitorini et al., 2014) States that the use of comic media in science learning is able to increase student learning motivation with a gain score of 0.55 (medium), student cognitive learning outcomes with a gain score of 0.42 (medium), and student affective learning outcomes with a gain score of 0.34 (medium). (Kurniawan & Hardini, 2020) States that the use of comic media has a big influence on student learning outcomes.

In general, the aim of this research is to develop E-comics media to overcome problems related to the interests and learning outcomes of social studies for grade 4 students. Specifically, the aim of this research is to determine students' interests and learning outcomes after using the E-comic learning media "Keragaman Budaya" in social studies content in elementary school grade 4. The novelty of this research is the development of Cultural and National Diversity learning materials as well as the delivery of information or learning messages to students as if they were faced with a real context presented in a real context e-comic form.

Interesting social studies learning can increase interest and make it easier for students to understand the material so that they can improve their learning outcomes. Thus, research was conducted with the title Development of E-Comics "Keragaman budaya" to Increase Interest and Learning Outcomes in Social Sciences in Elementary Schools. The reason the author chose this media in research is because E-comic media can be used to convey information or learning messages by highlighting material about Keragaman budaya dan bangsaku in social studies content which is expected to be easier for students in elementary school to understand because students seem to be faced with the context the real one.

METHODS

In this research, researchers used quantitative research methods. This research produces conclusions. This conclusion comes from data in the form of numbers and is formulated scientifically to become new knowledge. The research design used is Research & Development (R&D). R&D research is research used to develop a product and produce new products whose effectiveness is tested so that they can be used by the wider community (Haryati, 2012). The model used in developing the product is the ADDIE model. The stages carried out in the ADDIE model are Analyze, design development, implementation, and Evaluation (Bintari Kartika, 2017).



Figure 1 Stages of the ADDIE model

The research was conducted at an elementary school located in Tasikmalaya City, West Java on December 14 2023. Participants in the research were 23 class 4C students. The following is a detailed list of participants.

Tabel 1 Partisipan

Gender	total	Percentage
Female	13	56,6%
Male	10	43,4%

The instruments used in this research were interviews, questionnaires and tests. Interviews were used to obtain data before the research was carried out. The questionnaire was used to obtain information about the media being developed, namely E-comics, by media experts, materials experts and teachers. Questionnaires are also used to determine student responses regarding the development of e-comics after following the learning process in order to obtain information on students' interest in e-comic media. The following are the instruments used to validate the media being developed.

Table 2 Grid of Validation Instruments

Expert Category	Aspek	Jumlah butir
Media Expert	Appearance	5
Media Expert	Programming	2
	Learning	3
Material Expert	Material Contents	4
	Evaluation	2
	material	8
Teacher	Programming and	8
	display	

Table 3 Student learning interest response grid

Aspek	Jumlah butir
Feeling	1
interest	1
Motivation	1
Attention to learning	1

The following is the formula for determining the eligibility percentage results.

$$VA = \frac{score\ obtained}{maximum\ score}\ X\ 100\%$$

Information:

Va : Validation Score

Percentage (%)	Eligibility Rate
0 - 20 %	Very unsuitable for use
21 - 40 %	Not suitable for use
41 - 60 %	Quite suitable for use
61 - 80 %	Suitable for use

Tabel 2 Percentage of media appropriateness and Student Interest

Meanwhile, to measure learning outcomes, test instruments are used. The test given is in the form of pretest questions which are carried out before the e-comic is given and the posttest is carried out after the e-comic is given. The design used in measuring the test is "One group pretestposttest Design". The following is a quantitative method design using the quasi-experimental method "One group pretest-posttest Design".

81 – 100 % Very suitable for use

Data analysis used in this research is the n-gain test technique with the aim of determining the effectiveness of treatment before and after the provision of E-comic media. The following is the gain normality test formula used.

Uji n-gain=
$$\frac{posttest\ score-pretest\ score}{maximum\ score-pretest\ score}$$

Information:

n-gain : The amount of gain value Pretest score: Initial test result value Posttest score: Final test result score Maximum score: Maximum test score.

