SAVI Approach to Students' Creative Thinking Abilities in Class VI Elementary School Science Content

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ABSTRACT
Lack of diverse approaches and low students' creative thinking abilities during the science learning process. To overcome these problems, an innovative approach is needed to develop students' creative thinking abilities. This research examines differences in students' creative thinking abilities in science content between the SAVI approach and conventional learning in class VI elementary school. This includes quasi-experimental research (Quasi-Experimental) with a non-equivalent post-test-only Only Control Group Design. Populasi penelitian ini adalah siswa kelas VI SD berjumlah 110 orang. Sampel dalam penelitian ini dilakukan secara Random Sampling. Sampel yang diperoleh yaitu siswa kelas VI SD 2 sebanyak 25 orang sebagai kelompok eksperimen dan siswa kelas VI SD 5 sebanyak 24 orang sebagai kelompok kontrol. Pengumpulan data pada penelitian ini menggunakan metode tes dengan instrumen tes uralian. Analisis data yang digunakan adalah analisis statistika deskriptif dan analisis statistika inferensial (uji-t). Berdasarkan hasil analisis didapatkan bahwa pendekatan SAVI lebih berpengaruh terhadap kemampuan berpikir kreatif siswa. Disimpulkan bahwa pendekatan SAVI dapat meningkatkan kemampuan berpikir kreatif siswa. Implikasi penelitian ini adalah penerapan pendekatan SAVI dapat meningkatkan keaktifan siswa, mampu memecahkan masalah, dan mengembangkan kemampuan berpikir kreatif siswa.

1. INTRODUCTION
In the current era of globalization, students need to understand the real life around them. One of the real things that exist in the environment is nature (Y. Lestari, 2018; Martuti et al., 2019). This indicates that science learning really needs to be studied by students at all levels of education starting from elementary school level (Andira et al., 2022; Rosidah et al., 2023). Science studies natural phenomena and symptoms in real life. Natural phenomena will become new knowledge for students in the aspect of scientific attitudes. Through a scientific attitude, it will produce students' curiosity which can be implemented in real life (FFK Sari & Stefanus, 2022; Wirda. et al., 2023). Based on the meaning of science...
above, science learning in schools aims to help students understand facts related to natural phenomena and symptoms, be able to apply them in everyday life and be able to instil a scientific attitude in each student. (Nahdi et al., 2018; Wildaiman et al., 2022). The science learning process in class should invite students to do practicums to connect the knowledge that students have with the learning material studied. Practical activities are very important in the science learning process because they are able to make students understand the material being studied themselves (Arini & Damayanti, 2022; Suryani & P, 2020). In the learning process, teachers must be able to educate, direct, master the learning material and be able to provide creative ideas for students (Rahman et al., 2022; Utami et al., 2020). In reality, science learning in elementary schools still runs conventionally or is teacher-centered. Students only accept without having the opportunity to express their knowledge, so this will have an impact on the development of students' creative thinking abilities.

Students' creative thinking abilities can be developed in the science learning process. Creative thinking is the ability to solve and find many ideas and concepts in solving problems in the learning process (Dewi et al., 2019; Heswari & Patri, 2022). Developing students' creative thinking abilities can produce new ideas and concepts, be fluent in expressing their ideas and produce many ideas related to problem solving (Acesta, 2020; Utami et al., 2020). Students' creative thinking abilities will develop if teachers are able to provide stimulus or encouragement to students so that they play an active, creative role, are able to discover their experiences, and are able to experiment on their own in the learning process (Hesti & Somantini, 2017; MZ Sari & Eli, 2020). So that students are more motivated in the learning process and the learning atmosphere becomes conducive. The low ability of students to think creatively in learning causes the teaching and learning process to become unconducive, thus preventing students from understanding the learning material (Harahap et al., 2021; Heswari & Patri, 2022).

