Heyzine Website-Based E-Comic for Fourth Grade Elementary School Indonesian Language Subjects

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ABSTRAK

Kurang optimalnya pemanfaatan media pembelajaran digital dalam mendorong partisipasi aktif siswa dalam pembelajaran berdampak pada rendahnya hasil belajar siswa. Tujuan penelitian ini adalah mengembangkan media pembelajaran e-comic, mendeskripsikan kelayakan media, dan menguji keefektifan media dalam menunjang hasil belajar siswa pada mata pelajaran bahasa Indonesia kelas IV. Penelitian yang digunakan adalah jenis penelitian dan pengembangan (R&D) dengan menggunakan model ADDIE. Subjek penelitian yaitu 1 ahli materi dan 1 ahli media. Subjek uji coba yaitu guru dan siswa kelas IV SD. Metode yang digunakan untuk mengumpulkan data yaitu observasi, wawancara, angket, dokumentasi, dan tes. Instrumen pengumpulan data berupa lembar kuesioner dan soal tes. Teknik yang digunakan untuk menganalisis data yaitu analisis deskriptif kualitatif dan kuantitatif. Hasil penelitian yaitu uji validitas oleh ahli materi dengan persentase 95,3%, ahli media 88,5%, uji pengguna (guru) 94,2%, uji coba skala kecil 93,3%, dan uji coba skala besar 86,8%, dengan skor N-gain sebesar 61,2%. . Dari hasil tersebut dapat disimpulkan bahwa e-komik yang dikembangkan layak, praktis, dan cukup efektif untuk meningkatkan hasil belajar siswa dan digunakan dalam pembelajaran bahasa Indonesia di kelas IV Sekolah Dasar.

ABSTRACT

The less-than-optimal use of digital learning media in encouraging students' active participation in learning impacts low student learning outcomes. This research aims to develop e-comic learning media, describe its suitability, and test its effectiveness in supporting student learning outcomes in class IV Indonesian language subjects. The research used is research and development (R&D) using the ADDIE model. The research subjects were 1 material expert and 1 media expert. The test subjects were teachers and fourth-grade elementary school students. The methods used to collect data are observation, interviews, questionnaires, documentation, and tests. The data collection instruments are questionnaires and test questions. The techniques used to analyze data are qualitative and quantitative descriptive analysis. The results of the research are validity tests by material experts with a percentage of 95.3%, media experts with 88.5%, the user (teacher) tests with 94.2%, small-scale trials at 93.3%, and large scale trials with 86.8%, with N-gain score of 61.2%. From these results, it can be concluded that the e-comics developed are feasible, practical, and effective enough to improve student learning outcomes and are used in Indonesian language learning in class IV elementary schools.

1. INTRODUCTION

Education has a vital role in shaping individuals and society. The aim is not only to transfer knowledge from one generation to the next but also to develop the skills and personality needed to participate in social and economic life (Purwitaningrum & Prahmana, 2021; Rifa'i & Sunariya, 2020). Apart from that, education can also be a tool to help overcome disparities and improve the quality of life of society as a whole. Primary education is a level of education that must be completed by every individual to provide basic knowledge, skills, and values that are important in personal and societal development (Ashirin et al., 2021; Dwi agus setiawan & Nur Kumala, 2020; Wahyu et al., 2020). Elementary schools are formal educational institutions that provide basic education. The elementary school aims to provide primary education such as essential reading, writing, and arithmetic, understanding the basic concepts of

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various subjects, and developing positive character values (Asrial et al., 2020; Febriani et al., 2020; Lauc et al., 2020). Reading and writing skills in elementary school play an essential role in the development of children's primary education (Jabir, 2020; Utami, 2020). Students are encouraged to develop reading and writing skills as part of basic literacy at this stage. If students in elementary school age cannot immediately read and write, they will experience many difficulties in learning various learning materials (Hermita et al., 2020; Koyuncu & Fırat, 2020). Mastery of this learning can be achieved through language skills. One of the lessons learned by elementary school students is Indonesian (Agustina, 2021; Kurniawan et al., 2020). Indonesian is one of the subject materials that must be taught starting from the basic education level. Teachers need to create a supportive learning environment to improve Indonesian language learning outcomes for students (Berjamai & Davidi, 2020; Hapsari & Fitria, 2020). Learning activities should prioritize good interaction and communication between educators and students. Indonesian language learning activities will also run well if the teacher facilitates students with learning media that can help students learn (Hapsari & Fitria, 2020; Khairunnisa, 2021; Septiani & Hasanah, 2019). However, the current problem is the need for more learning media to support the learning process. This is reinforced by previous findings, which reveal that teachers still have difficulty developing learning media that supports students learning (Amil et al., 2021; Wardoyo et al., 2022). Other research also reveals that the teaching materials currently used by teachers are still conventional, making it impractical for students to carry anywhere and study at any time (Fahmi et al., 2021; Lestari et al., 2022). A lack of media or teaching materials will make it easier for students to understand learning material (Mutmainnah et al., 2021; Wirganata et al., 2019).

