

## **THE INFLUENCE OF CREATIVE PROBLEM SOLVING (CPS) LEARNING MODEL ON SELF-CONFIDENCE AND CREATIVE THINKING SKILLS OF GRADE 5 STUDENTS MIN 3 PONOROGO**

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### **Abstract**

In the existing reality, many students feel bored with the same learning model, seem monotonous, uninteresting, and students' responses are less active. The learning model is less attractive which can influence students' learning desires to foster students' self-confidence and creative thinking abilities. The research aims to determine the effect of students' self-confidence and creative thinking skills by using the Creative Problem Solving (CPS) learning model in class V MIN 3 Ponorogo. The approach in this study uses quantitative research, with a comparative experimental research type and the research design is True Experimental Design. The population in this study were students in class V MIN 3 Ponorogo as many as 76 students, then the sample used was 50 students, namely 25 students in the experimental class and 25 students in the control class. Collecting data in this study using tests and questionnaires. Data analysis of the results of this study used the pillai's trace model multivariate test, the test of between-subject effects, and the independent t test. Based on the results of data analysis that has been carried out by researchers, it can be concluded that self-confidence using the Creative Problem Solving (CPS) learning model with a total of 25 respondents shows the lowest score of 82 and the highest score of 94 and the average score is 88. With the high category 24 %, medium 64%, and low 12%. While the ability to think creatively using the Creative Problem Solving (CPS) learning model with a total of 25 respondents shows the lowest score of 85 and the highest score of 96 and the average score is 90. With the high category 12%, medium 72%, and low 16%. The results of the analysis show a significance value of  $0.00 < 0.05$ , then  $H_0$  is rejected. So it can be concluded that there is a significant influence on self-confidence and the ability to think creatively if the Creative Problem Solving (CPS) learning model is applied to science learning for class V MIN 3 Ponorogo.

**Keywords:** Self Confidence, Creative Thinking Ability, CPS Learning Model

### **Abstrak**

Dalam realita yang ada, banyak siswa yang merasa bosan dengan model pembelajaran yang sama, terkesan monoton, tidak menarik, dan respon siswa kurang aktif. Model pembelajaran yang kurang menarik dapat mempengaruhi keinginan belajar siswa untuk menumbuhkan kepercayaan diri dan kemampuan berpikir kreatif siswa. Penelitian ini bertujuan untuk mengetahui pengaruh kepercayaan diri dan kemampuan berpikir kreatif siswa dengan menggunakan metode Creative Problem Solving (CPS). ) model pembelajaran di kelas V MIN 3 Ponorogo. Pendekatan dalam penelitian ini menggunakan penelitian kuantitatif, dengan jenis penelitian eksperimen komparatif dan desain penelitiannya adalah True Experimental Design. Populasi dalam penelitian ini adalah siswa kelas V MIN 3 Ponorogo sebanyak 76 siswa, kemudian sampel yang digunakan adalah 50 siswa yaitu 25 siswa pada kelas eksperimen dan 25 siswa pada kelas kontrol. Pengumpulan data dalam penelitian ini menggunakan tes dan angket. Analisis data hasil penelitian ini menggunakan uji multivariat pillai's trace model, uji between-subject effect, dan uji t independent. Berdasarkan hasil analisis data yang telah dilakukan peneliti dapat disimpulkan bahwa kepercayaan diri dengan menggunakan model pembelajaran Creative Problem Solving (CPS) dengan jumlah 25 responden menunjukkan skor terendah 82 dan skor tertinggi 94 dan skor rata-rata 88. Dengan kategori tinggi 24%, sedang 64%, dan rendah 12%. Sedangkan kemampuan berpikir kreatif dengan menggunakan model pembelajaran

Creative Problem Solving (CPS) dengan jumlah responden 25 menunjukkan skor terendah 85 dan skor tertinggi 96 serta skor rata-rata 90. Dengan kategori tinggi 12%, sedang 72 %, dan rendah 16%. Hasil analisis menunjukkan nilai signifikansi  $0,00 < 0,05$ , maka  $H_0$  ditolak. Sehingga dapat disimpulkan bahwa terdapat pengaruh yang signifikan terhadap kepercayaan diri dan kemampuan berpikir kreatif jika model pembelajaran Creative Problem Solving (CPS) diterapkan pada pembelajaran IPA kelas V MIN 3 Ponorogo.

