E-Comic Improves Understanding of Indonesian Language Learning Results

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ABSTRACT

The problems currently occurring in elementary schools are limited variations in learning methods and students' difficulties in understanding spelling and the main idea of paragraphs. The aim of this research is to develop E-comics to improve understanding of Indonesian language learning outcomes. This type of research is development through 6 stages. This research involved research subjects consisting of media experts, material experts, and a group of fifth grade students consisting of 33 students. Data was collected through interviews, documentation and value assessments. The data collection instrument is a questionnaire. Data analysis techniques use descriptive qualitative, quantitative and inferential statistical analysis. The research results are: The e-comic media developed has gone through a careful evaluation and revision process and received high validation from media and material experts, exceeding the quality standard threshold. This media is considered appropriate and reliable to support learning and research. In addition, the results of the Wilcoxon test analysis show that there is a significant difference between pretest and posttest data, which shows an increase in students' understanding in the high category. It was concluded that E-comics can improve understanding of Indonesian language learning outcomes. This research is very relevant for advancing education and technology in using e-comics as a medium for learning Indonesian in elementary schools.

1. INTRODUCTION

Education has a very important role in the development of a country. Through education, individuals gain knowledge, skills and understanding to increase their potential and contribute to society (Ilham, 2019; Megawanti, 2015). Education has a strategic position in shaping the future of a nation, enabling optimal development of human resources and achieving sustainable prosperity (Ali, 2020; Santika, 2021). However, challenges in the field of education are increasingly complex in a global context that continues to develop. Social, economic, and technological changes affect the way we learn, teach, and
manage educational systems (Arsanti & Setiana, 2020; Ilham, 2019). Issues such as educational disparities, accessibility, quality of education, and facing global change require serious attention and effective solutions. Indonesian language subjects have an important role in the education system in Indonesia (Ali, 2020; Suparlan, 2020). As a core subject, Indonesian aims to develop students' language skills and understanding effectively and communicatively. Studying this subject involves important aspects such as reading, writing, speaking, and listening. At the elementary school education level, learning Indonesian is an important foundation in forming students' basic abilities in communicating using Indonesian well and correctly (Ali, 2020; Hamzah & Khoiruman, 2021). Through learning Indonesian, it is hoped that students will be able to master reading, writing, speaking and listening skills well and be able to respond appropriately. In the Indonesian language learning process, students are introduced to various aspects of the language such as vocabulary, grammar, spelling, and sentence structure in paragraphs. They are also taught about understanding reading texts, writing main ideas or paragraphs, and using language in various communication contexts (Dewi et al., 2020; Mailani et al., 2022). Apart from that, learning Indonesian also includes an introduction to Indonesian culture, customs and arts as part of enriching students' understanding of the nation's identity and cultural richness. Currently, Indonesian language subjects at elementary school level are one of the important contents that students need to master. Students' ability to speak Indonesian well and correctly is an important aspect in developing their thinking, communicating and creative abilities (Revita et al., 2023; Wulandari et al., 2023).

In the context of learning Indonesian at the elementary school level, several challenges were found such as low student interest and motivation, limited variations in the learning methods used, as well as students' difficulties in understanding spelling and language in determining the main idea of a paragraph (Hidayat, 2022; Ni Made Rusniasa et al., 2021). Another problem is related to learning methods that are monotonous, less interactive, and do not pay attention to the diversity of students' learning styles, which can have an impact on reducing their interest and motivation (Dewi et al., 2020; Hamzah & Khoiruman, 2021). Apart from that, the lack of variety in learning methods can also cause students to be less active and involved in the learning process. Limitations and lack of variety of learning resources also become obstacles for students to actively participate in learning Indonesian, thereby limiting the development of vocabulary, understanding grammar and communication skills (Afifah et al., 2022; Zakiyah et al., 2022). In the ongoing digital era, advances in information and communication technology have a major impact on various aspects of life, including in the field of education. However, in the context of Indonesian language education in elementary schools, there are obstacles in implementing technology in learning. This situation has the potential to reduce the attractiveness and interactivity of the learning process, as well as hinder the development of students' language skills and interest in Indonesian (Adzkiya & Suryaman, 2021; Hamzah & Khoiruman, 2021). To improve the quality of Indonesian language education, steps are needed to overcome this challenge by paying attention to the use of digital technology in the learning process, so that students are more active and have wider access to various learning resources.

