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The Efficacy of Adobe Flash CS6-Based Interactive Learning Media in Enhancing Student Academic Performance

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Abstract: This study aims to Effectively Utilize Adobe Flash CS6-Based Interactive Learning Media in Improving the Learning Outcomes of State Junior High School Students 03 South Bengkulu. This research method is a descriptive quantitative experiment. The design that will be used is Design One Pretest-Posttest Group. The subjects of this study are 30 students of Grade seven B State Junior High School 03 South Bengkulu. The instrument used was 20 multiple-choice questions. The results of the study with paired sample test showed that the value of asym sig. (2-tailed) of 0.00 < 0.05 so that it was rejected and accepted, which means that there is an effectiveness of interactive learning media based on adobe flash CS6 in improving student learning outcomes in the informatics subject of grade VII at SMP Negeri 3 South Bengkulu. It can be concluded that Adobe Flash CS6-based interactive learning media is effective in improving student learning outcomes in the informatics subject of grade VII at State Junior High School 03 South Bengkulu South Bengkulu.

Keywords: Effectiveness, Learning Media, Adobe Flash CS6.

Introduction

In the era of globalization and information technology advancements, the world of education is required to continue to innovate in developing learning methods and media (Firdos et al., 2023). One of the main challenges faced by teachers is how to deliver the subject matter in a way that is engaging, effective, and easy for students to understand (Utomo, 2023). Therefore, the use of interactive learning media is an increasingly relevant solution to be applied in the teaching and learning process (Anggraini et al., 2024). Interactive learning media is a means that can combine text, images, audio, video, and animation to convey information dynamically (Setiyanto et al., 2023). With this approach, students not only become passive listeners, but can also interact directly with the subject matter (Rohima, 2023). This can certainly increase students' interest in learning, strengthen understanding of concepts, and facilitate meaningful learning (Lestari, 2023).

Adobe Flash CS6 is one of the software that can be used to create interactive learning media with interesting visualizations (Prayudi & Anggriani, 2022). The advantage of Adobe Flash CS6 lies in its ability to combine animation, illustration, and interactivity in a single media package (Siagian, 2024). Additionally, Flash CS6 allows media developers to insert quiz

elements or practice questions that provide feedback directly to students (Satriawan et al., 2022).

The use of Adobe Flash CS6 in learning media allows teachers to create a more lively and communicative classroom atmosphere (Madona et al., 2023). Through this medium, abstract material can be visualized to be more concrete so that it is easier to understand (Mulyoto et al., 2023). Moreover, students who have visual and kinesthetic learning styles will be greatly helped by animation-based and interactive media like this (Tri, 2022).

Improving student learning outcomes is one of the indicators of success in the educational process (Rahman, 2022). Many studies show that interactive media can improve students' understanding of concepts, information retention, and critical thinking skills (Fauziyah et al., 2024). Therefore, it is important to examine the extent of the effectiveness of interactive learning media based on Adobe Flash CS6 in improving student learning outcomes.

In practice, Flash-based interactive media can be used for various levels of education and subjects, ranging from science, mathematics, to language (Liady et al., 2022). This media also supports individual and group learning, and can be accessed inside and outside the classroom (Sinaga et al., 2023). This flexibility is what makes Flash a potential medium in supporting 21st century learning (Sukmawati & Santosa, 2022). However, the use of technology-based media also requires readiness from teachers and students (Permana et al., 2024). Teachers need to have the ability to design and operate Adobe Flash CS6-based media, while students need to be familiar with the use of digital devices (Kusum et al., 2023). Therefore, training and mentoring for teachers are important factors in the optimal application of this media (Nisak & Rahmah, 2024).

Theory

This study aims to determine the effectiveness of interactive learning media based on Adobe Flash CS6 in improving student learning outcomes. This research is expected to provide an empirical overview of the benefits and challenges of using this media in the learning process in schools. The level of students' understanding of the subjects in learning can be determined by conducting evaluations. Based on the results of the evaluation of 31 students of the State Junior High School 03 South Bengkulu in the seventh grade, it was found that the student score was still below the average, which was less than 76. And based on the results of the three-day observation on August 28, 29 and 30, 2023, it was found that students had difficulties in understanding the informatics subject matter Therefore, it is necessary to implement the right learning strategies so that learning goals are achieved. The strategy aims to make students' learning experiences more meaningful and effective. This is also due to learning strategies that are still conventional. Therefore, innovation is needed through the use of interactive learning media, such as Adobe Flash CS6, which does not require an internet connection and is easy to create and use

The role of assessment in learning is very important in educational institutions (Murtafiah, 2022). After the learning process is carried out, activities are carried out by teachers and students, then the teacher will conduct an assessment as part of the evaluation (Saputra et al., 2022). To measure the success of students in mastering the material taught by the teacher by using assessment tools in the form of evaluations in the form of assessment instruments in the form of tests and non-tests is the purpose of the assessment of results Learning (Putri et al., 2022). Previous research analysis of learning media using adobe flash (Nasution et al., 2024),

android smartphone-based learning media design using adobe flash CS 6 (Taufik & Saputra, 2023), development of interactive learning media based on Adobe Flash (Nisa & Syafe'i, 2025), and Interactive multimedia based on Adobe flash CS6 application on thematic learning (Budi & Miaz, 2023).

