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DEVELOPMENT OF DIGITAL-BASED LEARNING MEDIA IN THE IPAS SUBJECT FOR GRADE 4 STUDENTS AT INPRES 3 TONDO ELEMENTARY SCHOOL

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Abstract. *This study aims to describe the problems in the learning process that affect the still-low Minimum Mastery Criteria (KKM) scores. The achievement of learning objectives, particularly in Grade 4 at Inpres 3 Tondo Elementary School, remains relatively low. This research uses a descriptive qualitative approach. Poerwandari states that qualitative research collects and processes descriptive data through observation, documentation, interviews, and questionnaires. The rationale behind this approach is research that provides information about the current subject of the problem. The validation results regarding the feasibility of the media, obtained from two validator expert, show a score of 84.28% from the media expert and 90.76% from the subject matter expert, with the criteria of "highly feasible" for use. The students' responses to the digital-based learning media for Grade 4 at Inpres 3 Tondo Elementary School yielded a score of 98.5%, categorized as "highly engaging." Meanwhile, the Grade 4 teacher's response to the digital-based learning media received a score of 90%, classified as "highly practical." Based on the research results, it can be concluded that the development of learning media positively impacts the understanding of Grade 4 students. The use of video media not only improves student learning outcomes but also makes the learning process more engaging and interactive. The analysis shows that students who used instructional video media experienced a significant increase in material comprehension compared to those who used conventional learning methods.*

Keywords: *Digital-based learning, learning outcomes, video media.*

Abstrak. Penelitian ini bertujuan untuk mendeskripsikan masalah-masalah dalam proses pembelajaran yang berdampak pada nilai KKM (Kriteria Ketuntasan Minimal) yang masih rendah. Dimana tingkat pencapaian tujuan pembelajaran khususnya di kelas IV SD Inpres 3 Tondo masih tergolong relatif rendah.Penelitian ini menggunakan pendekatan kualitatif deskriptif. Poerwandari mengatakan bahwa penelitian kualitatif mengumpulkan dan mengolah data deskriptif melalui observasi, dokumentasi, wawancara, dan angket. Dasar pemikiran yang digunakan dalam pendekatan ini adalah penelitian yang memberikan informasi tentang subjek permasahalan saat ini. Hasil validasi mengenai kelayakan media yang diperoleh dari 2 ahli validator, yaitu dari ahli media diperoleh skor dengan 84,28%, dan dari ahli materi diperoleh skor dengan 90,76%. dengan kiteria sangat layak untuk digunakan. Hasil Respon siswa terhadap media pembelajaran berbasis digital berbasis untuk kelas IV SD Inpres 3 Tondo dengan memperoleh skor yaitu 98,5% dengan kiteria sangat menarik. Hasil respon guru kelas IV terhadap media pembelajaran berbasis digital untuk kelas IV SD Inpres 3 Tondo dengan memperoleh skor 90% yaitu dengan kiteria sangat Praktis..Berdasarkan hasil penelitian yang telah dilakukan, dapat disimpulkan bahwa pengembangan media pembelajaran memiliki dampak positif terhadap pemahaman siswa kelas IV. Penggunaan media video tidak hanya meningkatkan hasil belajar siswa, tetapi juga membuat proses pembelajaran menjadi lebih menarik dan interaktif. Hasil analisis menunjukkan bahwa siswa yang menggunakan media video pembelajaran mengalami peningkatan yang signifikan dalam pemahaman materi dibandingkan dengan siswa yang menggunakan metode pembelajaran konvensional.

Kata Kunci: Pembelajaran berbasis digital, hasil belajar, Media Video.

1. INTRODUCTION

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In today's digital or information age, science and technology are advancing rapidly. Alongside this progress, audio, visual, and audiovisual media have become inseparable from modern human life. All of these media are based on information technology, which has introduced new dimensions to human civilization. This development has led to greater openness, with information and knowledge spreading worldwide, transcending boundaries of distance, space, and time. In reality, human life in the digital era is inseparable from technology. Information and communication, as integral parts of technology, influence various aspects of life and transform daily human activities, including education, where digital media has prompted schools to adapt policies for the Industry 4.0 era.

Education has also undergone significant advancements from traditional face to face teaching by educators to learning using gadgets. The use of gadgets among school-aged children has been shown to enhance academic performance, particularly at the kindergarten level, reflecting the influence of current technological and informational developments. However, the integration of digital technology in learning is not without challenges, as adaptability and network accessibility remain key obstacles.

In the modern era, technology plays a crucial role in shaping human life. Yet, many individuals, including teachers, still lack proficiency in utilizing it. Therefore, improving technological competence is essential. By employing diverse teaching approaches, educators must create an engaging classroom atmosphere. One effective way to boost student interest and learning outcomes is through the use of compelling instructional media. Additionally, technology integration can enhance the learning process. Many teachers still rely solely on textbooks, despite the availability of varied teaching methods. Educators must innovate their teaching strategies to stimulate student thinking, and one approach is through instructional media (Melati et al., 2023).

Based on observations and interviews conducted with fourth-grade teachers at SD Inpres 3 Tondo, it was revealed that issues in the learning process have contributed to persistently low Minimum Mastery Criteria (KKM) scores. The

achievement of learning objectives, particularly in Grade 4, remains relatively poor. Indicators of this phenomenon include complaints from educators about low student absorption rates, as seen in unsatisfactory final grades, especially in IPAS (Natural and Social Sciences). Another prominent challenge is the lack of engaging and relevant instructional media for IPAS. Occasionally, teachers use YouTube videos, but this approach often leads to ineffective learning processes, negatively impacting student motivation.