RESULTS AND DISCUSSION

Result

Development of E-Comic Learning Media

The media developed by researchers for the learning process is E-Comics or digital comics media. In comics there are several parts, such as arranged images, text and writing that can express the visuals. The e-comics developed by researchers in this study were created and designed using the Canva application which contains material regarding keragaman budaya theme 1, subtheme 1 class 4. In making this comic there are several processes carried out, such as creating ideas, adapting the material, drafting the manuscript, determining the design in the Canva application, which contains material about keragaman budaya. This development uses the ADDIE model with the following stages.

Analyze

The analysis stage carried out in one of the elementary schools in Tasikmalaya City includes activities: analysis of the use of facilities and infrastructure, analysis of the learning process and analysis of media use. This analysis activity aims to find out how the learning process in elementary school is. Things to do with interviews with class teachers. The interview was carried out during the 5th generation campus teaching program. Based on the results of the interview, the resource person obtained information that the elementary school uses the merdeka curriculum and the 2013 curriculum. In its learning activities it often uses print media which causes students to get bored easily and often uses conventional learning media so that students are in a real context.

Design

At this stage, activities are carried out to determine the use of learning media, create lesson plans by determining KD and learning indicators, and design a media framework that is adapted to the specified KD. The following are learning indicators and media frameworks that are adapted to learning indicators. The basic competency used in developing this media is Theme 1 Subtheme 1 keragaman budaya and my people with KD 3.2. Apart from determining KD and learning indicators,

designing the creation of E-comic media was carried out. In designing the manufacture of E-comics, there are several stages, namely. 1)

- 1. Determine the E-comic title The title of the comic created is adapted to the learning material, namely material about keragaman budaya and my nation. The title used by researchers is "Keragaman budaya".
- 2. Look for material references
- 3. Develop an E-comic framework In preparing the E-comic framework, the framework created includes the title, foreword, how to use it, KD and Indicators, learning objectives, E-comic content, quizzes, and the identity of the E-comic author. The following are the steps taken in compiling the framework for the Ecomic "Keragaman budaya".



Figure 2 Stages of preparing the E-Comics framework

Development

At this stage, the product framework development stage is carried out which was previously designed in accordance with the learning objectives so that it becomes media that is ready to be applied to students in elementary school. The following are the product development stages that were designed previously at the design stage.



Figure 4 comic content



Figure 5 comic content

Apart from developing the product framework, validation is also carried out at this stage. The aim is to see the suitability of the media that has been designed. The media suitability assessment was carried out by 1 media expert, 1 material expert and a teacher. The following are validation results from media experts, material experts and teachers.

Tabel 3 Media Expert Validation

Score Total	29
Maximum Score	35
Percentage	82,8%

Tabel 4 Material Expert Validation

Score Total	39
Maximum Score	45
Percentage	86,6%

Tabel 5 Teacher validation

Score Total	72
Maximum Score	80
Percentage	90%

From the results of the validation that has been carried out, it is known that overall E-comic media is in the very suitable category for use with a media expert validation score of 82.8%, a material expert validation score of 86.6%, a teacher validation score of 90%, with an average of 86 .4%. So the media developed is considered effective and very suitable for use in social studies learning activities in elementary schools regarding cultural and national diversity.

Implementation

At this stage the product being developed is applied in a valid situation with the aim of finding out the effect of the media being developed on the quality of learning that is interesting, effective and efficient. This implementation activity was carried out in one of the elementary schools in the city of Tasikmalaya. This stage is carried out after the media has received validation and been declared suitable by the vaidator. At the stage of implementing E-Comics media, learning was attended by 23 class 4C students which was held on Friday, December 3 2023.

First of all, it begins with the delivery of material related to keragaman budaya. After delivering the material, students are expected to work on the Pretest questions. After the pretest is completed, it continues with learning using the media developed, namely E-comic media. Learning begins by showing the product being developed, namely E-Comics media, through a projector screen and providing an understanding of what is in the E-comics which is then read and understood by students. After showing the product, students are given an interesting quiz to test their understanding of the content of the comic.

Evaluation

In the evaluation stage, product trials were carried out on students by giving posttest questions containing 10 questions with a duration of 15 minutes. The aim of giving posttest questions is to find out whether the implementation of the media being developed is able to improve learning outcomes. Apart from that, in the evaluation stage students were given an interest questionnaire to determine their interest in learning using E-comic media. The following are the scores in the Pretest and Posttest activities carried out during the implementation of the media and student interest questionnaire towards E-comic media. The following are the results of the pretest and posttest carried out.