Based on the results of observations and interviews with class IV teachers at SDN Jambewangi, Magelang Regency, it was found that teachers still used methods such as lectures, discussions, and group work in the overall implementation of learning. This method seems monotonous and boring for students. Teachers still use conventional media and have yet to utilize IT-based media optimally. This results in a lack of response and students who tend to be inactive during learning activities. The results of data analysis regarding the learning outcomes of class IV students at SDN Jambewangi, Magelang Regency, found that 62% of student learning outcomes still needed to reach the minimum completeness criteria. Low student learning outcomes occur due to several factors, such as teachers' need for knowledge about various learning approaches, learning methods, and learning techniques and teachers' lack of skills in implementing various components in the system. Apart from that, the use of IT-based learning media is still lacking because of the teacher's view that engaging learning media must be expensive and complicated. The essence of effective learning is a teaching and learning process that is not only focused on the results obtained but also on how effective a learning activity can be in transmitting good understanding, intellect, perseverance, opportunity, quality, and being able to provide behavioral transformation and apply it in one's life. Life. The lack of teaching materials or learning media impacts students' ability, so student learning outcomes are low.

The solution to this problem is applying IT-based interactive learning media to overcome existing problems. This is also supported by previous research findings, which state that learning must continue to strive to improve the quality of education by following existing technological developments (Darmayasa et al., 2018; Munandar et al., 2021). The approaches, media, models, and methods teachers and students apply in the learning process will determine opportunities for carrying out activities and obtaining learning outcomes. The five components that are very important in the teaching and learning process are objectives, materials, methods, media, and learning evaluation (Alamiyah et al., 2021; Mujahadah et al., 2021; Ula & Fadila, 2018). Interesting learning media can attract students' attention and interest to participate more in learning activities (Bakri et al., 2021; Saputra & Putra, 2021). The development of learning media is one of the many alternatives that can support digital-based interactive learning by utilizing various technologies in this global era. Media can be manipulated, seen, heard, and read, making it easier for students to learn (Darmayanti & Surya Abadi, 2021; Mertasari & Ganing, 2021). One of the learning media that can be applied to elementary school students to improve Indonesian language learning outcomes is E-Comic, based on the Heyzine website. The simple nature of comics will attract more students' interest in the learning process (Aeni & Yusupa, 2018; Rahmata et al., 2020). This is because comics are visually attractive. The media contains a series of pictures that are funny and related to each other so that students do not feel bored when reading them. Comics are a type of cartoon image that displays characters and tells a story in a series that is closely related to visuals and is intended to entertain readers (Aeni & Yusupa, 2018; Dwiasih & Agung, 2021; Rahmata et al., 2020; Taufiq et al., 2020). Comic-based learning media can also foster a disciplined and responsible personality in students. Interactive learning media can increase learning effectiveness by actively involving students and enabling more profound learning experiences (Asnawi et al., 2023; Siregar et al., 2019). Applying IT-based learning media can help increase accessibility, personalization, and learning experience and provide flexibility in

learning approaches. Previous research findings reveal a need for learning media to convey learning information, one of which can be using comics combined with learning materials (Hobri et al., 2021; Udayani et al., 2021). Other research also reveals that E-comics can be used to increase student learning motivation to improve student learning outcomes (Supartayasa & Wibawa, 2022; Syahmi et al., 2022).

However, there has yet to be a study regarding E-Comic Based on the Heyzine Website for learning Indonesian. The advantage of the Heyzine Website-Based E-Comic is that the material will be presented in images, audio, and video, increasing students' interest in learning Indonesian. Increased student interest certainly has an impact on increased learning outcomes. This research aims to develop an E-Comic based on the Heyzine website for class IV Indonesian language subjects. This learning media can provide insights and references in implementing IT-based learning activities. They can help achieve competency and increase students' interest and motivation in learning Indonesian.

