

# The Implementation of Creative Problem-Solving Model In Improving Creative Thinking, Problem-Solving, and Self-Regulated Learning Skills In Literature Learning For Grade XI Students of Saint Ursula High School

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KEYWORDS	ABSTRACT
Creative Problem-Solving instructional model; creative thinking; problem-solving, self-regulated learning; English literature; Classroom Action Research (CAR)	Creative thinking, problem-solving, and self-regulated learning skills are essential 21st-century skills that need to be developed. However, not many students have mastered these three skills. This research aims to determine the results of implementing the Creative Problem Solving (CPS) learning model to enhance these skills in English literature class for Grade XI at Santa Ursula High School in Jakarta. The research was conducted using the classroom action research (CAR) method, which consisted of three cycles. Each cycle involved the planning, observation, action, and reflection phases. A pre-test was conducted before starting each cycle, followed by a post-test after completing the cycle. The research subjects consisted of 32 students, and the assessment instrument used a scoring rubric. The results showed that there was an increase in the average value of creative thinking skills, problem-solving, and self-regulated learning in each cycle. From these results, it can be concluded that the CPS learning model can improve creative thinking, problem-solving, and self-regulated learning skills in English literature classes for Grade XI students at Saint Ursula High School Jakarta.

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## 1. Introduction

One of the leading subjects in the language specialization program at SMA Santa Ursula Jakarta is English literature. In analyzing literary works, students' skills to be able to find solutions to solve problems creatively and independently are the basic foundations that must be met (Artawan et al., 2023; Rohayati, 2023). These skills stimulate students to be able to solve problems with various forms of literary puzzles that are full of educational values and the meaning of life, indirectly, students also practice solving problems faced in their lives with the right steps. In this case, Kaufman and Sternberg (2019, p. 17), a cognitive psychologist, define creativity as the ability to generate new ideas that are relevant and useful. This ability is closely related to divergent thinking which is defined as the ability to produce various creative and unique alternatives or ideas (Wasiran & Andinasari, 2019). Meanwhile, problem-solving skills are defined by Dostal (2015, p. 4) stating that problem-solving skills often referred to as Problem problem-solving skills are the entire thinking process that is focused on

changing conditions, starting from individual awareness of a problem, which is then able to measure the difficulty level of the problem, determine the cause of the problem and be able to find solutions to solve it. Brookhart (2010, p. 98) said that problem-solving skills could be seen from the individual's ability to identify problems, possible obstacles that will arise and solutions that can be done. This is in line with the convergent thinking pattern, which involves the ability to analyze information, consider various factors, and choose the best solution or the right answer. Another skill that needs to be developed by students is learning independence. Panadero and Alonso-Tapia (2014) in Viruet Cruz, p. (2018, p. 62) mentioned that learning independence is a cycle in which students can control their learning process. This cycle begins by identifying the assigned tasks, making plans, conducting monitoring, and ending by conducting evaluations. In addition, learners also identify strategies to overcome difficulties and manage emotions that arise during the learning process, evaluate their own performance, and determine the causes of the learning outcomes they achieve (Eom & Ashill, 2016; Nurjanah, 2023).

Based on the results of observations and interviews with teachers who teach in the class XI language specialization program of SMA Santa Ursula Jakarta, it was concluded that students lack the ability to think creatively, solve problems and learn independently. To improve students' creative thinking skills, problem-solving and learning independence, it is necessary to implement a learning model that emphasizes the activeness and role of students in learning. According to Faturhman and Afriansyah (2020, p. 108), Creative Problem Solving (CPS) is the right choice in fixing these problems because this model is a problem-based learning model whose solution is in the form of creative problem-solving. Septian et al., p. (2019, p. 185), mentioned that the CPS learning model prioritizes the role of students as facilitators, motivators, and also disseminators of learning, both individually and in groups so that students are given the freedom to be active in the problem-solving process. Yuliati and Lestari (2019) also added that the Creative Problem Solving model trains students to think creatively when solving problems with structured steps, so that students are not only able to solve problems but also understand related concepts and can communicate their thoughts well. The Creative Problem Solving learning model was chosen in this study because it is believed to encourage students to practice outside the box thinking where students are able to explore various perspectives to find the most effective solutions in solving problems (Sari et al., 2020).

