The Effect of Creative Problem-Solving Model Assisted by Picture Series Media on Creative Thinking Ability

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Abstract
This study aims to describe the effect of creative problem solving models assisted by serial images on creative thinking skills. The type of research used in this study is a quasi experimental design type nonequivalent control group design. The population in this study were all students of Cluster I, Somba Opu sub-district, Gowa district, totaling 329 students with a total sample of 60 using cluster random sampling technique. The data collection technique used is a test technique to determine the ability to think creatively by giving essay questions. The results of the study based on hypothesis testing about the effect of the Creative Problem Solving model assisted by serial picture media on students' creative thinking skills in the control and experimental class posttest using the independent sample t test, obtained a significant value of 0.00 less than 0.05 so it can be stated that creative problem solving model assisted by serial picture media has an effect on students' creative thinking skills.

Keywords: Creative Problem Solving, Series Picture Media, Creative Thinking.

Introduction
The ability to think creatively is one of the components of ability that is important for 21st century society. According to Susanto (2013) creative thinking is a process that involves elements of originality, fluency, flexibility, and elaboration. This shows that creative thinking can develop language power that includes insight with broad elements. Creative thinking can produce quality thinking. This opinion is reinforced by Sani (2014) that creative thinking is the ability to develop ideas that are unusual, quality, and appropriate to the task. This is self-development of new ideas that have good ones. According to Munandar (2012) creative thinking has five stages, namely: orientation, preparation, incubation, illumination, and verification.

Based on the expert opinion, the ability to think creatively is the key to success in solving problems, because creativity can be a bridge between the stages of processing cognition and execution so that someone has convincing achievements or results. Therefore, students' creativity should be fostered
from an early age so that in the future students will find it easier to find ideas from the creative thinking process. However, the creative thinking ability of students in Indonesia is not optimal enough. The results of TIMMS in 2011 in (Ardiansyah, et al., 2016) show that the level of creative thinking of students in Indonesia is still relatively low. Therefore, teachers need to provide learning that is able to help optimize students' creative thinking skills.

According to Ariana (2020), Creative Problem Solving (CPS) is an achievement of good solutions in education where problem solving is uniformed or creatively varied. Creative Problem Solving (CPS) there are several targets that must be considered, namely: students will be able to state the sequence of solving problem solving steps in Creative Problem Solving (CPS), students are able to find possible problem solving strategies, students are able to evaluate and select possibilities the possibility is related to the existing criteria, students are able to choose an optimal solution, students are able to develop a plan in implementing problem solving strategies, students are able to articulate how Creative Problem Solving (CPS) can be used in various fields or situations.

In addition to the Creative Problem Solving (CPS) model, teachers can also use learning media. One of the media that can be used is serial image media. According to Kurniawan (2014) learning media is needed in addition to a vehicle for delivering learning materials as well as to increase the clarity of the discussion of the material. According to Krissandi (2020), serial images are media that displays a number of images with the background of the atmosphere being told and shows continuity between one image and another.

Picture series according to Arsyad (2011) is a series or story that is presented sequentially. The use of pictures in learning will train students to express the scenes and activities in the pictures. Based on this explanation, this study aims to examine the effect on creative thinking skills after being given treatment in the form of applying the Creative Problem Solving (CPS) model with the help of serial image media.

Method

This study uses quantitative methods. Quantitative research according to Sugiyono (2018) is a research method used to find the effect of certain treatments on others under controlled conditions. The type of experiment is a quasi-experimental research design with a nonequivalent control group design type. The design can be described as follows:

Picture 1. Research Design

<table>
<thead>
<tr>
<th>O1</th>
<th>X</th>
<th>O2</th>
</tr>
</thead>
<tbody>
<tr>
<td>O3</td>
<td></td>
<td>O4</td>
</tr>
</tbody>
</table>

Information:

O₁ : Creative thinking ability of experimental class students before being given treatment
O₂ : Class students’ creative thinking skillsexperiment after being given treatment
O₃ : Creative thinking ability of control class students before being given treatment
O₄ : Creative thinking ability of control class students who were not given treatment
X : the treatment given,creative problem solving with the help of Media Image Series

The independent variable as a treatment in this study is the application of creative problem solving models assisted by serial image media in learning, while the dependent variable is the ability to think creatively. The population in this study is
the Elementary School Cluster I, Somba Opu District, Gowa Regency. As for this study using cluster random sampling. Determination of the sample obtained from a lottery conducted on the population using a simple lottery. The sample in this study is SD Negeri Sungguminasa IV, Gowa district.