Tabel 6 Pretest and Posttest Results

No	Hasil Belajar	Nilai Rata-Rata
1.	Pretest	51,08
2.	Posttest	79,34

From the table above, there is a pretest score which has an average of 51.08 and an average posttest score of 79.34. Based on this, it shows that there is a change in the scores from the pretest and posttest. After obtaining the results from the pretest and posttest scores, they were then analyzed to determine the normality of the gain.

$$g = \frac{Posttest - Pretest}{Skormax - Pretest}$$
$$g = \frac{79.34 - 51,08}{100 - 51,08}$$
$$g = \frac{28,26}{48,92}$$
$$g = 0,57$$

Based on the n-gain calculation results, the n-gain was obtained at 0.57 with a percentage of 57% and is in the medium category. Therefore, it is concluded that the application of E-comics media can improve the learning outcomes of 4th grade elementary school students. Apart from collecting learning results, researchers also collected student questionnaires to determine their interest in participating in learning using E-comic media. The following is data on student learning interest that has been collected.

Tabel 7 Student Interest Questionnaire

Score total	440
Maximum score	460
Percentage	95,6%

From the results of the interest questionnaire, it can be seen that student responses from the results of the questionnaire distributed gave an average answer of strongly agreeing with the statement of the aspect being assessed. From several questions asked, a result of 95.6% was obtained. It can be concluded that the learning process with the help of E-comic media can increase their interest in the learning process.

Discussion

The development of E-comic media as a learning medium to increase the interest and learning outcomes of grade 4 students was carried out in one of the elementary schools in the city of Tasikmalaya using R&D research. This research is intended to develop e-comic learning media to increase student interest and learning outcomes in social studies learning in class 4. In this development, researchers used the ADDIE model. The ADDIE model has 5 steps, namely (Analyze). This stage analyzes the use of facilities and infrastructure, analyzes the learning process and analyzes media use. (Design) At this stage, the researcher determines the use of learning media, by determining the KD and learning indicators, and designing a media framework that is in accordance with the KD, indicators and objectives. (Development) At this stage, the product framework development stage is carried out which was previously designed and validated with media experts, materials and teachers to determine the feasibility of the media being developed. (Implementation) This stage involves applying E-comic products to real situations with the aim of finding out the effect of the media being developed on the quality of learning that is interesting, effective and efficient. Before implementing the product, students are first given pretest questions. (Evaluation) in the evaluation stage, a trial of the product developed is carried out on students by giving posttest questions.

Based on the results of the implementation and evaluation carried out, it shows that the use of the media developed, namely E-comic media, increases the learning outcomes of grade 4 elementary school students through obtaining posttest results which increase from the pretest results. From these results it is known that students can answer the questions presented with better results after participating in learning activities using E-comic media. Apart from improving learning outcomes, there was an increase in student interest identified through questionnaires. These results mean that on average students give answers that strongly agree with the statement of the aspect being assessed. They feel happy, more interested, more enthusiastic and more concentrated when taking part in learning using E-comic learning media.

From the research results there are research results that are relevant to the research conducted by the researcher. (Ais, 2019) In his research entitled "Pengembangan Media Komik untuk Meningkatkan Hasil Belajar Siswa Sekolah Dasar" stated that comic media is suitable for use and has an influence on learning outcomes. The use of this media received a very good response from students, namely 90.5%. So it can be concluded that comic media is feasible, practical and effective for improving the learning outcomes of third grade students in elementary school in social studies subjects. This research is of relevance to researchers because they both test the feasibility of the product to improve student learning outcomes in elementary school in social studies subjects, only different in class level, namely grade 4 and subject matter. (Riwanto & Wulandari, 2018) In their research entitled "Effectiveness of Using Digital Comic Media (Cartoon Story Maker) in learning with the theme Always Save Energy" the aim is to determine the effectiveness of using digital comic media to improve student achievement. This research states that the use of digital comic media can increase the effectiveness of learning in science lessons in elementary school.

This research is of relevance to researchers. The difference lies in the lessons used, in the previous research, the research examined science lessons in grade 4, while the researchers examined social studies lessons in grade 4. (Yasa & Chrisyarani, 2018) In their research entitled "Pengaruh Media Komik Tematik terhadap hasil belajar siswa kelas V SD" the aim was to determine the influence of comic media on the learning outcomes of fifth grade elementary school students, stating that the use of thematic comic media had an effect on the learning outcomes of fifth grade students elementary school. In the research conducted by this, it is of relevance to researchers, because they both tested the feasibility of the product to improve student learning outcomes in elementary school.

