The Effect of Using Pop Up Book Media on Critical Thinking Ability

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Abstract:

The first formal level of education which is part of the education series in Indonesia is elementary school. Therefore, the role of educators or teachers in elementary schools is to bring as much knowledge as possible to this world in the child's activity environment, both internally and externally as a learning experience. One way educators can support children's learning process in another way is by providing creative and innovative learning media to stimulate interest in learning and foster children's critical thinking abilities. Students must have the courage to accept challenges to try new things. Dare to try means accepting and analyzing problems, and finding solutions to these problems. The learning process requires critical thinking skills to achieve effective learning.

Keywords: Media Pop Up Book, Kemampuan, Berfikir Kritis

Introduction

Education is the main content of the development of human life. Education can be interpreted as the door to recognizing and understanding all aspects of human development. In Indonesia, the learning policy announced by the government of the Republic of Indonesia is mandatory for 12 years. Education starts from elementary school to college. The first formal level of education which is part of the education series in Indonesia is elementary school. Therefore, the role of educators or teachers in elementary schools is to bring as much knowledge as possible to this world in the child’s activity environment, both internally and externally as a learning experience. One way educators can support children’s learning process in another way is by providing creative and innovative learning media to stimulate interest in learning and foster children’s critical thinking abilities. Students must have the courage to accept challenges to try new things. Dare to try means accepting and analyzing problems and finding solutions to these problems. The learning process requires critical thinking skills to achieve effective learning. The current era of globalization requires all education units to emphasize character education, which instills in students having good attitudes and character, especially at the elementary school education level,
which will be the foundation for raising a generation that has good character and character. (Hasibuan & Sitepu, 2023). (Pratiwi, 2018) Learning is a dynamic process to achieve goals that have been formulated. Criteria for determining whether teaching is successful or not can generally be seen from two aspects, namely criteria viewed from the perspective of the teaching process itself and criteria viewed from the perspective of the learning outcomes or products achieved by students.

Critical thinking is a method of thinking that aims to receive the reader's reaction from the writer as a form of ability to think logically and systematically (Sulistiani & Masrukan, 2016). In this case, thinking logically and systematically in the classroom means there must be a connection between the results of the learning process. Students are subjects that can change for the better and progress naturally. One lesson that can provide activities to improve critical thinking skills by highlighting a problem is using pop up book learning media as a reference in creating interesting learning media. Teachers and parents must be able to analyze assumptions and opinions about correct information. Likewise, students are taught logical and interesting information, so that they better understand what information is considered correct. Effective methods and media are able to develop students' thinking so they can attract children's attention and encourage them to think critically.

(Dayton, 1998) Learning media is useful for complementing, maintaining and even improving the quality and ongoing learning process, the use of media in learning will improve learning outcomes, increase student activity, increase student learning motivation, increase understanding, present data in an interesting and reliable manner, facilitate interpretation of data and condense information. (Arsyad A, 2011). Body organs is the science of human body structure. In the anatomy of the human body, it will be seen that humans have many elements that make up one human body. These elements consist of the digestive system, respiratory system, reproductive system, muscular system, sensory system, nervous system. (Ismawanto, 2017). Science learning media requires creativity among students. Creativity is a potential that every human being has and is not received from outside the individual. The creativity that humans have is born with the birth of that human. Since birth, individuals have shown a tendency to actualize themselves. In this life, creativity is very important, because creativity is a very meaningful ability in the process of human life. (Chairunnisa Amelia, 2020)

Knowledge of the anatomy of the human body is very important. To be able to find out normal processes and bad conditions if a disease attacks the body's anatomy. So you can take precautions in the form of prevention for your body's health. That's why learning the anatomy of the human body is important material that students must understand from now on. Often the learning materials available in anatomy books and dolls are not sufficient to help students understand body anatomy. (Rini, 2022). Based on the problem of the difficulty of understanding this learning and the development, a pop up book was created which supports learning media about human body organs. So that students are able to understand the shape of the organs found in the human body in detail and thoroughly.

