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THE IMPACT OF USING SMART BOARDS ON IMPROVING THE ACADEMIC PERFORMANCE OF FIFTH-GRADE STUDENTS IN PANCASILA EDUCATION

Abstrak

Studi ini bertujuan untuk menilai pengaruh penggunaan media papan pintar terhadap peningkatan prestasi belajar Pendidikan Pancasila pada siswa kelas V SD Negeri 41 Kota Pagar Alam. Penelitian bersifat kuantitatif dan menggunakan desain eksperimental non-ekuivalen dengan grup kontrol dan pretest-posttest. Populasi studi adalah 156 siswa dari sekolah tersebut, dengan 38 di antaranya terpilih sebagai sampel, dibagi antara kelas eksperimen dan kelas kontrol. Data dikumpulkan melalui observasi, wawancara, dokumentasi, dan tes (pre-test dan post-test) dan dianalisis menggunakan uji statistik normalitas, homogenitas, dan t-test sampel independen. Hasil menunjukkan peningkatan signifikan pada kelas eksperimen dengan rata-rata 63,90 dibandingkan kelas kontrol yang mencapai 51,83. Dari analisis t-test, ditemukan nilai t-hitung (3.627) lebih besar dari t-tabel (1.688), menandakan pengaruh nyata dari media papan pintar terhadap prestasi belajar. Faktor penghambat termasuk variasi kecerdasan siswa yang beragam, sementara penggunaan media ini meningkatkan keaktifan dan pemahaman materi, memotivasi mereka untuk lebih bersemangat dalam belajar.

Kata Kunci: Media Papan Pintar, Pendidikan Pancasila, Prestasi Belajar

Abstract

This study aims to assess the impact of utilizing innovative board media on enhancing the academic performance of fifth-grade students in Pancasila Education at SD Negeri 41 Pagar Alam. The methodology uses a quantitative approach and incorporates a non-equivalent experimental design, incorporating control groups and pretest-posttest combinations. The study population consists of 156 pupils from the school, with 38 chosen as samples, distributed between the experimental and control courses. The data were gathered using observation, interviews, documentation, and tests (pre-test and post-test) and were subsequently analyzed using tests for normality, homogeneity, and independent sample t-tests. The results demonstrated a substantial enhancement in the experimental group, with an average score of 63.90, in contrast to the control group's score of 51.83. The t-test analysis revealed that the obtained t-value (3.627) exceeded the critical t-table value (1.688), demonstrating a statistically significant impact of the intelligent board medium on learning achievement. Obstacles to development were caused by the varying levels of intelligence among the students. However, using this media improved their engagement and comprehension of the topic, motivating them to be more enthusiastic in their learning.

Keywords: Learning Outcomes, Pancasila Education, Smart Board Media

INTRODUCTION

Education is a deliberate and structured effort to create an enjoyable learning environment where students actively develop their potential, including spiritual strength, religious values, self-control, personality, intelligence, noble character, and skills needed by themselves and society. (Muhammad Syarif Sumantri, 2015:41). Education serves as a cornerstone in eradicating knowledge poverty, addressing the issue of ignorance, and resolving the nation's challenges. (Mardinal Tarigan, 2022:2). Therefore, the educational process is inseparable from well-integrated teaching and learning activities that support a more effective learning process.

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Effective learning is achieved when students participate enthusiastically. A conducive learning atmosphere and environment also support effective learning. Teachers are expected to master the curriculum content, teaching methods, instructional media, and tools well so that during the teaching process, students can easily understand the material presented by the teacher, thus achieving the educational objectives, particularly in Pancasila education subjects.

At State Elementary School 41 in Kota Pagar Alam, the current curriculum has been adapted to include Pancasila education, a mandatory subject taught at all levels of education from elementary through higher education. It focuses on developing attitudes, skills, and character across religious, socio-cultural, linguistic, age, and ethnic dimensions, aiming to cultivate intelligent, skilled, and well-characterized citizens. Furthermore, it helps foster student behaviors related to values, ethics, politeness, and discipline through its role as a facilitator in the teaching process. (Erni Novianti, 2021:2).

Educational media are essential to supporting academic achievement. They act as an intermediary between educators and students in the teaching process, effectively connecting, informing, and conveying messages. These media also stimulate the attention, interest, thoughts, and emotions of learners, involving both software (material) and hardware (tools), making the learning process (both inside and outside the classroom) more effective. (Nizwardi Jalinus, et al., 2016:4).

Thus, educational media facilitate the teaching process, helping teachers clarify the meaning of the academic content from theoretical lessons and enabling students to gain specific knowledge and skills. Smart boards are an example of such media, creatively developed by educators to convey particular messages to students. (Rosalina Putri, 2022:4).

In this study, intelligent boards are practical tools for visually presenting and conveying messages with various images/icons related to cultural diversity in Indonesia, such as pictures of traditional houses and clothing displayed on the smart board. The learning process can also be interactive and playful using intelligent boards, helping students understand and focus on the content taught, thereby enhancing their academic performance.

Observations in the field indicate that teachers still employ conventional methods; therefore, it is necessary to implement educational media in Pancasila education subjects. This research aims to determine the impact of using smart boards on improving students' academic performance in Pancasila education on cultural diversity in Indonesia. Additionally, the study seeks to identify the factors that hinder and support the use of smart boards in enhancing the academic achievement of fifth-grade students at State Elementary School 41, Kota Pagar Alam.

METHOD

The researcher utilized a quantitative research strategy with an experimental approach in this investigation. Based on positivist philosophy, quantitative research is employed to study specific populations and samples. It involves gathering data using research instruments and analyzing quantitative/statistical data to assess applied hypotheses (Sugiyono, 2011: 99).