**Kata kunci:** *Percaya Diri, Kemampuan Berpikir Kreatif, Model Pembelajaran CPS*

## **Introduction**

Education is one of process where experience and information is obtained as the result of the learning process which includes definition and self-adaption from students towards the given stimulus to the growth and development. Meanwhile, the learning process is conducted interactively, inspiratively, fun, challenging, and motivating the students to engage in the learning process actively. They should be creative and independent based on the students' abilities (Zuhroniyah, 2012). Likewise in Science class, active and creative learning is also needed to support the learning process to be carried out properly.

Based on the fact in the field, there are some discrepancies. As the interview that has been done with the home teacher of five grade students, it can be concluded that the students still use conventional learning methods that tend to be teacher-centered learning using lecture models. By applying that kind of learning model, it will not foster the students' creativity in learning. The monotonous learning is not interesting and interactive. Thus, it will impact on the students' confidence and creativity and later on will affect their study (Mahroh, 2022). Based on the first observation in class V MIN 3 Ponorogo, the researchers found that the learning process was quite monotonous and less effective. The use of learning model that only focuses on one method will not help the student grow and develop their knowledge as well as their creative thinking skill.

Previous studies show that Creative Problem Solving (CPS) learning model can affect on students' self-confidence and creative thinking skill. A research conducted by Siti Nurhidayati shows that the implementation of CPS has a significant influence towards the skill of creative thinking based on self-confidence. The students' skill of creative thinking and self-confidence has improvement (Nurhidayah, 2020). Then, the research conducted by Zahrina Nurjannah in 2017 showed that the application of CPS learning model had an effect on mathematical creative thinking skills in terms of independent learning of SMP Negeri 40 Pekanbaru students, Nurjannah (2017: 95). From these previous studies, it can be concluded that the Creative Problem Solving (CPS) learning model has a significant effect on creative thinking skills, as well as in fostering students' self-confidence.

Based on the background of the study above, the researchers are interested in examining or proving the creative problem solving (CPS) affects on the level of the students' self-confidence and creative thinking skill at MIN 3 Ponorogo because as the observation at that school, the students' self-confidence and creative thinking skill are still low in science lesson. The researchers did experiment in order to prove the influence of the applied model.

## **Research Method**

Research method is a way to get data with specific purposes and uses. This study used quantitative research approach whose data was in the form of numbers to test the theory by examining the relationship between existing variables. Quantitative approach is a primary research approach using the postpositivist paradigm in developing science (such as the thought about cause and effect, reduction to variables, hypotheses, and specific questions, using measurement and observation, and theory testing), using research strategies such as

experiments and surveys requiring statistical data, Siregar (2013). The researchers use this method because they want to prove and examine the theory that CPS learning model affect the students' self-confidence and creative thinking skill.

Research design is a research plan that is arranged in such a way that we can get answers to the research problem. It aims to provide accountability for all steps that will be taken in a research, Margono (2006). In this design, the researchers explore a number of facts or data available at MIN 3 Ponorogo with test and questionnaire data collection techniques by distributing question sheets that will be filled in by MIN 3 Ponorogo students. After all data has been collected, it will be analyzed using quantitative data analysis. Quantitative data analysis technique is data in the form of numbers that can be obtained from the results of summation (counting) or can also be the results of measurements so that it can be known whether or not there is an effect of the Creative Problem Solving learning model on self-confidence and creative thinking skills on simple aircraft material for grade V students of MIN 3 Ponorogo.

The method used is quantitative research which is an influence that connects variables and data in the form of numbers and others. This type of research is a comparative experiment. While the research design used in this study is True Experimental Design in which the selection between experimental and control groups or classes is chosen randomly, Sugiyono, (2006). With this type of research, both the experimental group and the control group will be compared, and the selection of groups the students will be selected and placed without randomization, Emzir (2019).