2. METHOD

This type of research is research and development (R&D) research. The model used in developing media is the ADDIE (analyze, design, development, implementation, evaluation) development model (Branch, 2010). At the analysis stage, an analysis of the problems occurring in the field is carried out. At the design stage, the Heyzine Website-Based E-Comic media was designed. At the development stage, activities include the realization of product designs that have previously been created. At the implementation stage, the product is applied, and validation and product tests are carried out in the field to determine the product's feasibility. Finally, evaluation, namely assessing the product being developed based on opinions and suggestions received during validation tests and field tests, as well as making modifications according to evaluation results that are not met by the product. The research was conducted at SDN Jambewangi, Secang District, Magelang Regency. The population in this research was class IV students at SDN Jambewangi. This research used a saturated sampling technique, so the total sample was 30 students. The research subjects were 1 material expert and 1 media expert. The test subjects were teachers and fourth-grade elementary school students. The methods used to collect data are observation, interviews, questionnaires, documentation, and tests. Observation involves directly observing objects or events without making significant changes or manipulation. The interview was conducted with the fourth-grade teacher at SDN Jambewangi, Magelang Regency. The results of the interviews will be used as initial research data. This research uses three types of questionnaires: teacher and student needs questionnaires, expert assessment/validation test questionnaires, and teacher and student response questionnaires. This research uses documentation data in photos to support each process in research activities. The test in this study was given to measure students' abilities in learning Indonesian for class IV, CHAPTER 5, "Exchanging or Paying." The tests carried out in this research were pretest and posttest. The pretest is carried out before students use e-comic media, and the posttest is done after students use e-comic media. The data collection instruments are questionnaires and test questions. The instrument grid is presented in Table 1.

Table 1. Questionnaire Grid for Teacher Needs in Indonesian Language Learning

No	Criteria	Indicator
Profile Digging Information		
1	In accordance with the goals to be achieved	1. Teacher response to Indonesian language learning. 2. Teacher responses regarding Indonesian language learning which contains understanding of reading texts.
2	Appropriate to support lesson content that is facts, concepts, principles, or generalizations	1. The need for media in learning Indonesian. 2. The need for media in material that contains reading texts in it.
Media Profile		
1	Technical quality	1. Design 2. Size 3. Color 4. Typeface

The techniques used to analyze the data are qualitative and quantitative descriptive analysis. Qualitative descriptive analysis is used to manage data in the form of input provided by experts regarding

the Heyzine Website-Based E-Comic. Quantitative descriptive analysis is used to manage data in the form of scores given by experts regarding the Heyzine Website-Based E-Comic. The N gain test is used to test the effectiveness of the Heyzine Website-Based E-Comic in improving student learning outcomes for Indonesian language subject content.

Table 2. Questionnaire on Student Needs in Learning Indonesian

No	Criteria	Indicator
Profile Digging Information		
1	In accordance with the goals to be achieved	Student responses to Indonesian language learning
Media Profile		
1	Technical quality	1. Design 2. Size 3. Color 4. Typeface

3. RESULT AND DISCUSSION

Result

In this section, two things will be discussed: describing the design of media development and the validity of media development. The research results show that the learning outcomes of class IV students at SDN Jambewangi, Magelang Regency, have increased through learning using e-comics based on the Heyzine website. In particular, the e-comics material focuses on "Exchanging or Paying" in class IV, the Indonesian Language subject in Chapter 5. Further discussion regarding the findings related to the study of e-comic development is presented below. This media development design uses the ADDIE model, which includes five development stages. In the first stage of analysis, the activities carried out were collecting information specifically related to needs and problems in the field through observations and interviews with class IV teachers at SDN Jambewangi, Magelang Regency. The interview results show that there is still a lack of use of learning media in Indonesian language subjects. Teachers are still unfamiliar with IT-based learning media, so they are not optimal in utilizing technology or digital media in learning. It has not been implemented and tends to use monotonous learning methods, causing student learning outcomes not to reach the minimum completeness criteria. Teachers also have difficulty facilitating learning activities, so students' learning motivation and responses are still lacking. With these various problems, the solution is to develop learning media, namely website-based e-comics, that are easy to access and use and can support learning activities. The second stage is design. At this stage, learning media was designed as e-comics based on zine websites, which included material from class IV Indonesian language subjects. In making e-comics, the first step is to determine the learning outcomes and objectives. Product appearance includes creating e-comic designs, layouts, fonts, color palettes, and references. The product was created through Canva and converted into a flipbook using the Heyzine website. The third stage is development. At this stage, we rationalize and develop e-comics by collecting story content materials in the comics. The storytelling developed into comic content is a story from the narrative form in the class IV Indonesian student handbook into a dialogue form to be more interesting for the audience or students. The next step is to arrange the e-comic layout to be as attractive as possible. The product is converted into a flipbook by uploading the product file on the Heyzine website. The development results are presented in Figure 2.
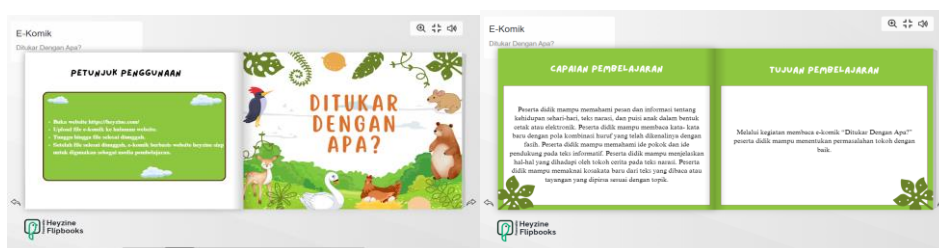