**Methods**

This research approach is quantitative research. Quantitative research methods
can be interpreted as methods used to research certain populations or samples, collecting data using research instruments, with the aim of testing predetermined hypotheses. The understanding that has emerged among the development of quantitative research is that researchers can deliberately make changes to the world around them by conducting experiments. The aim of the research is more directed at showing the relationship between variables, with quantitative methods significant differences will be obtained between before the research and after the research. Researchers conducted the study using a quantitative research approach. This type of quantitative research is a research method that examines a predetermined population and sample. Therefore, the data collection process uses certain instruments which are then analyzed using statistics, with the aim of testing the researcher's hypothesis (Sugiyono, 2010). The researcher chose the experimental research method because this research involved a control class and an experimental class. To obtain the necessary information, researchers need to evaluate the initial conditions of both sample classes. Therefore, a pretest was carried out first, and then followed by a posttest. The experimental class will receive treatment using pop up book media. The sample used was class V students at SDS Muhammadiyah 32, the sample was taken from one class and carried out two research studies, the first research did not use Pop UP Book media and the second research used Pop Up Book media.

**Results**

The implementation of this research begins with initial observations, namely by determining the time and place for conducting the research. After the time and place have been determined, then prepare the research instruments to be used in the class to be studied. In this research, learning media is used, namely using Pop Up Book media which is taught in class V. Before learning is carried out, students are given pretest questions first. The results of the pretest can be used to see students' initial abilities in solving questions on human body organ science material before they are given treatment.

Hypothesis testing in this research used the F-test with a sample size of 20 students through tests in the form of pre-test and post-test. To find out whether there is an influence in this research or not, you can see the table below.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre test</strong></td>
<td>22</td>
<td>13.00</td>
<td>60.00</td>
<td>30.4545</td>
<td>10.83085</td>
</tr>
<tr>
<td><strong>Post tes</strong></td>
<td>20</td>
<td>13.00</td>
<td>80.00</td>
<td>49.7500</td>
<td>22.73619</td>
</tr>
<tr>
<td><strong>Valid N (listwise)</strong></td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the table above, presenting the F-test results data in the table above, there is a significant influence in increasing the scores of class V students using the pre-test (M = 30.45, SD = 10.83085) and the scores of class V students using the post-test (M = 49.75, SD = 22.73619). It can be concluded that there is a significant difference between the pretest and post-test questions, thus there is an influence of Pop Up Book media on students’ critical thinking abilities.

This pretest aims to determine students' initial critical thinking abilities
before being given treatment to students. After being given treatment in the
learning process, students are given posttest thinking questions to determine
students' critical thinking abilities after being given treatment. This pretest and
posttest are used to determine students' critical thinking abilities after using Pop
Up Book media. In the learning process using Pop Up Book media, the researcher
explains the material being taught, namely human body organs. In this learning
process the researcher explains about body organs. The internal human body uses
the Pop Up Book media. After that, students are asked about what the internal
human organs are by pointing to the organs that are already in the Pop Up Book.
After students point to the picture in the Pop Up Book, students are again asked
about the function of these organs. (Suroiha et al., 2021) Pop Up Book media is a
three-dimensional book where if the book is opened it will produce interesting
pictures related to the material being presented in order to increase students'
understanding and stimulate student activity during the teaching and learning
process. Pop Up Book media is useful as a means of stimulating students' thoughts
and activity so that it is easy for them to understand the explanation of the
material presented by the teacher and makes it easier for the teacher to convey
the material that will be delivered.

The benefits of Pop Up Book media according to (Dzuanda, 2011) that is:
a. Teach children to appreciate books and care for them well
b. Develop children's activity
c. Stimulate children's imagination
d. Provide knowledge and provide an introduction to the shape of objects
e. Can be used as a medium to foster reading motivation in children

Conclusion
Based on the analysis of test data from research results from the
discussion, data on the validity of students' critical thinking, namely, of the 15
questions that were given to respondents, 10 questions remained valid and 5
questions were invalid. And the reliability of students' critical thinking is that
the Cronbach Alpha value is quite large, namely 0.844, which is declared reliable
or consistent. Statistical analysis of the F test results shows that there is a
significant effect of increasing students' scores using the pre-test (M = 30.45, SD
= 10.83085) and the scores of class V students using the post-test (M = 49.75,
SD = 22.73619). It can be concluded that there is a significant difference between
the pretest and posttest questions, thus there is an influence of Pop Up Book
media on students' critical thinking abilities.

Suggestion
After this research has been completed, it is hoped that readers or teachers
will always repeat applying media every time they want to carry out learning,
because in learning there must be media so that students can understand the
learning being carried out and students will focus on the teaching and learning
process. It is hoped that students' science scores will be satisfactory again.

References
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