This research was conducted to find out whether there was an increase in creative thinking skills, problem-solving, and also students' learning independence in literature after participating in learning with the Creative Problem Solving (CPS) method. This research is important because creative thinking skills, problem-solving, and learning independence are very relevant and important skills in facing future challenges in the era of globalization. Today's education needs to focus on developing 21st century or 6Cs skills, including those skills, to prepare learners to become competent and successful individuals in an ever-changing environment.

## **2. Materials and Methods**

This research was conducted using the Classroom Action Research (CAR) method. According to Kemis dan Taggart in Wibawa (2018), Classroom Action Research (CAR) is a form of reflective research conducted collectively by researchers to improve reasoning and alignment between their education and social practices. The goal is to improve researchers' understanding of the

implementation and methods of research that have been carried out. Susilowati, p. (2018, p. 37) added that CAR allows educators to practically see the learning process and interactions that can be applied in the classroom. In addition, CAR can also function as a link between theory and practice in education. Based on the views of the experts above, it can be concluded that CAR is a study conducted by educators to improve the quality of learning in the classroom through a pre-planned learning process.

In this study, CAR is carried out in three cycles, each cycle consists of 4 stages. The first stage is to prepare a plan, the second is to carry out actions that are the execution of the plan. The third stage is to make observations, where this activity is more about recording and storing the impact of actions, which then become material for reflection and improvement. The fourth stage is to make reflection, which is a form of assessment of actions on the research subject after the cycle carried out in the observation process which then becomes also the process of determining solutions. The researcher conducted a pretest before the cycle began and a posttest after the last cycle to see if there was an increase before and after the action was taken. In this study, data was collected through interviews with teachers, filling out questionnaires by students as pre-tests and post-tests, and observations carried out in each cycle by two teachers using validated rubrics. The assessment rubric that will be used includes creative thinking skills, problem-solving, and learning independence. The assessment with this rubric is carried out during the learning activities. Each assessment rubric has three indicators.

The data was analyzed quantitatively by calculating the value of improving creative thinking skills, problem-solving skills, and learning independence skills in each cycle. The improvement of students' competence in creative thinking, problem-solving, and learning independence is known from data analysis conducted quantitatively. This data analysis was carried out by comparing the achievement of grades obtained by students from competency tasks in each cycle, when before and after learning took place. The maximum points that students get in creative thinking, problem-solving, and learning independence are 100, with a minimum standard of 80. The acquisition of scores in these three competencies can be determined by using the following formula:

$$Value = \frac{Obtained\ Score}{Maximum\ score} \times 100$$

Furthermore, to measure the increase in students' competency scores before and after learning, a Normality Gain test was carried out on the competency values of creative thinking, problem-solving, and learning independence using the following formula:

$$N\ Gain = \frac{Obtained\ Score - Pretest\ score}{Ideal\ score - Pretest\ score}$$

Average criteria for N-gain based on the following Table:

**Table 1 Average N-gain Criteria**

N Gain	Classification
$g < 0,3$	Low
$0,3 \leq g < 0,7$	Currently

Source Kusnaedi in Riandari, (2020, 66)

Students are declared successful in having creative thinking, problem-solving and learning independence skills if their score is 80. Classically, success can be accepted if 70% of the students in the class get a score of 80 or more as the minimum standard for school learning completion. In this study, the calculation of classical learning completeness will be carried out with the following formula:

$$KK = \frac{\text{The number of student completed}}{\text{Total number of student}} \times 100$$