Figure 2. Results of E-Comic Development Based on the Heyzine Website

The fourth stage is implementation. At this stage, the product will be tested for validity by expert validators, including material and media experts. Media and material expert validators validate products to measure product suitability. Then, the product was also tested in the field on users (teachers) and students divided into small and large groups. This stage aims to determine the level of practicality and effectiveness of the product to improve student learning outcomes. The level of product suitability can be determined from the validity tests that have been carried out. On the material validation sheet, the assessment includes curriculum, content, and language aspects, which contain 16 assessment items. Assessment of curriculum aspects includes suitability of content to learning outcomes, content to learning objectives, and content to the topics discussed. Overall, it was very good and appropriate. Furthermore, the content aspect includes the presentation of material and questions. The linguistic aspect includes conformity of use with existing linguistic rules. The assessment on the media validation sheet includes aspects of design, media quality, and suitability of the media to the level of development, which consists of 13 assessment items. The validity test results are presented in Table 3.

Table 3. Media Validation Results

No	Validation Type	Percentage	Predicate
1	Material Validation	95.3%	Very Worth It
2	Media Validation	88.5%	Very Worth It

Table 3 shows that the material validation value is 95.3%, and the media validation value is 88.5%. The results obtained are then matched with the eligibility criteria table. The research results show that the e-comics developed are 76% - 100%, so the e-comics are in the very feasible and usable category. Furthermore, the results of user (teacher) and student trials are presented in Table 4.

Table 4. User Validation Results

No	Validation Type	Percentage	Predicate
1	Validation Results (Teacher)	94.2%	Very practical
2	Small Scale Trials	93.3%	Very practical
3	Large Scale Trials	86.8%	Very practical

The analysis results show that the test user (teacher) scored 94.2%. This score is in the range of 81% - 100%, in the very practical category. The class IV teacher commented that the material delivery on e-comics was very good and the appearance of e-comics based on the zine website was very interesting. Student trials are carried out on both small and large scales. On the student response questionnaire sheet are 13 assessment items consisting of material/content and presentation of e-comics. The results of data analysis obtained an average of 93.3% from small-scale trials and 86.8% from large-scale trials. The average obtained is in the range of 81% – 100% in the very practical category. The two test scores conclude that the e-comics developed are very practical for learning Indonesian in class IV CHAPTER 5 Exchange or Pay. After the field trial, the research conducted an N-gain test to calculate the pretest data and post-test from a large-scale trial with 15 multiple-choice questions. The N-gain test results are presented in Table 5.

Table 5. Usage Test Results

No	Data	Pretest	Score	Posttest	Category
1	Average	61.8		84.9	
2	N-gain		0.6		Currently
3	N-gain (%)		61.2%		
4	Interpretation of Effectiveness				Effective enough

The results of data analysis show that the N-gain score from the trial is 0.6 and is in the moderate improvement category. Then the value obtained is converted into a percentage to determine the effectiveness of the product. A score of 61.2% was obtained so that the product is classified as quite effective in improving student learning outcomes. Based on the results of validity tests and usage trials, the media developed is feasible, practical and effective enough to be used in learning activities.