The low creative thinking abilities of students were found in the results of students' daily tests which were still below the KKM. This is because the learning model used is not appropriate to the material being studied, so it has an impact on students' low creative thinking abilities (Dewi et al., 2019; Widiyarti, 2020). The low ability of students to think creatively is also caused by teachers tending to use conventional models, which has an impact on the development of creativity in expressing ideas and concepts. As well as the low ability to think creatively among students because teachers still tend to use lecture methods and lack interesting models and approaches, so students tend to be passive in learning (Helmi, 2016; ID Lestari et al., 2022).

However, based on data in the field, it shows that the creative thinking abilities of sixth grade elementary school students are still relatively low. This can be seen from the data on students' creative thinking ability test scores for science content which is on average 65.3 - 66.2, so this score is below the KKM. To overcome this, the solution that can be given is that learning can be done by relating facts in the environment and directing students to explore their own knowledge and teachers must be able to use various approaches in learning so that they can develop students' creative thinking abilities. Learning in schools should be able to train students to be creative, active, able to solve problems, and give students the opportunity to try new things in expressing their knowledge so that it can improve students' creative thinking abilities (Devi & Bayu, 2020; Hanifah Salsabila et al., 2020). However, learning in schools is still teacher-centered and learning activities run conventionally. Teachers communicate more in one direction and students just silently accept the material being explained, then the methods used tend to be assignments, working on assignment books and filling in answers to practice questions (Fahrudin & I, 2021; Umam & Jiddiyah, 2020).

One approach that can be used in science learning is the Somatic Auditory Visual and Intellectual (SAVI) approach. The SAVI approach is a learning approach that emphasizes students being active by involving all students' five senses starting from (doing things, listening, seeing and thinking) optimally in the learning process (Lana & Eli, 2021; Sarmilah. & Vanny, 2021). The SAVI approach has four elements, namely, Somatic, meaning learning by involving the sense of touch, namely the physical movements of the body. Auditory means learning by involving the sense of hearing, namely speaking and listening. Visual means learning by involving the sense of sight, namely the activity of observing and describing. Intellectual means learning by involving the mind in solving problems (Dewi et al., 2019; Siagian et al., 2020).

In the experimental class learning process which was given treatment using the SAVI approach assisted by three-dimensional visual media, students were enthusiastic and active in learning, thus influencing students' science knowledge competency (Akbar et al., 2022; Suryani & P, 2020). Learning in the experimental group that was given the multimedia-assisted SAVI approach to science knowledge competency was higher compared to the control group (Sulistiawati, 2022; Suryani & P, 2020). Learning using the SAVI approach based on YouTube practical videos can improve students' science learning outcomes (Akbar et al., 2022; Musyaffi et al., 2021). However, the results of the research above do not yet
show the effect of the SAVI approach on students’ creative thinking abilities. So, this research aims to test the differences in students’ creative thinking abilities in science content between the SAVI approach and conventional learning in class VI elementary school.

2. METHOD

This research is a quantitative type of approach quasi-experimental or (Quasi Experimental), the design used is non-equivalent post-test Only Control Group Design. This design was chosen because we wanted to know the differences in students’ creative thinking abilities between the experimental group using the SAVI approach and the conventional learning control group. The population in this study used all students class VI elementary school, totaling 110 students. Sampling was carried out by random sampling, to find out which classes were sampled in the experimental group and control group. The samples obtained were 25 students in class VI SD 2 as the experimental group and class VI elementary school students 5 totaling 24 people as the control group. The data collection method used was the test method and the instrument used was the descriptive test. The data analysis used was descriptive statistical analysis and inferential statistical analysis (t-test). The variables used were the SAVI approach and thinking ability creative. Before designing an instrument, the instrument grid is first prepared. This research uses 2 data analysis techniques, namely descriptive analysis and inferential statistical analysis. The descriptive analysis techniques used are mean, median, mode, standard deviation and variance. Meanwhile, the inferential statistical analysis used is the t-test. Before carrying out the t-test, a prerequisite test is carried out which includes a test for normality of data distribution and a test for homogeneity of variance.