Technological developments facilitate the use of interactive digital media in the learning process, including e-comics or digital comics. E-comics are a form of comic that can be accessed electronically via digital devices such as computers, tablets or smartphones. The use of e-comics in learning Indonesian offers an innovative and interesting approach for students. E-comics combine images, text, and interactive elements that create interesting stories, provide a fun learning experience, and increase students' motivation and interest in learning Indonesian (Wicaksana et al., 2020; Zakiyah et al., 2022). By implementing e-comics in Indonesian language learning, it is hoped that students will be more motivated in learning and improve their language skills. Therefore, the use of e-comics as a learning medium is considered an effective strategy for increasing student achievement in Indonesian language subjects. Another focus of this research is overcoming specific obstacles that arise in the process of learning Indonesian at the basic education level. One alternative proposed is to develop e-comics as a learning tool. This initiative aims to improve students' understanding of aspects of Indonesian, especially in terms of spelling and understanding the contents of paragraphs. The development of this e-comic is not only a creative solution to overcome these obstacles, but also has the potential to open up new opportunities in combining technology in the learning process (Setyawan & Koeswanti, 2021; Suganda et al., 2022). Therefore, the main aim of this research is to create alternative learning media that are not only innovative, but also effective in improving the quality of learning. Implementation of this product in various educational institutions has the opportunity to bring positive changes in learning approaches. Thus, this research not only produces products, but also encourages paradigm changes in education through deeper and more creative integration of technology (Lestari et al., 2022; Puspitasari et al., 2021).

The products that have been designed in this research have tremendous potential to have a significant impact on developments in various scientific fields (Andre et al., 2023; Hardani et al., 2022). The presence of this product is not only a result, but also a step that has an impact on improvements in the fields
of education and technology. Previous research conducted concluded that the use of e-comic media in learning is effective in improving student learning outcomes. This research involved two classes, namely classes 7A and 7B, with a One Group Pretest Posttest research design. The effectiveness test was carried out through a normality test, paired sample T-test, and N-gain test. The results of the normality test show that the data is normally distributed with a significance value above 0.05 in both classes. The paired sample T-test shows a significant difference between the pretest and posttest in both classes with a t-hit value that is greater than the t-table. In addition, the results of the N-gain test show that the increase in the average value in both classes is in the range between 0.30 to 0.70 (Andre et al., 2023; Indriasih et al., 2020).

2. METHOD

This research is included in the Research and Development (R&D) category. The main focus of this research is to develop e-comics by utilizing a combination of images, text and interactive elements to create interesting stories and attract students’ attention, with the aim of increasing enjoyment in the Indonesian language learning process and understanding spelling in the main idea of the paragraph. E-comic development is carried out through 6 stages, namely research and information gathering, planning, initial product development, product testing, product revision, and product implementation. The research and information gathering stages are carried out as a basis for the planning process. At the planning stage, the main focus is identifying problems, planning development, and identifying risks that may arise. Initial product form development aims to continuously improve initial ideas through repeated iterations. Product testing is very important to ensure product performance and quality in accordance with the stated objectives. Next, the product revision stage is carried out to improve test results and evaluate product quality according to needs.

This research involved research subjects consisting of media experts, material experts, and a group of fifth grade students consisting of 33 students. Data was collected through interviews, documentation and value assessments. For assessment by experts, quantitative analysis is used with a score of 1 to 4 as a research instrument, then the average number of scores is changed based on categories (low, medium and high) (Nasution, 2016; Suganda et al., 2022). Student assessments use comparative analysis or comparison tests of before and after scores. This comparison test is a parametric statistical analysis with the assumption of normality (Saputra et al., 2022; Sholikhah, 2016). However, if the assumptions are not met, the researcher will use a nonparametric test or Wilcoxon test.