Data collection techniques using tests and documentation. According to Arikunto (2013) a test is a series of questions or exercises and other tools used to measure skills, intelligence knowledge, abilities or talents possessed by individuals or groups. This test aims to measure students' creative thinking skills, while documentation aims to take documentation in the form of lesson plans (RPP) and photos in learning activities using creative problem solving models with the help of serial image media. The data analysis technique in this study consisted of descriptive analysis and parametric inferential analysis with the help of SPSS version 26 application. The test used in parametric inferential analysis was the independent sample t test. As for decision making in the test, if the significance value (2-tailed) <0.05, it can be stated that there is a significant and positive influence on the application of creative problem solving models on creative thinking skills.

Results and Discussion

Results
1. Descriptive Analysis

Descriptive analysis was used in this study by describing the average creative thinking ability in the pretest posttest control and experimental classes. The description of creative thinking in table 1 is as follows:

<table>
<thead>
<tr>
<th>Class</th>
<th>Average Creative Thinking Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>62.08</td>
</tr>
<tr>
<td>Posttest</td>
<td>64.49</td>
</tr>
<tr>
<td>Experiment</td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>67.08</td>
</tr>
<tr>
<td>Posttest</td>
<td>80.20</td>
</tr>
</tbody>
</table>

Based on decision making, if the significance value obtained is greater than 0.05 then the data is normally distributed. The significance value obtained from each pretest posttest data in the experimental and control classes has a significance value of more than 0.05. Therefore, it can be stated that the data obtained are normally distributed.

b. Homogeneity Test
The homogeneity test aims to determine whether the two groups of data obtained are homogeneous or not and as a prerequisite test for parametric inferential analysis. The data can be said to be homogeneous if the significance value obtained is greater than 0.05. The homogeneity test in this study uses the SPSS version 26 application. The results of the homogeneity test in this study are as follows:

Table 3. Homogeneity Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level</th>
<th>Statistics</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Thinking Ability</td>
<td>0.318</td>
<td>58</td>
<td>0.575</td>
<td></td>
</tr>
</tbody>
</table>

Source: SPSS Version 26

Based on decision making, if the significance value obtained is greater than 0.05 then the two groups of data obtained are homogeneous. Therefore, it can be stated that the data obtained in both groups are homogeneous.

3. Hypothesis testing

Hypothesis testing to determine the effect of creative problem solving models assisted by serial picture media on creative thinking skills was carried out using an independent sample t test with the assistance of SPSS version 26 application. The significance value obtained is less than 0.05. Therefore, it can be stated that there is an influence of creative problem solving model assisted by serial image media on creative thinking ability.

Discussion

The results in this study indicate that the creative problem solving model assisted by serial pictures has an effect on the creative thinking ability of students in class IV at SDN Sungguminasa IV, Gowa district. The results in this study are in accordance with the theory proposed by Ariani et al., (2020) that the Creative Problem Solving model can help students use creative thinking patterns. Therefore, the creative problem solving model certainly has an influence on students' creative thinking abilities. The application of the creative problem solving model is highly recommended for use by teachers as a model that can help optimize students' creative thinking skills.

Conclusion

Based on the data analysis and discussion above, the writer can conclude that: creative problem solving model assisted by serial picture media affects the creative thinking ability of students in grade IV SDN Sungguminasa IV, Gowa Regency. Teachers are expected to be able to choose a learning model that suits the
needs of students, have thorough preparation before teaching, of course with this creative problem solving model it will be one of the considerations for teachers if they want to know the extent of students' creativity in solving problems related to learning materials. Because this model can help students in exercising their creativity through the process of finding creative ideas.

Bibliography


Author Profile

Moh. Agus, was born in Takalar on August 24, 1995. The researcher completed his elementary school education at SDN No. 160 Inpres Bontolebang in 2007. In that year, he also continued his education at SMPN 4 Takalar and graduated in 2010. Then continued high school at SMAN 1 Polongbangkeng Selatan Takalar Regency and graduated in 2013. Then continued his undergraduate education at a private university, Muhammadiyah University Makassar in the Primary School Teacher Education (PGSD) study program in 2016 and graduated in 2020. Furthermore, the researcher continued his master's degree at the University of Muhammadiyah Makassar in the Master of Basic Education study program in 2020.