KK = Success Criteria

### 3. Results and Discussions

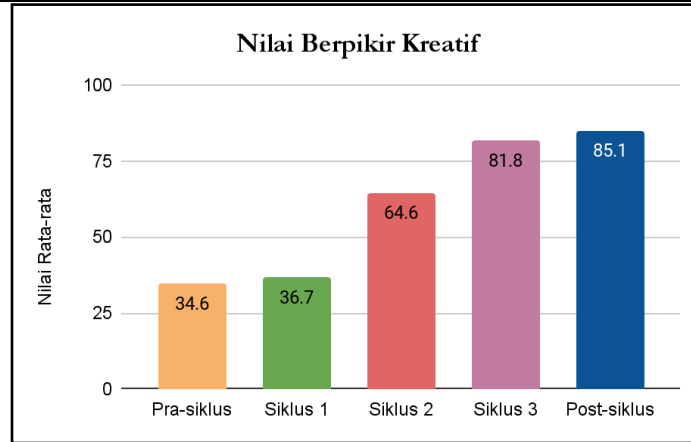
The research conducted is classroom action research (CAR) consisting of several stages, including pre-cycle activities, actions in three cycles, and post-cycles. Each cycle involves planning, action, observation, and reflection. The actions carried out in each cycle are English literature learning activities using the Creative Problem Solving (CPS) learning method. In the pre-cycle stage, the researcher conducted interviews with teachers and distributed questionnaires to students as a pre-test to measure students' creative thinking, problem-solving, and learning independence skills before actions were taken. The results of interviews with teachers and pre-tests showed that students' creative thinking, problem-solving, and learning independence skills were still low. This indicates that there is a gap between learning expectations and the skills possessed by students. This information is important because it provides a basis for researchers to apply actions, namely the use of the Creative Problem Solving (CPS) learning method, to improve skills in each cycle. Based on the observation and assessment of creative thinking skills, problem-solving, and learning independence at the pre-cycle to post-cycle stages, the following data are presented:

**Table 2 Value Acquisition**

Students	Pra- siklus			Siklus 1			Siklus 2			Siklus 3			Post-siklus		
	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
<b>ALPR</b>	44	44	24	25.0	25.0	33.3	50.0	50.0	50.0	75.0	75.0	83.3	84	80	84
<b>ASP</b>	40	32	32	33.3	33.3	33.3	50.0	50.0	58.3	83.3	83.3	83.3	80	88	80
<b>AKM</b>	32	36	28	41.7	33.3	33.3	66.7	58.3	58.3	83.3	83.3	83.3	84	84	80
<b>AAD</b>	40	44	28	25.0	25.0	25.0	58.3	50.0	50.0	75.0	66.7	83.3	80	80	84
<b>ACA</b>	32	36	20	41.7	33.3	33.3	66.7	58.3	66.7	83.3	83.3	83.3	80	92	80
<b>BSK</b>	24	36	24	41.7	50.0	50.0	75.0	83.3	83.3	91.7	91.7	91.7	80	68	88
<b>BL</b>	32	44	24	33.3	41.7	50.0	83.3	83.3	83.3	91.7	100	91.7	84	92	88
<b>CK</b>	40	28	20	33.3	41.7	50.0	83.3	83.3	83.3	91.7	91.7	91.7	84	88	88
<b>CGL</b>	36	24	28	25.0	25.0	25.0	58.3	50.0	66.7	83.3	83.3	91.7	96	84	84