The difference is, the previous research examined Indonesian language lessons in class V, while the researchers studied social studies in class 4. (Kurniawan & Hardini, 2020) States that the use of comic media has a big influence on student learning outcomes. This can be proven from the research results with the lowest percentage being 6.1% to the highest being 44% with an average increase of 18.46%. The effect size results show 2.77. (Mujahadah et al., 2021) In their research, they stated that the use of learning comic media can improve students' learning outcomes and interest. (Purwatresna Senjaya et al., 2022) In his research, it was stated that using E-comic learning media, students felt enthusiastic because the comic display was attractive, and the material could be understood, so it could be said that E-comic media increased students' interest in learning. (Agustin et al., 2023) In his research, it is stated that the use of digital comic media which has been tested has implications for increasing learning outcomes and students' interest in learning with the average score of the experimental class being 77.36 and the average of the control class being 53.51 and the average score on the questionnaire was 3.03 in the agree category (2.52-3.27). (Narestuti et al., 2021) In his research, it was stated that the use of digital comic media could improve the learning outcomes of class VIII students at MTs Ma'arif Ambulu with a percentage of 61% in cycle I with quite increased qualifications and in cycle II with a percentage of 93% with increased qualifications. (Elly Sukmanasa, Tustiyana Windiyani, 2017) In her research, it was stated that the use of digital comic media in the learning process resulted in students' interest in learning about events surrounding the proclamation for social studies subjects in class V elementary school. The learning media developed is declared suitable for use based on validation by material experts, validation by media experts, validation and test results by teachers as well as student responses.

Thus it can be concluded that digital comic media can be developed and is suitable for use in the learning process. (Kristin, Firosalia dan Mulia, 2023) In her research, it was stated that the use of the digital comic media developed was effective in improving the learning outcomes and learning motivation of grade 4 students with the T-test results showing a Sig. (2-tailed) .000 < 0.05 Ho is rejected and there is a difference in improvement in learning outcomes. (Fitri et al., 2023) In his research, it was stated that the use of digital comic media could improve learning outcomes in material on Pancasila values for fourth grade elementary school students with an average validation score from experts of 96.2%, student responses with a percentage of 90.3%, the t test result was sig (2-tailed) 0.000 < 0.05 and it was stated that there was a difference in the pretest and posttest results. (Styaningsih & Nuryadi, 2016) In their research, it is stated that the use of comic media has an influence on interest in learning, so that learning outcomes can improve more, both with the results of the experimental class being 79.80 which is higher than the control class of 74.84. (Juneli et al., 2022) In his research, it is stated that the use of digital comic media is feasible and effective for use in the learning process and can help teachers in delivering learning material and can increase the mastery of concepts for class V students which can be seen from the increased learning outcomes. (Oktaviana & Ramadhani, 2023) In their research, they stated that the use of digital comic media was feasible and made students more interested in learning, with expert validation results averaging 93.33% and student responses averaging 93.78%. (Haryanto et al., 2023) In his research, it was stated that the use of comic media with water cycle material was effective in improving student learning outcomes with pretest results of 62.03 and posttest results of 72.59.

The implication or involvement of the research conducted is that E-comic learning media in social studies learning activities in grade IV elementary schools can be used as an alternative solution to increase student interest and learning outcomes in the material "Budaya dan Bangsaku". The results of this research can be used as reference material and input for students and teachers to develop better E-comics in the future. The use of E-comic media provides students with the opportunity to re-study material independently wherever and whenever, apart from that, when students have difficulty answering questions, students can easily review the material discussed through the E-comic media provided.

CONCLUSION

From the results of the data above, it can be concluded that e-comic media is effective and very suitable for use in social studies learning activities in grade 4 elementary schools. The development of e-comics can increase student interest and learning outcomes as seen from the increase in work on pretest and posttest questions. Apart from increasing learning outcomes, there is also an increase in interest that can be identified through student interest questionnaires. From the results of the questionnaire, the average answer was strongly agree. They feel happy, more interested, more enthusiastic and more concentrated when taking part in learning using E-comic media. So that E-comic learning media can continue to be developed in learning activities to make it more interesting in order to increase student interest and learning outcomes in grade 4 elementary school.

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