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Pengaruh Inkuiri Terbimbing Berbantuan Media Audio Visual Terhadap Sikap Ilmiah Siswa Sekolah Dasar

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Abstract

This study aimed to examine the difference and effect of guided inquiry learning assisted by audiovisual media on elementary students' scientific attitudes in science learning on changes of matter. The study employed a quasi-experimental method with a non-equivalent control group design. The sample consisted of 30 third-grade students at SD Negeri 2 Asemrudung, with class 3A as the experimental group and class 3B as the control group. Data were collected through questionnaires, observation, interviews, and documentation, then analyzed using an independent samples t-test and simple linear regression. The results showed no statistically significant difference between the experimental and control groups (sig. 0.830 > 0.05), and the coefficient of determination was very small (R^2 = 0.002). However, observation indicated that the experimental group showed stronger curiosity, cooperation, openness, and honesty in recording data. These findings suggest that guided inquiry assisted by audiovisual media contributes positively in qualitative terms to the development of students' scientific attitudes.
Keywords: guided inquiry, audiovisual media, scientific attitude, science, elementary school

1. Introduction

Science learning in elementary school is not only directed at cognitive mastery, but also at the development of scientific attitudes such as curiosity, objectivity, cooperation, openness, and honesty. Scientific attitude is an important foundation for students to understand natural phenomena through systematic inquiry and evidence-based reasoning.

Preliminary observations at SD Negeri 2 Asemrudung showed that students' scientific attitudes were still relatively low. The initial scores of curiosity, respect for data or facts, and open-mindedness with cooperation were still below the expected level. This condition indicates the need for learning strategies that are not only contextual, but also capable of guiding students through scientific processes more explicitly.

Guided inquiry learning places students at the center of the learning process by helping them formulate problems, propose hypotheses, collect data, test hypotheses, and draw conclusions. This model is considered suitable for elementary school because teacher guidance remains present while students are still actively involved in discovery activities. Previous studies also show that guided inquiry can support scientific performance, critical thinking, concept mastery, and scientific attitude development in elementary students.

Audiovisual media can strengthen guided inquiry by presenting concrete, interesting, and easily understood stimuli. Video, animation, sound, and images can help students visualize abstract science concepts, especially in the topic of changes of matter. The integration of guided inquiry and audiovisual media is therefore expected to encourage students to ask questions, observe carefully, work together, and record data honestly during the learning process.

This study was conducted to examine whether guided inquiry learning assisted by audiovisual media has an effect on scientific attitudes of third-grade elementary students in

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science learning on changes of matter. The study contributes empirical evidence for teachers who need learning models that are both engaging and relevant to character development.

2. Method

This research used a quantitative approach with a quasi-experimental method and a non-equivalent control group design. The population was third-grade students of SD Negeri 2 Asemrudung. The sample consisted of 30 students, divided into class 3A as the experimental group and class 3B as the control group.

The experimental group received science learning through guided inquiry assisted by audiovisual media, while the control group received conventional learning. The learning material focused on changes of matter in everyday life. Data were collected using questionnaires, observation sheets, interviews, and documentation.

The scientific attitude instrument was developed based on three main dimensions: curiosity, respect for data or facts, and open-mindedness with cooperation. Observation sheets were also used to document the implementation of guided inquiry syntax, namely orientation, problem formulation, hypothesis formulation, data collection, hypothesis testing, and conclusion drawing.

The data analysis techniques included validity and reliability testing, normality and homogeneity testing, independent samples t-test, and simple linear regression. The significance level used in hypothesis testing was 0.05. The quantitative analysis was complemented by qualitative observation of classroom interaction and learning implementation.

3. Results and Discussion

The results of the independent samples t-test showed a significance value of 0.830, which is greater than 0.05. This means that there was no statistically significant difference in scientific attitude scores between the experimental group and the control group. The experimental group obtained an average score of 10.43, while the control group obtained 10.37.

The simple linear regression analysis showed an R^2 value of 0.002. This indicates that guided inquiry learning assisted by audiovisual media explained only 0.2% of the variation in scientific attitude scores, while the rest was influenced by other factors outside the model. Therefore, the effect was not significant quantitatively.

Although the quantitative results were not significant, classroom observations showed a more positive pattern in the experimental class. Students appeared more curious, more willing to cooperate in groups, more open to discussion, and more honest in recording data. The learning process was also implemented very well, with strong teacher facilitation, active student participation, and effective use of media.

These findings support the idea that scientific attitude is not easily changed in a short period and may require continuous practice, authentic assessment, and repeated exposure to inquiry-based learning. In this case, audiovisual media functioned as an initial stimulus that helped students focus attention and understand abstract concepts more concretely, while guided inquiry provided structured opportunities for scientific engagement.

The findings are in line with previous studies that report guided inquiry and audiovisual media can improve engagement, scientific skills, or related learning outcomes, even when statistical effects on affective variables are limited in short interventions. For elementary

students, the combination appears more powerful in shaping procedural and social dimensions of scientific attitude than in producing immediate score differences.

4. Conclusion

Guided inquiry learning assisted by audiovisual media did not show a significant statistical effect on scientific attitudes of third-grade elementary students in this study. However, the learning model provided a positive qualitative contribution, especially in fostering curiosity, cooperation, openness, and honesty in scientific activities.

The model is promising for elementary science learning, but its impact on scientific attitude may require longer implementation, more authentic assessment, and consistent teacher facilitation to produce stronger.

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