Discussion

The results of data analysis show that the e-comic based on the Heyzine website received very good qualifications from experts, teachers, and students. Several factors cause this. First, e-comics based on the Heyzine website are suitable for use in learning because they can improve student learning outcomes. The results of product validity tests that have been carried out show that the website-based Heyzine electronic comic has been able to answer students' learning problems in class IV Indonesian subjects. The concept of learning is how to educate students about how students learn with all the diversity they have in their thinking abilities and creativity in solving problems in life (Awaludin et al., 2020; Rusydiyah et al., 2021; Warju et al., 2020). E-comics itself is the result of the development of comics as a learning medium whose presentation contains learning material, images, audio, and video (Afriana & Prastowo, 2022; Hobri et al., 2019). Digital comics offer interactivity that increases student participation in the learning process. Students can interact with the material through pictures, animations, and other interactions, thereby increasing their awareness and interest in the material being studied, thus having an impact on improving student learning outcomes (Rahmata et al., 2020; Udayani et al., 2021). Thus, the use of digital comics as a learning medium can improve student learning outcomes in an effective and efficient way Second, e-comics based on the Heyzine website are suitable for learning because they make learning easier for students. The comics were developed to make it easier for students to learn anywhere and anytime (Afriana & Prastowo, 2022; Hobri et al., 2019; Indriasih et al., 2020). Advances in digital technology in the industrial era have succeeded in changing various dimensions of human life, including education. This is characterized by the use of modern science (AI, robots, and IoT) for human needs to ensure that humans can live comfortably. Technology becomes an intermediary in delivering knowledge and information (Machaba & Bedada, 2022; Simatupang et al., 2020). This is supported by previous findings, which confirm that E-commerce can make learning easier for students anywhere and anytime (Dwiasih & Agung, 2021; Indriasih et al., 2020). E-comic based on the Heyzine website designed with Flipbook. A flipbook is a form of book consisting of a series of images mounted on pages that can be rotated quickly, and these images can create the illusion of movement or animation (Perdana et al., 2021; Rokhim et al., 2020). Flipbooks are often used as a creative tool to display simple animations or present information interactively. This makes it easier for students to use E-comics.

Third, e-comics based on the Heyzine website are suitable for use in learning because they motivate students to learn. Heyzine website-based e-comics have fulfilled many of the indicators needed to support learning activities and suitability to students' level of development. The advantage of learning media is that it can broaden insight into learning materials such as books, pictures, and resources available in class, students gain diverse experiences through learning activities and provide students with real and direct learning experiences (Arifin & Lestari, 2020; Dwiasih & Agung, 2021; Indriasih et al., 2020). The use of interesting and interactive learning media is also important in the learning process to increase students' learning experience and motivation (Fachrunisa et al., 2022; Sakinah et al., 2023). The more attractive appearance of e-comics with a lighter story presentation is a special attraction for students. Compared with the presentation of stories in books, students preferred the presentation of stories packaged in e-comics. Using e-comics also makes students more enthusiastic and highly enthusiastic about learning (Sudarma et al., 2020; Wicaksana et al., 2019). In the digital era, technology can be utilized optimally to support the educational process, especially learning activities, and can help teachers compile, present, and present information. The results of this development are supported by previous studies, which have relatively the same characteristics regarding research topics, even though the subjects, numerical variables, and models used differ. Previous research findings state that the development of digital comics is suitable for use because it makes it easier for students to understand learning material (Angga et al., 2020; Syahmi et al., 2022). Other research also states that comic media can improve students' reading comprehension (Handayani & Koeswati, 2020; Marliana & Subrata, 2023). Research into the development of e-comic media certainly has advantages and disadvantages. Some of the advantages of website-based heyzine e-comics are that they are easy to access anytime and anywhere, can be opened via a mobile phone or computer, and do not require an application to save storage space on the device used; apart from that, they are also useful for learning. Media can also be an introduction to technology for students. However, this e-comic also has several areas for improvement, such as the limited material in the e-comic; even though it can be an evaluation, the questions presented still need to be more varied and support the HOTS element. Stable internet to access e-comics via the website. This research implies that the development of e-comics based on the Heyzine website can be used by teachers in classroom learning activities to help students learn Indonesian.

4. CONCLUSION

The results of the validity tests that have been carried out show that the media obtained very good qualifications with an interpretation of effectiveness in the category of being quite effective in supporting learning. Based on the results obtained, it can be concluded that the website-based e-comic Heyzine is very feasible, practical, and quite effective in improving student learning outcomes in class IV Indonesian language subjects. Student responses to learning are also enhanced by using e-comics, which have a very attractive appearance.

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