

Digital Communication and Interactive History Learning: The Influence of Magic School-Based Learning Media on Students' Learning Outcomes

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Abstract

This study aims to analyze the application of Magic School learning media in history learning and determine its influence on the learning outcomes of grade XII students of SMAN 1 Leupung. This study uses a quantitative approach with a pre-experimental method and a one-group pretest-posttest design. The population as well as the research sample amounted to 23 grade XII students which were determined through saturated sampling techniques. Data were collected through observation, tests, and documentation, then analyzed using normality, homogeneity, correlation, paired sample t-test, and one sample t-test. The results showed that the average student learning outcome increased from 46.5 before treatment to 77.8 after the application of Magic School media. Student learning activities based on observation results reached 82% in the good category. The results of the paired sample t-test obtained a t-count value of 15.512 greater than the t-table of 2.080 at a significance level of 5%, so that there was a significant difference between the pretest and posttest scores. The one sample t-test also obtained a significance value of 0.008, which shows that the average posttest score has significantly exceeded the KKM of 70. Thus, the Magic School learning media has a significant effect on improving the history learning outcomes of grade XII students of SMAN 1 Leupung.

Keywords: Magic School Learning Media, History Learning, Learning Outcomes

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INTRODUCTION

Education is a strategic process in developing the potential of students while forming quality human resources. In this process, learning outcomes are one of the important indicators to see learning success. In history learning, learning outcomes are not only related to the ability to remember facts and chronology, but also include the ability to understand cause-and-effect relationships, analyze events, and relate past experiences to present life.

History learning in schools still faces problems in the form of low student involvement and understanding when the learning process takes place in a monotonous manner. The delivery of material that is only centered on the teacher's explanation can cause students to be less active, easily lose concentration, and have difficulty understanding the material that is conceptual and chronological in nature. Therefore, the use of interactive learning media in accordance with technological developments is one of the important alternatives to create a more interesting learning experience.

Learning media functions as an intermediary for conveying learning messages as well as a means to stimulate students' attention, interest, motivation, and involvement. The development of artificial intelligence (AI) also opens up opportunities for the use of digital media that is more adaptive and interactive. One of the media that can be used in this context is Magic School, which is an AI-based platform that provides various tools to help prepare materials, learning activities, assessments, and learning interactions.

Magic School has the potential to support history learning because it can help present material in a more visual, interactive, and flexible manner. In this study, the use of Magic School is combined with the Problem Based Learning model. Students are directed to study historical problems, work in groups, seek information through available features, discuss findings, and present problem-solving results. Thus, students not only receive information, but also engage in the process of building understanding through investigation and discussion activities.

Based on initial observations at SMAN 1 Leupung on February 23, 2025, it is known that of the 23 students in grade XII, only 4 students or 17.39% obtained a score above the KKM, while 19 students or 82.61% have not reached the KKM of 70. This condition shows that there are problems in the achievement of history learning outcomes. Therefore,

learning innovations are needed that can increase student involvement and help them understand the material more effectively.

This research was carried out to answer two main problems, namely how to apply Magic School learning media in history learning in grade XII of SMAN 1 Leupung and whether the use of media affects student learning outcomes. This research is expected to make a practical contribution for teachers in utilizing learning technology and enriching studies on the use of AI-based media in history learning.

METHODS

This study uses a quantitative approach with a pre-experimental type of research. The research design used is a one-group pretest-posttest design. In this design, one group is given initial measurement through a pretest, then given treatment in the form of learning using Magic School media, and then given a posttest to determine changes in learning outcomes after treatment.

The research was carried out at SMAN 1 Leupung with the research subjects of all grade XII students totaling 23 people. Because the population is relatively small and all members of the population are involved, the sampling technique used is saturated sampling. The learning material used focuses on the struggle to defend Indonesia's independence.

Data collection is carried out through observation, tests, and documentation. Observation is used to determine the implementation of student activities during the learning process. Tests are given in the form of pretest and posttest to measure students' cognitive learning outcomes before and after the application of Magic School media. Documentation is used as data to support research.

The learning process is carried out through the planning, implementation, and evaluation stages. In the planning stage, the researcher prepares learning tools, LKPD, presentation materials, videos, test instruments, and observation sheets. In the implementation stage, learning is carried out with the Problem Based Learning model supported by Magic School media. Students work in groups, identify problems, seek information, discuss, compile results, and present the results of problem solving. The evaluation stage is carried out through posttest and observation of student activities.

Data analysis was carried out through normality tests and homogeneity tests as prerequisite tests, then followed by correlation tests and paired sample t-tests to find out the differences in learning outcomes before and after treatment. In addition, one sample

t-test was carried out with a KKM comparative value of 70 to find out whether the average learning outcomes after treatment had exceeded the completeness standard.

