



# The Effect of the Application of the Treffinger Model on Creative Thinking Ability in Pancasila and Civic Education Class VII SMPN 17 Palembang

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**Abstract.** This study aims to describe the effect of the application of the *Treffinger* model on the ability to think creatively in class VII Pancasila and civic education subjects of SMPN 17 Palembang. This study used a quantitative approach with a *pre-experimental* research method that used a *one-group pretest-posttest design*. The population in this study was all grade VII students of SMPN 17 Palembang totaling 255 people with the research sample being grade VII.4 students totaling 30 people selected by *purposive sampling* techniques. The data collection techniques used are observation and test techniques. Based on the results of the analysis of average observations during the learning process, there was a significant increase, namely the first meeting was 46.76% quite creative, the second meeting 60.66% creative, the third meeting 63.13% creative, and the fourth meeting 68.89% with creative interpretation criteria. While the test results in learning on *pretest-posttest* questions have a significant effect of .217, this is so that  $> \alpha = .05$ , it can be concluded that  $H_0$  is rejected and  $H_a$  is accepted.

**Keywords:** Creative Thinking · Faculty of Teacher Training and Education · Junior High School Students · Treffinger Learning Model

## 1 Introduction

Education in the 21st century is the evolution of aspects of modern human life characterized by the use of information or communication technology in all aspects of life, including learning. Saifulloh & Darwis [1] found that the teaching and learning process is a systematic effort by teachers to shape the learning process effectively and efficiently, starting with planning, implementation, and evaluation.

Permendikbud No. 16 of 2022 states: Learning is the conscious effort by educators and other adults to enable students to achieve maximum learning outcomes and make a positive impact on their environment. The success of the learning process increases the intensity of the student's effective participation in the learning process, making the student good, intelligent, and competent, with a personality formed by Pancasila and

Pancasila (Smart and Good Citizenship) is inseparable from the competence of educators who aim to make the nation 1945 Constitution.

The 21st-century learning paradigm is based on the formulation of the Ministry of Education and Culture, which draws on knowledge from a variety of sources, including creative thinking, analytical thinking to formulate problems, cooperation, and collaboration to solve problems. Emphasis is placed on the required abilities of the students [2]. Given the importance of creative thinking skills in the Indonesian government's regulatory development, this will allow creative thinking skills to be integrated into the curriculum.

Further, on the importance of developing creative thinking skills and the world of education. Munandar [3] said that education should focus on developing the creative abilities of students to meet the needs of the individual and the needs of the country's community; This is because creative people are self-confident, independent, responsible, committed, less problem-solving, more spontaneous, and more focused on the future than the past [4].

Pancasila and civic education (PPKn) are very important because they teach students to be wise and good citizens and to apply and internalize moral values in relation to the life around them. Part of the subject. Critically, rationally and creatively responds to citizenship issues in line with his PPC's learning objectives set out in Law No. 20 of 2003 on the National Education System.

Pancasila and civic education learning require the use of creative and innovative learning models that meet the needs of students. Therefore, teachers should be able to choose a learning model that fits the conditions and materials that exist in the underlying skills in order to achieve the learning objectives [5]. Citizenship education should be able to encourage learners to develop their own identities, participate in the international community, and build relationships around the world. Erlande [6] states that civic education ultimately aims to educate the younger generation into intelligent and good citizens.

A learning model that can improve creative thinking skills is the Treffinger learning model. The Treffinger learning model is a learning process that provides opportunities for students to brainstorm ideas and find the most correct answers [7]. This model is Donald J. 1980 Trefinger [8]. Henry S. Treffinger is president of the Center for Creative Learning Inc in Sarasota, Florida. "This model was developed as an attempt to generate creative learning", according to Osborne [9].

The Treffinger learning model, also known as "creative problem solving," states that it is the same as asking students to think creatively when working on a problem. However, Treffinger is the result of a thorough overhaul of her CPS, his three constructs of overcoming problems and finding suitable solutions by paying attention to key facts in the environment, and in the community actually implemented.