<b>CARJ</b>	28	32	28	41.7	41.7	33.3	58.3	83.3	66.7	91.7	91.7	83.3	80	80	88
<b>CC</b>	24	36	28	25.0	25.0	25.0	41.7	58.3	66.7	75.0	83.3	75.0	84	80	84
<b>CEBS</b>	36	32	28	25.0	25.0	25.0	41.7	50.0	66.7	66.7	66.7	75.0	80	80	80
<b>DHN</b>	32	28	28	58.3	50.0	58.3	83.3	83.3	75.0	83.3	91.7	91.7	80	84	96
<b>EZL</b>	36	32	24	33.3	33.3	33.3	41.7	50.0	66.7	66.7	83.3	75.0	84	80	84
<b>FA</b>	28	28	28	41.7	41.7	41.7	66.7	83.3	83.3	83.3	91.7	91.7	88	92	88
<b>FAJ</b>	36	32	28	25.0	25.0	25.0	41.7	50.0	83.3	75.0	75.0	83.3	84	80	84
<b>FBDM</b>	32	32	32	25.0	25.0	25.0	50.0	83.3	58.3	58.3	83.3	75.0	88	92	84
<b>GEPB</b>	36	28	24	41.7	33.3	33.3	75.0	75.0	58.3	83.3	83.3	83.3	88	80	88
<b>GMLP</b>	32	28	28	25.0	25.0	25.0	50.0	50.0	58.3	75.0	75.0	83.3	84	84	88
<b>JMTS</b>	36	32	24	25.0	33.3	25.0	58.3	66.7	58.3	83.3	75.0	83.3	92	88	88
<b>KCT</b>	36	36	24	58.3	50.0	50.0	75.0	83.3	58.3	83.3	91.7	91.7	80	88	84
<b>LMS</b>	36	32	32	66.7	58.3	58.3	83.3	83.3	66.7	91.7	83.3	83.3	80	84	88
<b>MIB</b>	40	28	28	41.7	41.7	33.3	66.7	58.3	58.3	83.3	83.3	83.3	92	88	88
<b>MAWP</b>	36	36	32	41.7	33.3	33.3	66.7	58.3	50.0	83.3	83.3	83.3	80	80	88
<b>PKA</b>	40	28	20	41.7	41.7	33.3	75.0	50.0	58.3	83.3	83.3	75.0	92	80	84
<b>PNWS</b>	36	32	24	50.0	50.0	50.0	75.0	83.3	66.7	83.3	91.7	83.3	88	84	84
<b>RK</b>	40	36	24	50.0	41.7	50.0	83.3	83.3	83.3	83.3	83.3	91.7	96	96	88
<b>ST</b>	40	44	32	33.3	33.3	33.3	66.7	66.7	58.3	83.3	75.0	83.3	80	80	84
<b>SL</b>	28	36	28	33.3	33.3	25.0	58.3	66.7	58.3	83.3	75.0	83.3	88	80	80
<b>SV</b>	28	32	20	41.7	33.3	33.3	83.3	58.3	66.7	91.7	83.3	83.3	92	80	88
<b>VMD</b>	40	44	28	25.0	33.3	33.3	66.7	83.3	83.3	83.3	83.3	83.3	80	80	84
<b>ZMP</b>	32	36	36	25.0	25.0	25.0	66.7	66.7	58.3	83.3	75.0	83.3	92	80	84
<b>RATA2</b>	<b>34.6</b>	<b>33.9</b>	<b>26.8</b>	<b>36.7</b>	<b>35.7</b>	<b>35.7</b>	<b>64.</b>	<b>66.9</b>	<b>65.9</b>	<b>81.8</b>	<b>82.8</b>	<b>84.1</b>	<b>85.2</b>	<b>83.6</b>	<b>85.4</b>

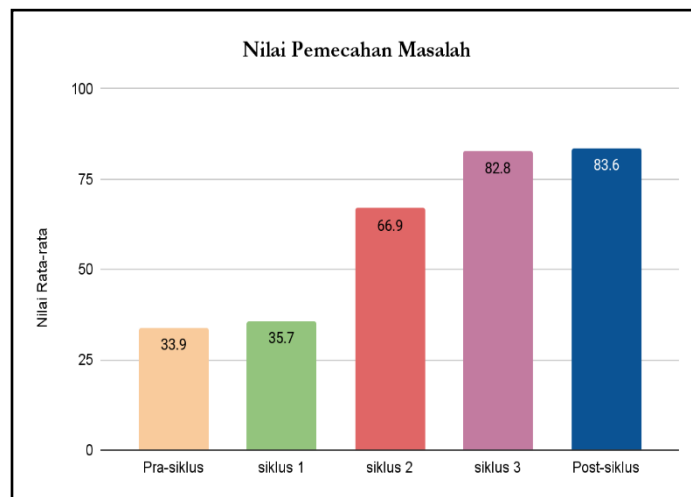
The CPS learning model is used to measure the improvement of creative thinking, problem-solving, and learning independence skills, which are carried out in three learning cycles with each cycle consisting of three meetings. From the three learning cycles, the data showed an increase in the average score in each cycle. The value of the results of measuring creative thinking skills in pre-cycle, first cycle, second cycle, third cycle, and post-cycle learning has been measured using rubrics. These values can be seen in Figure 1 below:



**Graph 1 The Overall Value of Creative Thinking**

Figure 1 above illustrates a consistent improvement in the average score of creative thinking skills. In the pre-cycle stage, the average score of creative thinking skills was 34.6. This value increased to 36.7 in the first cycle, then increased again to 64.6 in the second cycle, and continued to increase to 81.8 in the third cycle. After going through the post-cycle stage, the average score increased slightly to 85.1. The researcher calculated the N-gain from the value of creative thinking skills obtained in the pre-cycle stage before the action was taken, which was 34.6, and the value of creative thinking skills in the post-cycle stage after the action was taken, which was 85.1. The N-gain obtained is 0.8, this value is relatively high. Therefore, it can be concluded that the application of *the Creative problem-solving* learning model in this study has a significant positive impact on creative thinking skills.