RESULTS

The application of Magic School learning media in this study is carried out through face-to-face learning with the Problem Based Learning model. Learning takes place in one meeting with a duration of 2×45 minutes. In the initial stage, the teacher opens the learning, conducts perception, conveys the learning objectives, and provides an introduction to the material. Furthermore, students are directed to understand historical problems related to the struggle to defend Indonesia's independence.

In the core activity, students are divided into groups and each member gains a role in the discussion process. Students use Magic School features, including Learning Bots and Prompt Assistants, to obtain additional information relevant to the given problem. The information is then analyzed and discussed with the group. The results of the discussion are outlined in the LKPD and presented in front of the class.

The use of Magic School media makes learning more interactive because students are involved in activities to find information, ask questions, process answers, discuss, and convey results. Based on the results of observations, student activities obtained a percentage of 82% and are in the good category. These results show that the application of Magic School media can support student involvement in the history learning process.

Table 1. Summary of Student Learning Outcomes Before and After the Implementation of Magic School

Measurement	Number of Students	Average	Categories
Pretest	23	46,5	Low
Posttest	23	77,8	Height

Source: Research data processing, 2026

The measurement results showed an increase in the average score of student learning outcomes. Before being given treatment, the average pretest score was 46.5 and was in the low category. After learning using Magic School media, the average posttest score increased to 77.8 and was in the high category. Thus, there was an average increase of 31.3 points.

The normality test showed that the pretest and posttest data were normally distributed with significance values of 0.402 and 0.342, respectively. The homogeneity test obtained a significance value of 0.910 so that the data was declared homogeneous. The results of the correlation test showed a relationship between the pretest and posttest values.

Hypothesis testing using a paired sample t-test obtained a significance value of 0.001. The value was smaller than 0.05, so there was a significant difference between the learning outcomes before and after the application of the Magic School media. The t-count value of 15.512 was also greater than the t-table of 2.080. Thus, H_0 was rejected and H_a was accepted.

The one sample t-test with a KKM comparison value of 70 obtained a significance value of 0.008. Because the value is smaller than 0.05, the average posttest of 77.8 is proven to be significantly higher than the KKM. These findings show that the learning outcomes of students after learning using Magic School have reached the set standards of completeness.

DISCUSSION

The results of the study show that the application of Magic School learning media can create a more active and interactive history learning. Students not only receive explanations from the teacher, but are also involved in the process of information retrieval, problem-solving, discussion, and presentation. This is in line with the characteristics of constructivistic learning that place students as active subjects in building knowledge through learning experiences.

The use of Magic School in Problem-Based Learning provides a space for students to explore historical material through questions and problems. The digital features used help students obtain information faster, while the group discussion process encourages students to test, compare, and process the information obtained. Thus, technology is not used only as a tool to present material, but as a means to support the thinking process and learning activities.

The increase in the average score from 46.5 to 77.8 shows that the use of Magic School media has a positive impact on students' cognitive learning outcomes. This increase is inseparable from the presentation of more varied materials and learning activities that encourage student involvement. History material that could previously be understood in

the abstract becomes easier to learn through a combination of explanations, videos, questions, digital exploration, and discussion.

The findings of this study also show that the improvement of learning outcomes occurs simultaneously with the increase in student activities. The observation results of 82% with a good category show that students are able to follow the learning stages and participate in group activities. This involvement is an important factor because students have the opportunity to develop the ability to understand the material, express opinions, collaborate, and convey the results of thoughts.

Statistically, the results of the paired sample t-test showed a significant difference between pretest and posttest scores. These results reinforce the findings of previous research on the use of technology-based learning media that can improve learning outcomes. However, this study has limitations because it uses one group without a control group. Therefore, the improvement in learning outcomes needs to be understood in the context of changes that occur after treatment in the studied group.

Overall, the results of the study show that Magic School can be one of the alternative innovative learning media in history learning. The use of this media will be more optimal if it is accompanied by good learning planning, teacher assistance, selection of appropriate materials, and students' ability to use technology critically and responsibly.

CONCLUSION

The application of Magic School learning media in the history learning of grade XII of SMAN 1 Leupung combined with the Problem Based Learning model was well implemented. Students were involved in activities to understand problems, seek information through digital media, discuss, compile results, and present the results of problem solving. The results of the observation of student activities obtained a percentage of 82% with the good category.

Magic School's learning media has a significant effect on the history learning outcomes of grade XII students of SMAN 1 Leupung. This is shown by an increase in the average score from 46.5 in the pretest to 77.8 in the posttest. The results of the paired sample t-test showed a t-count value of 15.512 > t-table of 2.080 and a significance value of $0.001 < 0.05$. In addition, the results of one sample t-test showed a significance value of $0.008 < 0.05$, so that the average posttest had significantly exceeded the KKM by 70.

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