Treffinger's learning model integrates cognitive dimensions and effectively finds the direction of solving problems that will be taken. The most dominant characteristic of the Treffinger learning model is Basic Tools, which is a way of informing natural phenomena to students so as to invite students' curiosity and being able to Practice with the process, which is to generate ideas and provide opportunities to be able to apply abilities and

working with real problems that are, preparing actions to obtain explanations and creative problem solving [10].

In addition, to achieve Pancasila and civic education learning objectives, one of which is the ability of students to improve their abilities and be able to train students to think creatively, therefore a learning model is needed that not only transfers knowledge to students but is able to stimulate the thinking power of students also to form their own knowledge in solving the problems they face [11].

This learning model is very suitable for current conditions because it requires a learning model that can activate students and foster cooperation between students so that there is no difference between students who are active and those who are less active in the learning process [12]. In this learning model, teachers are expected to help students think creatively and encourage them to come up with their own ideas for solving problems. Based on the results of a preliminary study that has been conducted at SMPN 17 located on Jl. Padang Tuesday, Bukit lama, Ilir Barat, I, Palembang City. That the information has been obtained by researchers through interviews with one of the Pancasila and civic education teachers in the learning process using lectures, assignments, and discussion methods. However, the use of learning media models is rarely used in the learning process because of the limited media and learning aids that only use whiteboards not equipped with infocus or power points.

At the time of learning PPKn, there are still many students who are not proactive, and students tend to be passive, resulting in low creative thinking ability of students. This is also supported by insight into students' daily citizenship test results by working with analytical essay problems and case studies of solved problems. According to daily test results, 56.25% of students perform below the minimum completion standard (KKM). The minimum integrity standard (KKM) that must be achieved is 70. Learning Pancasila and civic education requires the ability to think creatively without misunderstanding concepts. This is a problem related to the creative thinking ability of students who are still learning.

This happened when researchers at SMPN 17 Palembang made observations. Overcoming these problems in our time, therefore, requires active and innovative learning that makes the learning process fun and encourages creative thinking and active participation in the construction of knowledge, attitudes, and behavior.

## 2 Method

In this study, Noor [13] states that development is performed by taking a measurement (pre-test) before treatment (treatment) followed by another measurement (post-test) for 4 sessions. The population of this study consisted of his Pancasila and civic education class VII students in SMPN 17 Palembang, and due to the large number of students in front of the class, only SMPN 17 was class VII.4 in Palembang. Observations should be used as indicators of creative thinking and supported by undergraduate daily test data.

The data collection techniques used in research are observation and observation by test. Data analysis techniques used in the statistical field with the aid of computer software are in the form of SPSS version 26 [14].

The aim was to study the effect of applying her Treffinger model learning on students' creative thinking ability in class VII Pancasila and civic education subjects of SMPN

17 Palembang after the data passed normality and data homogeneity tests. You can then perform hypothesis testing using the SPSS corresponding sample t-test formula. Since the researcher uses two samples of her from different subjects, the proposed hypothesis is:

Ha: There is a significant influence on the application of the Treffinger model on the creative thinking ability of students in Pancasila and civic education class VII subjects of SMPN 17 Palembang

Ho: There is no significant influence on the application of the Treffinger model on the creative thinking ability of students in Pancasila and civic education class VII subjects of SMPN 17 Palembang

### 3 Results and Discussion

#### 3.1 Description of Observations

Description of student observations using the Treffinger learning model in the Pancasila and civic education learning process for class VII.4. Observations were made using questionnaires to assess students' creative thinking skills in mastering the material for Pancasila and civic education subjects. This observation was supported by two friends of mine and one Pancasila and civic education teacher as observers. The observer fills in a checklist (✓) in the Show or Hidden Answer Choices column based on the activity the student performed. An assessment is then conducted to determine the value of the student's creative thinking skills in experiential education. The students' observation sheets show their creative thinking ability. The obtained observation data are transformed based on the evaluation criteria. The following observations are based on indicators.

