DEVELOPMENT OF GOOGLE SITE -BASED INTERACTIVE LEARNING MEDIATO IMPROVE LEARNING OUTCOMES OF SCIENCE MATERIAL CLASS V HEAT TRANSFER MATERIALS ELEMENTARY SCHOOL

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Abstract

Yunarti, 2023. Development of Google Site -Based Interactive Learning Media to Improve Learning Outcomes of Science Material Class V Heat Transfer Materials Elementary School. 21st century learning is a learning that integrates the ability of literacy, knowledge skills, skills and attitudes, and mastery of technology. The low value of learning outcomes is influenced by the use of monotonous learning media. Science learning activities using Google Site interactive learning media make learning activities more inspiring, interactive, challenging, fun, and motivating students to active learners.

This study aims to test the validity, practicality, and effectiveness of the GoogleSite -based Interactive Learning Media on heat transfer material in class V SDN 1 Karanggeneng Kunduran District, Blora Regency. Research uses the Research & Development (R&D) development approach, producing Google Site -based interactive learning media on heat transfer material for elementary school V. The research subjects involved class teachers, students, and learning outcomes documents.

The results showed that Google Site -based interactive learning media was worthy of being a solution to improve student learning outcomes, suitable for implementing the learning model of Problem Based Learning and ADDIE implementation model because it had a high level of practicality, which was 87%, and effectively improved student learning outcomes and mastery The material of heat transfer with completeness to 72.73% and learning interest roseby 6.20% in grade V SD Negeri 1 Karanggeneng Academic Year 2021/2022.

Keywords: media, interactive, google site, heat transfer

1. Introductions

The development of the world of education seems to be accelerating after the Covid-19 pandemic which hit all levels of society, the world of education seems to have changed its orientation from environment-based to technology. After being forced to carry out online learning for about two years, students have become addicted to gadgets and everything in them. Thus, there is no longer any reason for teachers to delay the use of information technology as a learning medium.

It is inevitable that the use of online platforms is an alternative to maintaining student learning motivation. However, effectiveness in online learning requires teacher creativity and innovation in the use of learning media tools. Activities that can be carried out to develop teacher creativity in teaching are learning from the experiences of other teachers, sharing with peers, and improving relationships with other teachers (Adzkiya & Suryaman, 2021).

Based on the research results obtained from searching the learning outcomes documents in class V SD Negeri 1 Karanggeneng on science learning material about *heat transfer* it was found that the number of students who scored completed or above KKM only 9 out of 22 students or 41%. The low value of learning outcomes shows the level of students' understanding of the material taught by the teacher can also be said to be low. Class completeness of 40% is certainly still far from the minimum class completeness which should be 70%. One of the causes is the low interest of students in learning science, especially in Heat Transfer material. This is evidenced by the results of a survey to determine student learning interest in the material.

The choice of Google Site-based interactive science learning media is because it has a varied, attractive appearance, and is liked by students. According to research (Noviana, 2021) with the title Development of Google Sites-Based E-Modules in Science Learning Single and Mixed Substance Materials for Class V SD which aims to determine the quality and feasibility of Google Site-based interactive learning media on Single and Mixed Substance material for Class V SD produced that. Hamalik (in Arsyad, 2002) suggests that the use of teaching media in the teaching and learning process can generate new desires and interests, generate motivation and stimulate learning activities, and even bring psychological influences on students. The use of learning media at the learning orientation stage will greatly help the effectiveness of the learning process and the delivery of messages and lesson content at that time. In addition to arousing student motivation and interest, instructional media can also help students increase understanding, present data in an interesting and reliable manner, facilitate interpretation of data and condense information. The explanation of the

function of Hamalik's teaching media emphasizes that the use of learning media in teaching and learning activities can increase students' motivation and desire to learn and students can be interested and more easily understand the material presented.

The Google Site e-module has feasibility in looking at the quality of understanding material concepts and motivating students in learning.

The advantages possessed by the Google Site above, it is believed that the development of Google Site-based interactive learning media is able to increase interest in and results in learning science in Heat Transfer material for grade V elementary schools. Based on the background above, the researchers conducted a study entitled "Development of Google Site-Based Interactive Learning Media to Increase Interest and Learning Outcomes in Science Heat Transfer Materials for Class V Elementary Schools".