Based on the evaluation using the assessment rubric on problem-solving ability in the pre-cycle, first cycle, second cycle, third cycle, and also post-cycle stages, the values are obtained as seen in the following Graph 2:

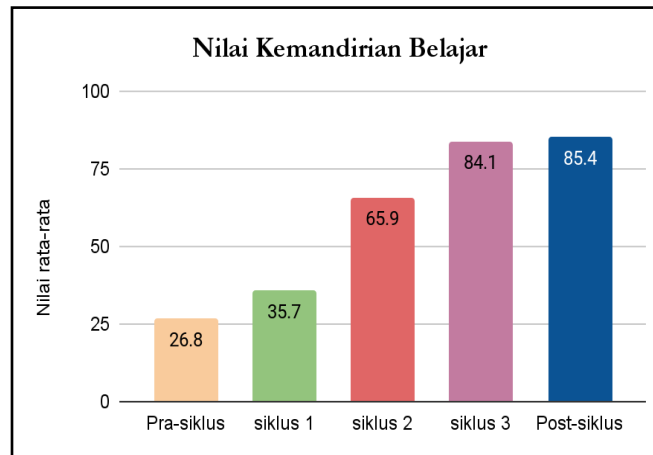


**Graph 2 Overall Value Troubleshooting**

From Graph 2 above, data on the average value of problem-solving skills in the pre-cycle, first cycle, second cycle, third cycle, and also post-cycle stages can be seen. In the pre-cycle stage, the average score of problem-solving skills was 33.9, which saw a slight improvement to 35.7 in the first

cycle. Then, there was a significant increase to 66.9 in the second cycle and increased again to 82.8 in the third cycle. After the post-cycle, the value tends to be stable with a value of 83.6. The researcher calculated the N-gain from the value of problem-solving skills obtained in pre-cycle activities when students have not received action, which is 33.9 and the value of problem-solving skills in post-cycle when students have received action, which is 83.6. The N.gain value obtained is 0.8, this value is in the high category. Therefore, it can be concluded that the *Creative Problem Solving* learning model applied in this study has a strong positive impact on problem-solving skills.

Based on the rubric evaluation of independent learning skills in the pre-cycle, first cycle, second cycle, third cycle, and also post-cycle stages, the assessment results are found as reflected in Graph 3 below.



**Graph 3 Overall Value of Learning Independence**

From Graph 3 above, it can be observed that there is an increase in the average score of learning independence skills in the pre-cycle, first cycle, second cycle, third cycle, and also post-cycle stages. In the pre-cycle stage, the average score of learning independence skills was 26.8. This value increased in the first cycle to 35.7, then increased again in the second cycle to 65.9, and reached its peak in the third cycle with a score of 84.1. After going through the post-cycle stage, the score reached 85.4. This data is also supported by the achievement of scores from each indicator of learning independence skills. The researcher calculated the N-gain from the value of learning independence skills obtained in pre-cycle activities when students have not received action, which is 26.8 and the value of learning independence skills in post-cycle when students have received actions, namely 85.4. The N.gain value obtained is 0.8, this value is in the high category. Therefore, it can be concluded that the *Creative Problem Solving* learning model applied in this study has a strong positive impact on learning independence skills.

**Table 3 Overall Skills Value,**

Skills	Pre-cycle	Post-cycle	N-Gain
Creative Thinking	34.6	85.1	0.8
Troubleshooting	33.9	83.6	0.8
Learning Independence	26.8	85.4	0.8



Table 3 above shows a very significant increase in the three skills measured, namely creative thinking skills, problem solving and also learning independence before and after learning with the Creative Problem Solving model. The N-gain value obtained based on the improvement in the three skills is 0.8 and is in the high category. In the pre-cycle stage, students demonstrate low levels of creative thinking, problem-solving, and learning independence. After going through three learning cycles with the Creative Problem Solving method, there was a very significant improvement in these skills. The difference in values between pre-cycle and post-cycle shows a consistent increase from cycle to cycle. These results indicate that the Creative Problem Solving learning model is effective in improving students' creative thinking, problem-solving, and learning independence skills. These results also show the potential and effectiveness of the learning model in improving students' ability to face future challenges.