Table 1 shows the results in the experimental class, namely class VII.4 for the ability to think creatively with the treatment of the Treffinger learning model there are (0) classified as very creative, 5 students (16.66) classified as creative, 11 students (36.66) classified as quite creative, 9 students (30.00) classified as less creative, and 5 students (16.66) classified as very less creative. So in the first meeting, the average was 42.76, which was quite creative.

**Table 1.** Creative Thinking Ability of Learners First Meeting of Experimental Class

Not	Scores obtained	Criterion	Frequency	Percentage (%)
1	80 – 100	Very Creative	0	0%
2	60 – 79	Creative	5	16,66%
3	40 – 59	Quite Creative	11	36,66%
4	20 – 39	Less Creative	9	30,00%
5	0 – 19	Very Less Creative	5	16,66%
	<b>Sum</b>		<b>30</b>	<b>100%</b>
	<b>Average</b>	<b>Quite Creative</b>		<b>42,76</b>

**Table 2.** Creative Thinking Ability of Learners Second Meeting of Experimental Classes

Not	Scores obtained	Criterion	Frequency	Percentage( %)
1	80 – 100	Very Creative	3	10,00%
2	60 – 79	Creative	13	43,33%
3	40 – 59	Quite Creative	8	26,66%
4	20 – 39	Less Creative	6	20,00%
5	0 – 19	Very Less Creative	0	0%
	<b>Sum</b>		<b>30</b>	<b>100%</b>
	<b>Average</b>	<b>Creative</b>		<b>60,66</b>

Table 2 shows the results in the experimental class, namely class VII.4 for the ability to think creatively with the treatment of the Treffinger learning model there are 3 students (10.00) who are classified as very creative, 13 students (43.33%) are creative, 8 students (26.66%) are classified as quite creative, 6 students (20.00%) are classified as less creative, and 0 students (0%). So in the second meeting, the average was 60.66%, which was classified as creative.

Table 3 shows the survey results. Results were obtained in an experimental class on the ability to think creatively using the Treffinger learning model, class VII.4. She was 6 students (20.00%). Very creative, 17 students (56.66%) are creative, 5 students (16.66%) are very creative, 2 students (6.66%) are less creative, and 0 students (0%) were classified as having little creativity. Therefore, at the second meeting, the average was 63.13%, which was considered creative.

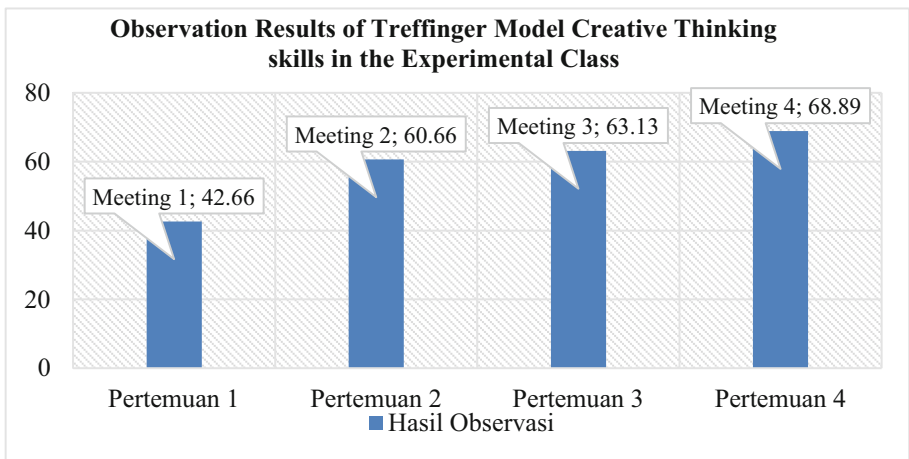
Based on Table 4 shows the results of the research that has been done, the results were obtained in the experimental class, namely class VII.4 for the ability to think creatively using the Treffinger learning model there were 8 students (26.66%) who were classified as very creative, 18 students (60.00%) classified as creative, 4 students (13.33%) classified as quite creative, and 2 students (6.66%) classified as less creative, and 0 students (0%) are classified as very less creative. So in the fourth meeting, the average was 68.89%,