3. RESULT AND DISCUSSION

Result

At the research stage, researchers conducted interviews with class V teachers at SD Negeri Wonosari 01 Ngaliyan Semarang. The results of the pre-research show that one of the main problems in class V of SD Negeri Wonosari 01 Ngaliyan Semarang is mastery of the main idea material, which causes a lack of understanding in the preparation of paragraphs resulting in a decrease in the value of learning outcomes. In the planning stage, the researcher designs the images and storyline in the e-comic based on the main idea of the paragraph. Next, the product testing stage is evaluated by experts for improvements before testing. Suggestions and input from validators are used by researchers to improve e-comic media. The results of the design validator scores assessed by experts can be seen in Table 1.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Aspect</th>
<th>Score</th>
<th>Information</th>
</tr>
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<tbody>
<tr>
<td>Media</td>
<td>Appearance</td>
<td>3.83</td>
<td>Worthy</td>
</tr>
<tr>
<td></td>
<td>The media presented is clear</td>
<td>4.00</td>
<td>Worthy</td>
</tr>
<tr>
<td></td>
<td>Relevance of the material</td>
<td>3.80</td>
<td>Worthy</td>
</tr>
<tr>
<td>Material</td>
<td>Presentation of material</td>
<td>3.75</td>
<td>Worthy</td>
</tr>
<tr>
<td></td>
<td>Language</td>
<td>3.75</td>
<td>Worthy</td>
</tr>
</tbody>
</table>

The results of the description analysis show that the validation value of media experts in the appearance and media aspects presented is 3.83 and 4.00, which exceeds the threshold value of 3.67, indicating that the media developed is suitable for use. Researchers succeeded in receiving input from experts, which indicated that the media met the established standards and criteria. With a high validation value, namely 3.83, this media is considered suitable and reliable to support learning or research objectives. The media has gone through a careful evaluation and revision process, demonstrating sufficient quality for use in the intended context. In conclusion, this media has successfully passed the assessment of experts and

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is suitable for use in the implementation of education or research. The results of the validation analysis by material experts show that e-comic media has been declared suitable for use with a material relevance value of 3.80 and a material and linguistic presentation value of 3.75. These values exceed the threshold of 3.67, indicating that the media is in accordance with the learning needs and objectives set by material experts. Researchers succeeded in integrating relevant material content and supporting learning objectives in this media. In addition, material experts provide positive assessments of the presentation of material and language, which makes it easier for students to understand the material presented. The e-comic of the developed design is presented in Figure 1.

![Figure 1. E-Comic Media](image)

Based on the results of the analysis, it can be concluded that e-comic media has met the appropriate criteria in terms of material relevance, material presentation and language in accordance with the assessment of material experts. Therefore, this e-comic media can be considered suitable and appropriate for use in the learning process, helping to support students' understanding of the material being taught, and achieving the learning objectives that have been set.

The product trial phase was carried out on subject groups of students in class V of SD Negeri Wonosari 01 Ngaliyan Semarang. A total of 33 students from different intelligence levels were selected as samples. This testing is carried out using tests (pretest and posttest) as a measurement value of the effectiveness of the product design. The aim of this stage is to evaluate the effectiveness of e-comic media in developing main idea material. Statistical assumption testing is required for parametric models, normality tests are carried out to see the distribution of student scores. The results of the normality test from measuring student scores are presented in Table 2.

<table>
<thead>
<tr>
<th>Table 2. The Normality Test Results</th>
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<tr>
<td>Shapiro-Wilk</td>
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<tr>
<td>Pre-test</td>
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<tr>
<td>Post-test</td>
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Normality analysis shows that the significance value for the pretest is 0.043 and for the post-test is 0.041. Both significance values are below the 0.05 significance level, which indicates that the data distribution of pre-test and post-test scores does not meet the assumption of normality. Thus, it can be concluded that the data is not normally distributed. So, the test cannot use parametric statistical tests so non-parametric test analysis using the Wilcoxon test is needed. The results of Wilcoxon analysis on pre-test and post-test data show the Asymp. value. Sig. (2-tailed) is 0.000 and the Z value is -5.024. Asymp. Value Sig. less than 0.05 indicates that there is a significant difference between the pre-test and post-test data at the 5% significance level. In addition, a negative Z value indicates that the difference occurs because the post-test data tends to be higher than the pre-test data. The output results show a positive rank value of 33, which indicates a positive change or increase in value in the 33 research subject samples. With an average increase in value of 17.00. Apart from that, if you look at the N-gain value of 0.71, it exceeds the value of 0.7 which is in the high category. The conclusion from these results is that the treatment or intervention provided is effective in improving the quality of the variables observed in the research subjects. The results of this analysis can be concluded that there is a significant difference between the pre-test and post-test data, indicating a significant change in the observed variables after the treatment or intervention was carried out. This indicates that the treatment or intervention given to research subjects has had a positive and significant impact in improving the variables being measured. Thus, the results of the Wilcoxon analysis support the effectiveness of the treatment or intervention given in increasing the posttest scores of the research subjects. The product revision stage was carried out after researchers discovered product deficiencies during testing. However, at this stage the product/design development found no problems or deficiencies. This is proven by validation results and results of measuring student learning scores.
Discussion