3. RESULT AND DISCUSSION

Result

The data in this study was obtained through administering a post-test to the experimental group which was carried out by providing treatment using the SAVI approach and to the control group learning was carried out conventionally. The post-test given is in the form of a description test consisting of 5 questions which are used to determine students’ creative thinking abilities. Data from research results in the experimental group were obtained from post-test data given to 25 students who were given treatment using the SAVI approach. Data from research results in the control group were obtained from post-test data given to 24 students who were taught conventionally. The results obtained in the experimental group post-test research obtained a mean of 76.20, a median of 75.00, a mode of 75.00, a standard deviation of 9.274, a minimum score of 60, a maximum score of 90, and a variance of 86,000. Meanwhile, the results of the control group’s post-test research data obtained a mean of 68.54, a median of 70.00, a mode of 75.00, a standard deviation of 9.146, a minimum score of 50, a maximum score of 85, and a variance of 83.650.

Based on the results above, it can be seen that the experimental group had higher scores than the control group. From the results of the calculations above, a histogram is presented regarding the calculation of the mean, median, mode, standard deviation and variance which are presented in Figure 1, and Figure 2.

![Figure 1. Experimental Group Histogram](image1)

![Figure 2. Control Group Histogram](image2)
Based on Figure 1 above, it can be seen that the creative thinking ability of the experimental group students is highest at 84 - 89, 72 - 77 and 60 - 65. Meanwhile, in Figure 2, the creative thinking ability of the control group students is highest at 74 - 79 and 74 – 79, 62 – 67. Based on this, it can be concluded that the scores in the experimental group are dominantly higher than those in the control group.

Assumption testing is carried out before conducting hypothesis testing. In this research, there are two prerequisite tests that must be carried out before testing the hypothesis. The prerequisite tests used are: includes a test for normality of data distribution and a test for homogeneity of variance. The results of the normality and homogeneity of variance tests are shown in Table 1, and Table 2.

**Table 1. Normality Test Results for Experimental Group and Control Group**

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Experiment</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>Normal Parameters, b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>76.20</td>
<td>68.54</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>9.274</td>
<td>9.146</td>
</tr>
<tr>
<td>Absolute</td>
<td>0.149</td>
<td>0.135</td>
</tr>
<tr>
<td>Positive</td>
<td>0.111</td>
<td>0.115</td>
</tr>
<tr>
<td>Negative</td>
<td>-0.149</td>
<td>-0.135</td>
</tr>
<tr>
<td>Statistical Tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>0.159</td>
<td>0.200</td>
</tr>
</tbody>
</table>

Based on data Table 1 the sig (2-tailed) value obtained for the experimental group was 0.159 and the control group was 0.200. So that the Kolmogorov-Smirnov significance value is > 0.05, then H0 is accepted. This means that the research data is normally distributed.

**Table 2. Homogeneity Test Results of the Experimental Group and Control Group**

<table>
<thead>
<tr>
<th>Mark</th>
<th>Levene Statistics</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on Mean</td>
<td>0.054</td>
<td>1</td>
<td>47</td>
<td>0.818</td>
</tr>
<tr>
<td>Based on Median</td>
<td>0.040</td>
<td>1</td>
<td>47</td>
<td>0.842</td>
</tr>
<tr>
<td>Based on Median and with adjusted df</td>
<td>0.040</td>
<td>1</td>
<td>46.868</td>
<td>0.842</td>
</tr>
<tr>
<td>Based on Trimmed Mean</td>
<td>0.061</td>
<td>1</td>
<td>47</td>
<td>0.805</td>
</tr>
</tbody>
</table>

Based on the test, a value of 0.818 was obtained, so it was concluded that the significance value of Levene's statistical test was > 0.05, so H0 was accepted. This means that the variance between groups of data is homogeneous. After the prerequisite tests have been carried out, continue with hypothesis testing t-test. The type of t-test used is Polled Variance. The recapitulation of hypothesis test results is presented in Table 3.