To address this, teachers need to design instructional media tailored to students' characteristics, enabling easier comprehension of IPAS material. Such media should also be accessible outside school hours, given time constraints. Digital learning media offers advantages such as interactivity, concept visualization, and improved accessibility, allowing students to learn independently and explore material more actively. Developing digital-based media aligned with the curriculum and the characteristics of Grade 4 students at SD Inpres 3 Tondo is crucial to fostering a more conducive and engaging learning environment.

Research indicates that digital-based learning media can enhance student outcomes. Project-based learning utilizing digital tools also promotes collaboration and creativity, enabling deeper and more practical learning. However, the success of digital media implementation depends on teacher readiness and school technological infrastructure, underscoring the need for adequate teacher training and support.

Given the above information, the researcher is motivated to develop varied instructional media to assist teachers in delivering lessons effectively. Based on the identified problems, this study is titled "Development of Digital-Based Learning Media for IPAS Subjects in Grade 4 at SD Inpres 3 Tondo." The findings are expected to serve as a valuable reference for educators and curriculum developers in designing more effective teaching materials, supporting the goals of the Merdeka Curriculum, which emphasizes student-centered learning. This initiative not only has the potential to improve the quality of elementary education but also prepares younger generations to face the evolving challenges of the digital era with greater readiness and critical thinking.

2. RESEARCH METHOD

This study employs a descriptive qualitative approach. According to Poerwandari, qualitative research collects and processes descriptive data through observation, documentation, interviews, and questionnaires. The rationale behind this approach is that it provides information about the current subject of study. Given the nature of this research, the descriptive qualitative method is deemed most suitable, as it requires the researcher to engage directly with the research subjects in the field. This study adopts a descriptive-analytical design, focusing on describing and explaining how digital-based learning media can enhance student learning outcomes in the IPAS (Natural and Social Sciences) subject for fourth-grade students at SD Inpres 3 Tondo. The research model used is the ADDIE model, an acronym for Analyzing, Designing, Developing, Implementing, and Evaluating.

Data Analysis Technique the researcher uses qualitative descriptive analysis to present the results of developing digital-based learning media for the IPAS subject. The Likert Scale (Sugiyono, 2018) is applied to each statement in the questionnaire, calculated using the following formula:

$P = f/N \times 100\%$

Where:

P = Percentage of questionnaire data

f = Total score obtained

N = Maximum possible score

This method allows for a systematic evaluation of the effectiveness and feasibility of the developed learning media.

3. DISCUSSION

Based on the research results of developing a digital-based video media for teaching the topic of energy transformation in Grade IV at SD Inpres 3 Tondo, the media can be declared valid, engaging, and implementable in learning. The validity, attractiveness, and implementation are supported by the following findings

Product Validity

The attractiveness of the product was observed through students' responses while using the digital-based learning media. After using the media, students were given a questionnaire containing statements with five answer choices: "very interesting", "interesting", "quite interesting", "not interesting", and "very uninteresting". Out of 34 students who used the digital-based media, 99.75% responded positively, as shown in Table 4.9. Referring to Arikunto (2010:35), if evaluation results are below 60%, the product is considered invalid and needs full review; otherwise, scores above 61% indicate the product is feasible and receives positive responses.

The high attractiveness rating shows that the media is easy to use and operate, as the content is clear and easy to understand. Students showed increased enthusiasm during the learning process, indicating strong interest. This engagement allowed them to absorb information more accurately and helped enhance their responsiveness, concentration, and critical thinking during the interactive learning experience.

Additionally, based on an interview with the Grade IV teacher at SD Inpres 3 Tondo, the digital-based media was described as highly engaging, effective, and enjoyable because students could practice the content directly, which helped them absorb information effectively. Students were clearly enthusiastic and eager during the learning activity, and they claimed to understand the energy transformation material better because the media was easy to grasp and used simple, enjoyable language. Based on the student response questionnaires and the teacher’s statement, the digital learning media for IPAS Chapter 4: Energy Transformation can be declared engaging.

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Product Implementation

Regarding implementation, an interview with the Grade IV teacher revealed that the learning material presented in the digital-based media aligns with the learning objectives. Students were highly enthusiastic during the learning sessions as they

could directly engage with the content, allowing them to retain the information effectively.

4. CONCLUSION

Based on the conducted research, it can be concluded that the development of learning media has a positive impact on the understanding of Grade IV students. The use of video media not only improves students' learning outcomes but also makes the learning process more engaging and interactive. Analysis shows that students who used the video media demonstrated significantly better understanding than those who learned through conventional methods. From the study on "Development of Digital-Based Learning Media to Improve Student Learning Outcomes", the following conclusions can be drawn: 1) The development process followed five steps of the ADDIE model: Analysis, Design, Development, Implementation, and Evaluation. During development, feedback and suggestions from validators included adjusting the placement of "volume addition" text in the material and Reducing the duration/speed of the video; 2) the validation results showed the feasibility of the media, with a score of 88.57% from the media expert and 90.76% from the subject matter expert both categorized as highly feasible; 1) Student response score: 99.75% (very attractive); 2) Grade IV teacher response score: 90% (very practical).

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