Improving Biology Learning Outcomes through Guided Inquiry with Video Media

Ruth Rize Paas MEGAHATI. S

Medical Laboratory Technology Study Program, Politeknik Keseshatan Kesuma Bangsa, Bandar Lampung, Lampung, Indonesia

*Corresponding author: megahati71@gmail.com

Abstract

Lack of student participation during discussions causes students to become inactive when learning, and difficulty in answering teacher questions because the information the teacher conveys is not understood by students. This results in student scores still below the KKM in Global warming is one of them. The minimum completeness criteria set at SMPN 2 Lembah Gumanti is 65. The purpose of the study was to determine the effect of the application of the guided inquiry model with video media on the biology learning outcomes of seventh-grade students of SMPN 2 Lembah Gumanti, Solok Regency. The type of research is an experiment with a research design Randomized Control Group Posttest Only Design. The use of t-test is used in the affective domain as a data analysis technique and the t-test was used in the cognitive and psychomotor domains for data analysis techniques. 1 the experimental class has an average score of 62.38 with a predicate of C (Enough) while the control class has an average value of 53.22 with a predicate of D (Less). Hypothesis test 0.05 obtained t-count 2.90 > t-table 1.67, meaning that H1 is accepted. The guided inquiry learning model accompanied by video media can improve the biology learning outcomes of class VII students of SMPN 2 Lembah Gumanti, Solok Regency.

Keywords: Guided Inquiry, learning outcome, Biology

Acknowledgments:

Thank you to all those who have helped carry out this research

For citation:

Introduction

In the teaching process, the teacher applies the lecture method but in the lesson plans the learning model used is Discovery Learning (Ana, 2019), so there is a lack of compatibility between planning and implementation in the learning process. In addition, the scientific approach taken has not really been implemented because it has only reached the stage of observing and asking questions. Lack of student participation during discussions causes students to become inactive when learning, and difficulty in answering teacher questions because the information the teacher conveys is not understood by students. This results in student scores still below the KKM in Global warming is one of them. The minimum completeness criteria set at SMPN 2 Lembah Gumanti is 65.

The low value of students on global warming material, especially on the sub-material of the process of the occurrence of the greenhouse effect, is difficult for students to understand. This happens when the teacher explains the material using PowerPoint media which only contains the main points of explanation that cause the process of the greenhouse effect. The low value of students on global warming material is because in this material students find it difficult to understand the process of the greenhouse effect. When explaining the material the teacher uses PowerPoint media which is only in the form of explanatory points which causes the learning objectives in the process of the greenhouse effect to not be conveyed properly (Lari, 2014). The purpose of the study was to determine the effect of the application of the guided inquiry model with video media on the biology learning outcomes of seventh-grade students of SMPN 2 Lembah Gumanti, Solok Regency.

Methodology

The type of research is an experiment with a research design Randomized Control Group Posttest Only Design. All students of class VII SMPN 2 Gumanti Valley, Solok Regency. The sampling technique was purposive sampling so class VII.1 was chosen as the experimental class and class VII.2 was used as the control class. Instruments in the research in the affective domain are attitude observation (responsible and cooperative in groups), instruments in the cognitive domain in the form of multiple-choice questions through written tests, and instruments in the psychomotor domain with products (systematic reports and report readability. The use of t-test is used in the affective domain as a data analysis technique and the t-test was used in the cognitive and psychomotor domains for data analysis techniques.
Results

The results of the research have been conducted at SMPN 2 Lembah Gumanti with two sample classes, namely, class VII.1 by applying guided inquiry learning models and video media as the experimental class and class VII.2 applying the scientific approach as the control class. Assessment of students' cognitive domains is carried out based on the results of the final test conducted after all the material in the chapter has been studied by students in 4 meetings, the final test is carried out with 23 multiple choice questions.

In Figure 1 the experimental class has an average score of 62.38 with a predicate of C (Enough) while the control class has an average value of 53.22 with a predicate of D (Less).

![Figure 1. The average value of the sample class](image)

Percentage of KKM with a limit of 65. In the experimental class completed 13 students or (50.00%), 13 students did not complete, or (50.00%) while in the control class 2 students completed (8.00%) while those who did not complete were 23 students (98.00%). Hypothesis test 0.05 obtained $t_{count} = 2.90 > t_{table} = 1.67$, meaning that $H_1$ is accepted.

Discussion

The results of the hypothesis test that has been carried out, that the application of the guided inquiry learning model with the media can improve student learning outcomes. Based on the acquisition of psychomotor domain scores for the experimental class with 62.38 predicated Enough (C) and the control class with a value of 53.22 predicated Less (D). In the cognitive
domain, the experimental class is categorized as adequate and under the KKM. This is because students are not used to using this learning model and only some students are able to understand it. This makes the learning process less than optimal. However, student involvement becomes active with the application of this model and media. Curiosity is high if the observation activities are in accordance with the material in the video media. This can be seen in the understanding and ability of students' memory to increase after watching the video. Stated that "video media can record real current events, with a combination of color, audio and movement to make the characters look more alive and watching videos can strengthen students' understanding in material about asking questions about material that is not understood and seek answers from sourcebooks."

In accordance with the opinion of (Wati & Sartiman, 2019); (Harden, 2007) that the guided inquiry learning model has the advantage of emphasizing maximum learning on students for search and discovery so that their role is not only accepting but also playing a role in finding themselves by way of direction.

In the learning process in the control class students' scores were low, because in learning students did not listen to the explanations delivered by the educators. As seen in the question and answer process, only some students responded, while others were busy with their own activities. This is because students only focus on textbooks so students' curiosity in learning is lower than in the experimental class. According to (Mahajan & Singh, 2017) learning outcomes will be maximized if there is a teacher-student relationship.

Conclusion

The guided inquiry learning model accompanied by video media can improve the biology learning outcomes of class VII students of SMPN 2 Lembah Gumanti, Solok Regency.

References:


https://doi.org/10.1016/j.sbspro.2014.03.592