2. Research Methods

This study uses a *Research & Development (R&D) development approach*. The research and development method (R&D) is a research method related to products (Sugiyono, 2019). This research produces a product and can be used to produce certain products. This research is a needs analysis and intends to test the product. So that the product can be used by the wider community.

Development research can be carried out with several models, namely; ASSURE, Borg and Gall, Dick and Carry (2003), and the ADDIE model. In this development research using the ADDIE model. ADDIE is the main component of the systems approach to developing learning and development procedures in learning, especially learning media (Suryani et al., 2018).

The ADDIE model was developed by Reiser and Molenda in 1990. The ADDIE model design is a development design that aims to guide the development of training program tools and infrastructure that are effective, dynamic and also support the performance of the training itself. According to (Bernardez, 2007), the ADDIE model is a general learning model and is suitable for development research, when it is used in developing this process and is considered sequential and interactive.

According to (Branch, 2009) in stating "ADDIE is basically the result of the development paradigm. The focus of the ADDIE development model is aimed at learning and one of them is learning media.

The reason the author chose the ADDIE model is because it can describe the most effective systematic approach to learning development for the development of learning products. According

to (Suryani et al., 2018) states that learning design is a systematic, effective, and efficient process in creating learning systems to solve learning problems or improve student performance through a series of problem identification, development, and evaluation activities.

3. Result and Analysis

Based on the research results obtained from searching the learning outcomes documents in class V SD Negeri 1 Karanggeneng on science learning material about heat transfer, it was found that the number of students who received a complete score or above the KKM was only 9 out of 22 students or 41%.

After validating the material, media validation was then carried out involving 3 (three) people who have expertise in *Google Site* design. The results of the media expert validation test with indicators of display simplicity, cohesiveness, emphasis, balance, shape, and color, the learning media design gets the criteria of 'no need for revision' and that means that the learning media is ready for use.

The results of the needs analysis are grouped into 2 (two), namely:

a) Learning media

The problem in the field is that teachers are still fixated on BSE and do not have other references in teaching so that learning is monotonous. Thus the need for learning media is to create interactive learning innovations by utilizing information technology. The solution offered is with Google Site.

b) Learning models

One of the factors supporting the success of the learning process is the learning model. Findings in the field show that teachers are less innovative in carrying out learning, causing children to be less active in participating in learning. The solution offered is the application of the Problem Based Learning learning model.

The final test results for the group with Google Site interactive learning media (experiment) were higher than the group with manual learning media (control) with an average of 86.55 to 78.55.

The t-count value is 3.541 and sig.(2-tailed) is 0.002. The 2-tailed significance value is 0.002 <0.05 so there is a significant difference in point scores between the experimental and control groups.

Based on the discussion of the research results above, it can be concluded that the use of interactive learning media based on Google Sites is effective in increasing the academic grades of fifth grade students at SD Negeri 1 Karanggeneng Kunduran District for the 2021/2022 academic year from an average of 71.1 to 86.5.

4. Closing

Based on the description of the discussion of the research results that have been described in the previous chapter, the following conclusions can be put forward:

The results of the validity test show that the development of interactive learning media by utilizing the Google Site is valid for use in learning to improve student learning outcomes of class V SD 1 Karanggeneng Kunduran District on heat transfer material.

The results of the analysis found that the development of Google Site-based interactive learning media on heat transfer material in fifth grade students of SD Negeri1 Karanggeneng Kunduran District is practical to implement with the Problem Based Learning learning model and the ADDIE implementation model because it has a high level of practicality, namely 87%.

Google Site-based interactive learning media is effective for increasing student learning outcomes and mastery of heat transfer material with completeness to 72.73% and learning interest increasing by 6.20% for fifth grade students at SD Negeri 1 Karanggeneng for the 2021/2022 academic year.

Suggestion

Based on the results of the study, the researchers submit suggestions as follows:

The development of interactive learning media in science learning can be applied to other materials by paying attention to the appropriate material characteristics.Teachers should play an active role and carry out learning innovations to improve learning outcomes.

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