Based on the research stage, analysis was carried out to identify problems related to understanding and mastery of the material, especially in determining the main idea of paragraphs in Indonesian language lesson content. The results of problem identification show that students have difficulty determining the main idea of paragraphs in spoken and written texts and presenting the results of identifying the main idea. The causes of this problem include the development of learning media that is less than optimal and the application of learning models that are still conventional. Therefore, it is necessary to develop learning media in the form of digital-based e-comics to improve mastery and understanding of the material to determine the main ideas in spoken and written texts for class V students at SD Negeri Wonosari 01. In the design stage, the design of the e-comic images and storyline is developed. Based on two main instrument categories, namely media instruments and material instruments. The media instrument includes an assessment of attractive display presentations and the use of media that is clear and easy to understand. Meanwhile, the material instrument involves three aspects of assessment, namely the relevance of the material to the learning objectives, effective and appropriate presentation of the material, and the use of appropriate language that is easy for students to understand. Apart from that, the question instrument is used as a means to measure the success of students’ grades after using e-comics in learning. By using these instruments, it is hoped that we will be able to produce e-comics that comply with established standards and criteria, and are effective in supporting understanding and mastery of the material so that the application of conventional learning models is not monotonous (Indriasih et al., 2020; Sulastri, 2021).

In the initial product development stage in this research, a modification process was carried out based on input and suggestions provided by media and material experts. This modification was carried out with the aim of improving the quality and perfection of the initial product design that had been developed previously (Indriasih et al., 2020; Nugroho & Airlan, 2020). By paying attention to input from these experts, it is hoped that the resulting product can meet the desired quality standards and more precisely match the needs and objectives set in the research (Andre et al., 2023; Kunto & Wardani, 2020).

At the product testing stage, evaluation is carried out through three main aspects, namely media validation, material validation, and different tests on student assessments. The results of validation carried out by experts show that the product received a score that is included in the high category. These results indicate that the instruments used in product design are considered worthy of further development, especially in an effort to improve student assessment results (Megantari et al., 2021; Suganda et al., 2022). Apart from that, the results of different tests that use statistical methods in student assessments also show positive differences or significant improvements. The results of this trial provide strong support for the product’s effectiveness in improving student assessment results and demonstrate the product’s potential to be applied in broader learning contexts (Indriati et al., 2022; Puteri et al., 2022).

The revision stage after going through product testing in student value development research shows a significant role in improving the quality and validity of the product that has been developed. Initial product testing provides valuable insight into how the product will perform in actual learning situations, as well as identifying potential weaknesses and shortcomings. However, at the revision stage, the researcher did not make many changes or modifications to the design model. This is because the validation results by experts show that the product is suitable for use and there is a significant difference or increase in student score results, so the design is very effective for use in developing student learning (Andre et al., 2023; Ayu et al., 2021).

Overall, the analysis results from this research show significant potential in using e-comics as a medium to improve student learning outcomes in Indonesian language subjects. The implications of these findings in the context of education and technological developments open new opportunities in the development of innovative learning approaches. Limitations in this study emerged in the implementation phase, because the scope of this research was limited to evaluating the effectiveness of e-comics in increasing grade achievement and understanding of Indonesian. It is hoped that in further implementation, platform development steps can be carried out, with the aim that the products produced through this research can be adopted by society more widely.

4. CONCLUSION

The research results show that product development based on the perspective of media instruments and materials has significant effectiveness in improving student assessment results. This is supported by validation results from experts and statistical measurements which show that this product meets the desired quality standards and has a positive impact on student learning outcomes. As a result, this product is feasible and ready to be implemented in various educational institutions, because it has great potential to improve the quality of learning and overall student learning outcomes. However, to achieve the
success of this product, support, cooperation and commitment from various related parties is very necessary. With joint collaboration, this product can make a positive contribution to the development of education and create a young generation who is intelligent, creative and has potential.

5. REFERENCES