**Table 3.** Creative Thinking Ability of Learners Third Meeting of Experimental Classes

Not	Scores obtained	Criterion	Frequency	Percentage( %)
1	80 – 100	Very Creative	6	20,00%
2	60 – 79	Creative	17	56,66%
3	40 – 59	Quite Creative	5	16,66%
4	20 – 39	Less Creative	2	6,66%
5	0 – 19	Very Less Creative	0	0%
	<b>Sum</b>		<b>30</b>	<b>100%</b>
	<b>Average</b>	<b>Creative</b>		<b>63,13</b>

**Table 4.** Creative Thinking Ability of Learners Fourth Meeting of Experimental Classes

Not	Scores obtained	Criterion	Frequency	Percentage( %)
1	80 – 100	Very Creative	8	26,66%
2	60 – 79	Creative	18	60,00%
3	40 – 59	Quite Creative	4	13,33%
4	20 – 39	Less Creative	2	6,66%
5	0 – 19	Very Less Creative	0	0%
	<b>Sum</b>		<b>30</b>	<b>100%</b>
	<b>Average</b>	<b>Creative</b>		<b>68,89</b>

**Fig. 1.** Observations of Creative Thinking Ability

which was classified as creative. The average observation of creative thinking skills using the Treffinger model in the experimental class can be seen in the Fig. 1.

From the diagram above, it can be seen that the average value of student's creative thinking skills from the first meeting to the fourth meeting experienced differences in the experimental class. Where in the experimental class The first meeting averaged 42.66% with quite creative interpretation, then the second meeting increased to 60.66% where there was also an increase in the third meeting of 63.13% with creative interpretation and the last meeting increased by 68.89% with creative interpretation. So it can be concluded from the observations of the four experimental class meetings that there is an increase in creative thinking.

### 3.2 Description of Test Data Analysis Results

The aim of this data analysis is to assess the scores achieved by students in experimental classes. The test is administered twice - once before the learning process (pretest) and

once after (posttest). Following the acquisition of pretest and posttest results, the average scores of both are calculated for the experimental class. Pretests are conducted to determine the initial knowledge of students with regard to the learning material. Once this is established, the learning process can commence. At the end, the Treffinger model is applied to the experimental class and a posttest is given to gauge the impact of this model on the creative thinking abilities of students.

The data test was collected in the form of a written essay with 16 questions, which was administered to the experimental class consisting of 30 students in grade VII.4. The research results are obtained from the test data, and the highest and lowest scores for the pretest and posttest abilities are identified.

The pretest data were analyzed to assess the creative thinking ability of grade VII.4 students prior to implementing the Treffinger learning model. Four meetings were conducted, each with four essay questions. The first meeting yielded an average score of 48.00, while the second and third meetings yielded scores of 51.00 and 53.00, respectively. The fourth meeting was used to determine the student's initial ability, resulting in an average score of 55.05. Overall, the pretest scores revealed that grade VII.4 students had an average creative thinking ability of 53.00.

Following the implementation of the Treffinger learning model, posttest data were collected to evaluate the students' creative thinking ability. Four meetings were held, and four essay questions were given at each meeting. The first meeting yielded an average score of 75.17, while the second and third meetings yielded scores of 76.67 and 79.33, respectively. The fourth meeting was used to determine the final ability, resulting in an average score of 82.05. The diagram below illustrates the average scores of the pretest and posttest creative thinking skills using the Treffinger model in the experimental class (Fig. 2).