With this background, it is important to conduct further studies The Efficacy of Adobe Flash CS6-Based Interactive Learning Media in Enhancing Student Academic Performance. In addition, the results of this research can also be a reference for educators in choosing and developing the right learning media according to the needs of students. Thus, the learning process will become more interesting, effective, and able to significantly improve learning outcomes. This research is expected to be able to make a real contribution to the development of learning innovations and improving the quality of education in Indonesia and especially for the state junior high school 03 South Bengkulu.

Methods

The research method used is quantitative with one group design method using pretest-posttest. The population in this study were class VII A and B of junior high school 03 Bengkulu Selatan. With informatics subjects with 61 students. The sample used was class VII B students of SMP Negeri 03 Bengkulu Selatan, which was 30 people. The data collection technique used a test in the form of a multiple choice question. The test used consisted of 20 multiple choice questions. The data analysis technique used was the paired sample T test.

Result and Discussion

The results of the paired test T test is needed to see if any independent variables individually affect the dependent variables. In this test, the researcher used SPSS 25, the criteria in the test (t-test) are if the sig value > 0.05 Ho is accepted and Ha is rejected and if the sig value < 0.05 then Ho is rejected and Ha is accepted. The following are the results of the paired samples test:

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Pretest - Posttest	-20.66667	7.62633	1.39237	-23.51439	-17.81895	-14.843	29	.000

It is known that *the value of sig*. (2-*tailed*) of 0.00 < 0.05, it can be interpreted that Ha is accepted which means the effectiveness of interactive learning media based on adobe flash CS6 in improving student learning outcomes in the informatics subject of grade VII at SMP Negeri 3 South Bengkulu.

Adobe Flash CS6-based interactive learning media has been proven to be effective in improving student learning outcomes at various levels of education and subjects. Features such as animations, simulations, and interactive quizzes allow for more engaging and easy-to-understand material delivery. The results of this research that have been carried out are in line with the research conducted at SMA Negeri 14 Bombana by Nasarudin and his colleagues showing that the use of Adobe Flash CS6-based multimedia in geography learning is very effective. Of the total 23 students, around 87% showed an increase in learning outcomes after using this interactive learning medium (Nasarudin et al., 2023). In line with research Research

by Fatma Zahra at SMA Negeri 2 Sigli researched the effectiveness of the use of Adobe Flash CS6-based interactive learning media on atomic structure materials. The results showed that the experimental class experienced an increase in learning outcomes with an n-gain value of 0.78 (high category), compared to the control class that had an n-gain of 0.65 (medium category). The effect size test showed a value of 0.97, which means that the use of this media has a great influence on improving learning outcomes (Zahra, 2023).

Another study by Lenni Khotimah Harahap and Anggi Desviana Siregar (2023) at SMA Negeri 1 Padangsidimpuan showed that the use of Adobe Flash CS6-based interactive media on chemical equilibrium materials increased student learning motivation by 94.7% and learning outcomes by 87.17. This result is higher than the use of internet-based chemistry learning media, which shows learning motivation of 88.5% and learning outcomes of 79.67 (Harahap & Siregar, 2020). Research by Situmorang et al. (2023) at SMA Negeri 1 Pematang Siantar developed learning media using Adobe Flash CS6 on biodiversity materials. The results of the study showed that the media was very feasible to use, with a validity rate of 88% and a positive response from students of 81.49%. In addition, the learning outcomes of students who use this media are higher than those who do not use (Kurniawan & Jakak, 2024). Although Adobe Flash CS6 is no longer officially supported by many modern platforms due to technological developments such as HTML5, these studies show that interactive learning media developed with Adobe Flash CS6 still has high effectiveness in improving student learning outcomes. However, for long-term sustainability, media developers need to consider migrating to newer and widely supported platforms.

Conclusion

Based on the sig (2-tailed) value of 0.000 < 0.05, it can be interpreted that Ha is accepted, which means that there is an effectiveness of interactive learning media based on adobe flash CS6 in improving student learning outcomes in the informatics subject of grade VII at State Junior High School 03 South Bengkulu, South Bengkulu.

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