The format of the design used is the pretest-posttest control group design by giving a pretest before the treatment and posttest after the treatment. The procedure in conducting this research starts with the explanation of the first material then give the pretest for each groups, after that present the materials using CPS learning method, then the teacher gives a question and the students discuss to solve it then they give their opinion or notion about the answer of the given question, and for the last activity, the posttest is given to measure how far their understanding skill and to know what kind of learning model that can be used to give the influence to the students so that the learning process will run well. The purpose of this research was to know the differences between the class that used CPS learning model and those that did not.

This research was conducted in Class V of MIN 3 Ponorogo which is located in Janti Village, Slahung District, Ponorogo Regency. The reason the author conducted research at this institution was to find out the effect of the Creative Problem Solving (CPS) learning model. It was found that the influence of the learning model can have its own impact during learning activities, especially on the ability of self-confidence and the ability to think creatively of the students themselves. If students use a more creative learning model, it will also have a positive influence on the mindset and abilities of students, and vice versa. The existence of these problems will reduce the level of enthusiasm and confidence of students which will also affect their learning outcomes. Based on this phenomenon, the researcher is interested in conducting in-depth discussions and tests related to these problems. The implementation of the research began during field observations from November 2022 to March 2023.

Population is the whole object that is in an area and fulfills certain conditions that have a relationship with research problems, or all units or individuals in the scope to be studied, Margono (2010). Another definition states that population is all data that concerns us in scope and time that we determine, Margono (2010). In this study, the population taken is fifth-grade students of MIN 3 Ponorogo, which totals 76 children listed in table 1.

**Tabel 1 Populasi Peserta Didik**

No	Class V	Total Students
1	Al-Majid	25
2	An-Nur	26
3	Al-Mughni	25
<b>Total Students</b>		<b>76</b>

Samples are part of the population selected using certain procedures so that they are able to represent the population, Martono (2010). The sample is part of the number and characteristics possessed by the population. If the population is large and it is not possible for researchers to study everything in the population, for example due to limited funds, energy and time, researchers can use samples taken from that population.

Sampling technique is a method or way to determine the sample, to specify the sample to be taken, we can use several sampling techniques. In this study the sampling technique was random sampling. The random sampling technique is a random sampling technique without paying attention to strata in the population, Sugiyono (2006). Random sampling in this study is used to determine groups or classes randomly, but in determining the objects of each class group are not randomly selected, but will be fully sampled. This study took a sample of two classes of grade V students of MIN 3 Ponorogo. The classes used as samples are Al-Majid and Al-Mughni classes, each of which has 25 students.

## **Result and Discussion**

### **Students' Self-Confidence in the Application of Creative Problem Solving (CPS) Learning Model**

This study aims to see the confidence of students by applying the Creative Problem Solving (CPS) learning model for class V MIN 3 Ponorogo. Experimental treatment uses CPS learning model by providing learning material supported by learning media in the form of smart boards that make students learn more actively, enthusiastically and less boring. In between learning times, educators also provide questions that are written on the smart board media to be answered by competing which makes activeness and increases the confidence of students.

From the calculation results in the table of self-confidence using the CPS learning model, it was obtained the high, medium and low categories. Each of these categories has a percentage of 24% (high), 64% (medium), and 12% (low). This shows that the application of the CPS learning model has an influence on increasing students' self-confidence.

The results of this study are in line with previous research studies conducted by Siti Nurhidayati in 2019, Faculty of Tarbiyah and Teacher Training UIN SUSKA, entitled "The Effect of Creative Problem Solving (CPS) Learning Model Application on Mathematical Creative Thinking Ability Based on Self Confidence of Vocational Students". This study aims to describe the effect of applying the CPS learning model on creative thinking skills based on self confidence. The results of the research conducted, it is known that: (1) there is a difference in mathematical creative thinking ability based on high, medium and low self confidence of students at Abdurrahman Pekanbaru Vocational School.

### **Students' Creative Thinking Ability in the Application of Creative Problem Solving (CPS) Learning Model**

This study aims to see the ability to think creatively in science by using the Creative Problem Solving (CPS) learning model for fifth grade students of MIN 3 Ponorogo. Experimental treatment using the CPS learning model by providing learning material supported by learning media in the form of smart boards that make students learn more

actively, enthusiastically and not boring. In between learning times, educators also provide questions that are outlined in the smart board media to be answered in a scramble that challenges the activeness and thinking process.