From the graph above, we can see that the average score of the student's creative thinking ability test results has increased. With an average pre-test score of 53.00% and an average post-test score of 80.33%, the creative test resulted in an increase in students'

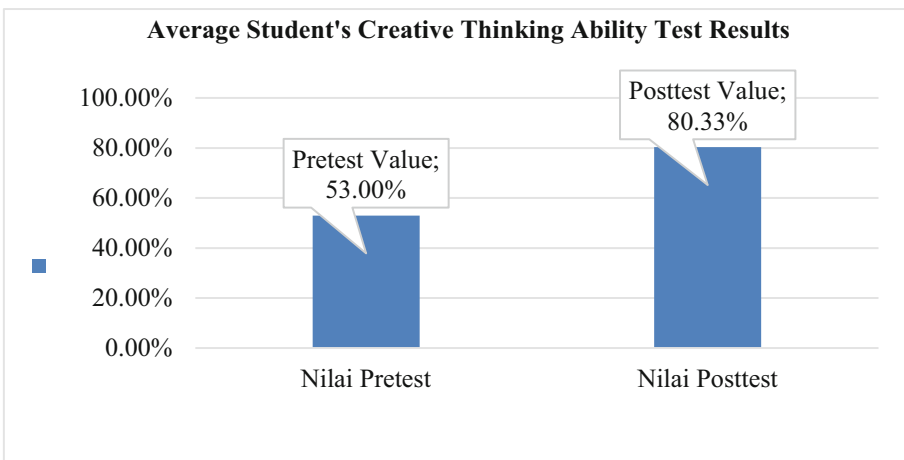


Fig. 2. Average Student Scores on Tests of Creative Thinking Skills

ability to think in experimental classes. Based on the statistical Shapiro-wilk test data treatment results for the significance pretest question  $415 > .05$  normality test means that the data are normally distributed. All data are declared normal, meaning that the data are also normally distributed while the posttest question significance  $554 > 0.05$ . Based on the hypothesis test in this study using a simple linear regression formula with the help of IBM SPSS Statistics 26. The level of criteria for testing this hypothesis with a confidence level of 95% ( $\alpha = .05$ ) is: if the significant level is  $> \alpha$  (5% or 0.05) then  $H_0$  is rejected, but if the significant level is  $< \alpha$  (5% or 0.05) then  $H_a$  is accepted. That is the result of a simple linear regression test in the Coefficients table above, it can be seen that the significant level obtained is  $.000 < .05$ , it can be concluded that  $H_0$  is rejected and  $H_a$  is accepted. Thus, it can be concluded that there is a significant influence from the application of the Treffinger model on the creative thinking ability of students in class VII Pancasila and civic education subjects of SMPN 17 Palembang.

The results of the above research are corroborated by the opinion [12] that the Treffinger learning model is very suitable with current conditions because it can improve students' creative thinking skills and foster cooperation between students so that there is no difference between students who are active and those who are less active in the learning process. It is also supported by the opinion of the research results [15], which show that there are differences in students' creative thinking between experimental classes that use the Treffinger learning model and control classes that use conventional learning models which have theoretical implications that the use of learning models based on social reconstruction theory becomes relevant in the context of social learning.

## 4 Conclusion

Based on the results of data analysis conducted in this study, it can be concluded that there is an influence of the Treffinger learning model on the creative thinking ability of students in Pancasila and civic education class VII.4 SMPN 17 Palembang. The effect of the Treffinger learning model on the experimental class has a significant influence based on the results of a simple linear regression test on the Coefficients table, it can be seen that the significant level obtained is  $.000 < .05$ , it can be concluded that  $H_0$  is rejected and  $H_a$  is accepted. With the increase in the results of the creative thinking ability test, students were seen from the average, which was 53.00% to 80.33%, and the increase from the observation of creative thinking skills, students were seen in the fourth meeting, which was 68.89% which was categorized as creative thinking.

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