**Table 3. t-test Results**

<table>
<thead>
<tr>
<th>Mark</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances assumed</td>
<td>F: 0.054, Sig: 0.818, Q: 2.909, df: 47</td>
<td>Sig. (2-tailed): 0.006, Mean Difference: 7.658, Std. Error Difference: 2.632, 95% Confidence Interval of the Difference: 2.363, 12.954</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>F: 2.910, Sig: 0.040, Q: 46.964, df: 46.868</td>
<td>0.006, Mean Difference: 7.658, Std. Error Difference: 2.632, 95% Confidence Interval of the Difference: 2.364, 12.953</td>
</tr>
</tbody>
</table>

Based on the results Table 3 it can be seen that the sig value. (2-tailed) the result obtained was 0.006<0.05, then H0 is rejected and H1 is accepted. Thus, it is stated that there are differences in students’ creative thinking abilities in science content between the SAVI approach and conventional learning in class VI elementary school.
Discussion

Learning using the SAVI approach applied to the experimental group had an impact on students' creative thinking abilities in science content. This is proven by the sig value. (2-tailed) results obtained were that there were differences in students’ creative thinking abilities in science content between the SAVI approach and conventional learning in class VI elementary school. Learning using the SAVI approach influences students’ creative thinking abilities because in the learning process students learn by involving all their senses. The SAVI approach invites students to learn actively by involving all of the students' senses in the learning process. This is because in the learning process, students gain new knowledge through the findings they make, students interact with their friends, or with teachers in solving problems so that the knowledge that students have becomes wider. By involving all students' senses, it can certainly stimulate students to be able to solve problems in a diverse, unique and detailed manner, thereby improving students' creative thinking abilities. Learning using the SAVI approach can arouse students' interest and learning outcomes in Mathematics subjects, able to attract students' attention and involvement in the learning process and increase students' understanding of the material being studied (Indarti, 2022; Suryani & P, 2020). Learning using the SAVI approach is able to encourage students to develop skills to gain new knowledge. And learning using the SAVI approach provides students with the opportunity to obtain new information in the learning process according to their respective learning styles (Sarmilah, & Vanny, 2021; Sulistiawati, 2022).

Second, learning using the SAVI approach invites students to involve their sense of touch, namely learning while moving. Students are invited to move their physical members by studying in groups with their classmates, then each group of students carries out assignments prepared by the teacher according to the material studied. Students are invited to learn by involving their senses of hearing and sight, namely learning to listen and observe the learning videos shown by the teacher properly and carefully. After watching the learning video, students are directed to learn by involving their thinking, namely learning to solve a problem contained in the learning video. Through these activities, students can stimulate active learning, discover new things with their own ideas, so that they can develop students' creative thinking abilities. Through the SAVI approach, learning objectives will be achieved optimally and students will gain a lot of knowledge through their own ideas (Dewi et al., 2019; Indarti, 2022). Students' creative thinking abilities are trained by inviting students to discover and try new things using their own imagination and ideas (Salam et al., 2021; Utami et al., 2020).

In the SAVI learning process, students are trained to be able to carry out discussions, ask questions actively, solve problems regarding the material being studied, so that there is good interaction between teachers and students and students in the learning process. At the delivery stage, active student involvement is very necessary because it is able to create new knowledge for students in each learning process. Learning using the SAVI approach is able to enable students to dig up information from the material being studied, form groups to discuss and play roles, and be able to present the results of their discussions in front of other groups. Through the activities carried out in the learning process by applying the SAVI approach, students are able to improve their creative thinking abilities (Akbar et al., 2022; Sulistiawati, 2022). The implications of this research are to increase student activity, be able to solve problems, and develop students’ creative thinking abilities. This research has limitations, namely that the data collection methods and instruments used only use tests and during the test there are still students who look at their friends’ answers. In addition, this study only used one group as the research population. Based on these limitations, the recommendation that can be given is to use more varied data collection methods and instruments and cover a wider research population.

4. CONCLUSION

Based on the research results, it was found that there were differences in students’ creative thinking abilities in science content between the SAVI approach and conventional learning in class VI elementary school. It was concluded that the SAVI approach could improve students’ creative thinking abilities in science content. Learning using the SAVI approach is able to enable students to dig up information from the material being studied, as well as being able to present the results of their discussions in front of other groups. This can certainly improve students’ creative thinking abilities.

5. REFERENCES