From the calculation results in the category table of creative thinking skills that use the CPS learning model, high, medium and low categories are also obtained. Each of these categories has a percentage of 12% (high), 72% (medium), and 16% (low). It shows that the application of the CPS learning model has an influence on the creative thinking ability of students.

The results of this study are in line with previous research studies conducted by Juli Hartati in 2021, entitled "The Effect of Creative Problem Solving (CPS) Learning Model on Self Efficacy and Creative Thinking Ability of Students in Physics Material". Based on the research, it was concluded that the data was normally distributed with  $> 0.05$  and homogeneity of the sig value.  $0.007 > 0.05$  for self-efficacy and sig value.  $0.014 > 0.05$  for creative thinking skills so it was tested using the manova test by obtaining a sig value.  $0.000 > 0.05$  which means  $H_0$  was rejected and  $H_a$  was accepted. This indicates that there is an effect of the Creative Problem Solving learning model on students' self-efficacy and creative thinking skills in physics material, Hartati (2021).

### **Students' Self-Confidence and Creative Thinking Ability in the Implementation of Creative Problem Solving (CPS) Learning Model**

This study aims to observe the self-confidence and creative thinking ability of science students using the Creative Problem Solving (CPS) learning model for class V students of MIN 3 Ponorogo. Experimental treatment using CPS learning model by providing learning material supported by learning media in the form of smart boards that make students learn more actively, enthusiastically, and not tediously. In between learning times, educators also provide questions that are outlined in the smart board media to be answered in a scramble that makes activeness, self-confidence, and the thought process is also tested to answer the questions given.

From the calculation results in the category table of self-confidence using the Creative Problem Solving (CPS) learning model, the categories of high, medium and low are obtained. Each of these categories has a percentage of 24% (high), 64% (medium), and 12% (low). While the calculation results in the category table of creative thinking skills that use the CPS learning model obtained high, medium and low categories as well. Each of these categories has a percentage of 12% (high), 72% (medium), and 16% (low). This shows that the application of the CPS learning model has an influence on students' self-confidence and creative thinking skills

The results of this study are in line with theoretical studies and previous research conducted by Siti Nurhidayati in 2019, Faculty of Tarbiyah and Teacher Training UIN SUSKA, entitled "The Effect of Creative Problem Solving (CPS) Learning Model Application on Mathematical Creative Thinking Ability Based on Self Confidence of Vocational Students". This study aims to describe the effect of applying CPS learning model on creative thinking skills based on self-confidence. Based on the research, it is known that: (1) there are differences in mathematical creative thinking skills between students who use creative problem solving learning models and students who use conventional learning at Abdurrahman Pekanbaru Vocational School; (2) there are differences in mathematical creative thinking skills based on students' high, medium and low self-confidence at Abdurrahman Pekanbaru Vocational School.

Tabel 3.1 Uji Normalitas Kolmogrov-Smirnov

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Kepercayaan Diri Eksperimen	.169	25	.064	.900	25	.018
Kepercayaan Diri Kontrol	.163	25	.085	.897	25	.016
BK Eksperimen	.126	25	.200*	.843	25	.001
BK Kontrol	.143	25	.199	.891	25	.012

\*. This is a lower bound of the true significance.

Tabel 3.2 Uji Homogenitas Matriks Varian Levene's Test

Levene's Test of Equality of Error Variances <sup>a</sup>				
	F	df1	df2	Sig.
Kepercayaan Diri Siswa (Y1)	2.028	1	48	.161
Berpikir Kreatif IPA (Y2)	1.588	1	48	.214

Tabel 3.3 Uji Homogenitas Matriks Kovarian Box's M Test

Box's Test of Equality of Covariance Matrices <sup>a</sup>	
Box's M	6.654
F	2.118
df1	3
df2	414720.00
Sig.	.096
Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.	
a. Design: Intercept + Model	