The study used a Quasi-experimental design involving two classes: the experimental and control classes. The experimental class was exposed to treatment, which involved learning through interactive whiteboard media. In contrast, the control class did not receive any treatment or use any form of media. Afterward, both classes underwent pre-treatment tests (pre-tests) and post-treatment tests (post-tests). This study aims to determine students' academic progress after using interactive whiteboard technology.

The population for this study comprises all students enrolled in SD Negeri 41 Kota Pagar Alam, with a total of 156 pupils. A purposive sampling strategy was employed to choose the research sample, yielding a sample size of 38 students. The data analysis in this study encompasses the Normality Test, Homogeneity Test, and hypothesis testing.

The Normality Test is performed to ascertain whether or not the investigated data adheres to a normal distribution. Using SPSS V23 software, the Kolmogorov-Smirnov method is used to perform the normalcy test.

The Homogeneity Test determines whether the variance of the studied sample data is uniform. It is required before any statistical data analysis can begin. With SPSS V23, the homogeneity of variance is examined using Levene's Test.

In this study, the t-test is used for hypothesis testing. The t-test is employed to investigate a treatment's impact. The researcher used the independent sample t-test to do hypothesis testing.

RESULT AND DISCUSSION

Based on the pretest results conducted in the experimental and control groups, the experimental group had an average score of 44.80, while the control group had an average score of 40.94.

Upon analyzing the data from the learning media whiteboard post-test in the experimental group, the average score was 63.90, whereas in the control group, it was 51.83.

Further, a prerequisite test was conducted on both pretest and post-test data. The pretest data for both experimental and control groups showed a significance value > 0.05 , precisely 0.200 for the experimental group and 0.159 for the control group, indicating a normal distribution of pretest data in both classes. Similarly, the experimental group had a significance value of 0.176 for the post-test data, and the control group had a significance value of 0.167, suggesting a normal distribution of post-test data in both classes.

Regarding the homogeneity test, the significance value for the pretest data in the experimental and control groups was $0.878 > 0.05$, indicating data homogeneity. Similarly, both groups obtained a significance value of $0.643 > 0.05$ for the post-test data, indicating data homogeneity.

The obtained data shows that the average score in the experimental group is higher than that in the control group. This is because the experimental group received a different treatment using the whiteboard media, resulting in higher post-test scores than the control group. This demonstrates the effectiveness of the whiteboard media as a learning tool, as it is engaging and presents surprises in each envelope, thus fostering enthusiasm and motivation among students and making learning more active and engaging.

The hypothesis testing further supports these results using an independent t-test in SPSS V23.

Table 1.

t-value
3,627

The t-value (t-test) computed from the hypothesis testing table is 3.627, with 36 degrees of freedom (df). The crucial t-value (t-table) is derived using a sample size (n) of 38, including the experimental and control groups. The degrees of freedom (df) are calculated as $n-2$, resulting in a value of 36. The t-table value achieved is 1.688, which may be found in the t-table appendix. Given that the estimated t-value (3.627) exceeds the crucial t-value (1.688), the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted. This suggests a statistically significant difference between the experimental and control groups.

In addition, the two-tailed significance value (sig) is 0.001, which is less than 0.05. Thus, the null hypothesis H_0 is rejected, whereas the alternative hypothesis H_a is accepted. The data suggests that the experimental group, which utilized whiteboard media, achieved greater learning outcomes than the control group, which used conventional means. Therefore, it can be deduced that using the whiteboard medium positively impacts academic performance in Pancasila education for fifth-grade students at SD Negeri 41 Kota Pagar Alam.

This is consistent with the findings of Laila Adhe Kharisma Nur's research conducted in 2022, which suggests that employing whiteboard media can enhance students' comprehension of the subject matter, foster the development of critical thinking abilities, and stimulate students to engage in questioning and problem-solving actively. The utilization of whiteboard media has the potential to incite students' attention and curiosity, thereby enhancing their academic performance. Permatasari's 2021 study provides additional evidence that incorporating whiteboard media into Pancasila education improves students' comprehension and attentiveness, leading to enhanced learning outcomes in Pancasila education. \

According to the researcher's observations and interviews, one problem that hinders the use of whiteboard media is the occurrence of wrong replies from students, which can be attributed

to variations in their degrees of intellect. Moreover, certain students may need more time to engage fully in front of the entire class, impeding the learning process.

Conversely, there are supporting aspects, such as students' keenness for learning, particularly their passion for using whiteboards in Pancasila education. Interviews with teachers and students reveal that incorporating whiteboard media in Pancasila education is highly captivating and fosters active involvement in the learning process.

SUMMARY

In conclusion, the research findings demonstrate that using whiteboard learning media significantly enhances students' learning achievement in Pancasila education. The pretest and post-test scores indicate a substantial improvement, supported by the statistical analysis using independent t-tests. This suggests that the whiteboard media effectively contributes to advancing learning outcomes for fifth-grade students at SD Negeri 41 Kota Pagar Alam.

Furthermore, observations and interviews reveal several supportive factors for utilizing whiteboard media in learning. These include heightened student enthusiasm, increased comprehension facilitated by visually engaging materials, and enhanced confidence among students in participating actively in class discussions. However, challenges such as varying student abilities and occasional hesitancy in participation are noted as inhibiting factors. Despite these obstacles, the overall impact of whiteboard media on students' learning experiences remains positive and beneficial. Overall, the study underscores the effectiveness of incorporating whiteboard media into Pancasila education, providing a dynamic and engaging learning environment that fosters improved learning outcomes and student engagement.

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