Tabel 3.4 Hasil Uji Multivariate Test Model Pillai's Trace

Multivariate Tests <sup>a</sup>					
Effect	Value	F	Hypothesis df	Error df	Sig.
Pillai's Trace	.996	6449.001 <sup>b</sup>	2.000	47.000	.000
Wilks' Lambda	.004	6449.001 <sup>b</sup>	2.000	47.000	.000
Hotelling's Trace	274.426	6449.001 <sup>b</sup>	2.000	47.000	.000
Roy's Largest Root	274.426	6449.001 <sup>b</sup>	2.000	47.000	.000
Pillai's Trace	.728	62.984 <sup>b</sup>	2.000	47.000	.000
Wilks' Lambda	.272	62.984 <sup>b</sup>	2.000	47.000	.000
Hotelling's Trace	2.680	62.984 <sup>b</sup>	2.000	47.000	.000
Roy's Largest Root	2.680	62.984 <sup>b</sup>	2.000	47.000	.000

Tabel 3.5 Hasil Uji Test of Between-Subjects Effects

**Tests of Between-Subjects Effects**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Kepercayaan Diri Siswa (Y1)	353.780 <sup>a</sup>	1	353.780	7.492	.009
	Berpikir Kreatif IPA (Y2)	4900.500 <sup>b</sup>	1	4900.500	128.515	.000
Intercept	Kepercayaan Diri Siswa (Y1)	356674.580	1	356674.580	7553.198	.000
	Berpikir Kreatif IPA (Y2)	319520.180	1	319520.180	8379.392	.000
Model	Kepercayaan Diri Siswa (Y1)	353.780	1	353.780	7.492	.009
	Berpikir Kreatif IPA (Y2)	4900.500	1	4900.500	128.515	.000
Error	Kepercayaan Diri Siswa (Y1)	2266.640	48	47.222		
	Berpikir Kreatif IPA (Y2)	1830.320	48	38.132		
Total	Kepercayaan Diri Siswa (Y1)	359295.000	50			
	Berpikir Kreatif IPA (Y2)	326251.000	50			
Corrected Total	Kepercayaan Diri Siswa (Y1)	2620.420	49			
	Berpikir Kreatif IPA (Y2)	6730.820	49			

Tabel 5.6 Hasil Uji Independent T Test

**Independent Samples Test**

	Levene's Test for Equality of Variances	t-test for Equality of Means								
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Kepercayaan Diri Siswa	Equal variances assumed	1.740	.194	2.778	47	.008	5.492	1.977	1.515	9.468
	Equal variances not assumed			2.784	46.790	.008	5.492	1.972	1.523	9.460
Berpikir Kreatif IPA	Equal variances assumed	1.931	.171	11.080	47	.000	19.752	1.783	16.165	33.338
	Equal variances not assumed			11.006	41.550	.000	19.752	1.795	16.129	33.375

## **Conclusion**

Based on the results of the data analysis of the researchers' discussion above, it can be concluded that:

1. CPS learning model affects on students' self-confidence. This has been proven by the analysis result by applying CPS learning model with 25 respondents in which the lowest score was 81, the highest score was 98, and the average score was 88. With a high category of 24%, a medium category of 64%, and a low category of 12%. There is a significant effect if CPS learning model is applied to increase the confidence of fifth grade students of MIN 3 Ponorogo ( $0.008 < 0.05$ ). So it can be concluded that  $H_01$  is rejected and  $H_a1$  is accepted.
2. CPS learning model has an impact on science creative thinking skill. This has been proven by the analysis result by applying CPS learning model with 25 respondents in which the lowest score was 82, the highest score was 98, and the average score was 91. With a high category of 12%, a medium category of 72%, and a low category of 16%. There is a significant effect if the CPS learning model is applied to improve the creative thinking skills of fifth grade students of MIN 3 Ponorogo ( $0.000 < 0.05$ ). So it can be concluded that  $H_02$  is rejected and  $H_a2$  is accepted.
3. CPS learning model has an effect on self-confidence and creative thinking ability of science students. This is evidenced by the results of the analysis which shows a significance value of  $0.008 < 0.05$  (self-confidence) and  $0.000 < 0.05$  (creative thinking ability). There is a significant effect if CPS learning model is applied to increase self-confidence and creative thinking skills of fifth grade students of MIN 3 Ponorogo ( $0.008$  and  $0.000 < 0.05$ ). So it can be concluded that  $H_03$  is rejected and  $H_a3$  is accepted.

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