#### 4. Conclusion

The results of classroom action research using the Creative Problem Solving (CPS) learning model prove that there is an improvement in creative thinking skills, problem-solving skills, and learning independence skills in English literature learning grade XI of the language specialization program of SMA Santa Ursula Jakarta has been obtained through three learning cycles which include the stages of planning, action, observation, and reflection. Based on the conclusion above, several processes and reflection results can be input for several parties as suggestions in the implementation of learning activities with the same method, namely the Creative Problem Solving (CPS) learning method is a good method to be carried out in the classroom that expects the results of students' thinking with the results of new understanding and knowledge. (1) In Creative Problem-Solving learning, teachers must prepare and carry out each stage completely and sequentially so that the expected learning outcomes can achieve maximum results. (2) The five stages in the Creative problem solving learning model can be divided into different days but still sequential with continuous material, especially in the fourth stage of the Creative Problem Solving learning method, namely the implementation of the solution, the teacher needs to pay attention to enough time for students to complete their work so that the learning goals can be achieved. (3) The results of this research can be used as a reference in implementing Creative problem solving learning model activities. (4) This research can be used as a reference in carrying out learning activities to improve creative thinking skills, problem-solving skills and students' learning independence skills. In addition to teachers and schools, this research is also expected to be useful for other researchers (1) This research can be a reference for other researchers who are interested in conducting research on the application of the Creative Problem Solving learning model. (2) The results of this study can be used as a reference to measure other competencies using the Creative Problem Solving learning model. (3) This research can be a valuable reference source for further research or similar research on different competencies, both in other schools and at different levels of education.,

#### 5. References

- Artawan, P., Hamsiah, A., Pongpalilu, F., Rachmandhani, M. S., Utari, T. I., Pratama, A., Mahmudah, K., Sumardi, M. S., & Wahyuningsih, N. S. (2023). *Pengantar Ilmu Pendidikan: Teori, Konsep Dan Aplikasinya Di Indonesia*. PT. Sonpedia Publishing Indonesia.
- Brookhart, S. M. (2010). *How To Assess Higher Order Thinking Skills in Your Classroom*. ASCD Alexandria.
- Dostál, J. (2015). Theory of Problem Solving. *Procedia - Social and Behavioral Sciences*, 174, 2798–2805. <https://doi.org/10.1016/j.sbspro.2015.01.970>



- Eom, S. B., & Ashill, N. (2016). The determinants of students' perceived learning outcomes and satisfaction in university online education: An update. *Decision Sciences Journal of Innovative Education*, 14(2), 185–215.
- Faturohman, I., & Afriansyah, E. A. (2020). Peningkatan Kemampuan Berpikir Kreatif Matematis Siswa melalui Creative Problem Solving. *Mosharafa: Jurnal Pendidikan Matematika*, 9(1), 107–118. <https://doi.org/10.31980/mosharafa.v9i1.562>
- Kaufman, J. C., & Sternberg, R. J. (2019). *The Cambridge Handbook of Creativity*. Cambridge University Press. <https://doi.org/10.1017/9781316979839>
- Nurjanah, R. L. (2023). Self-regulated learning strategy in learning activities of literal reading course to build learning independence. *SALEE: Study Of Applied Linguistics And English Education*, 4(1), 296–314.
- Rohayati, N. (2023). *Model Inovatif Kreatif dalam Pembelajaran Menulis Sastra*. Tohar Media.
- Sari, A. D., Hastuti, S., & Asmiati, A. (2020). Pengembangan Model Creative Problem Solving (CPS) Untuk Meningkatkan Kemampuan Berpikir Reflektif Siswa. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, 4(2), 1115–1128. <https://doi.org/10.31004/cendekia.v4i2.318>
- Septian, A., Komala, E., & Komara, K. A. (2019). Pembelajaran dengan model Creative Problem Solving (CPS) untuk meningkatkan kemampuan berpikir kreatif matematis siswa. *Prisma*, 8(2), 182–190.
- Susilowati, D. (2018). Penelitian Tindakan Kelas (PTK) Solusi Alternatif Problematika Pembelajaran. *Jurnal Ilmiah Edunomika*, 2(01). <https://doi.org/10.29040/jie.v2i01.175>
- Viruet Cruz, Guillermina. (2018). *Influence of Self-Assessment Scripts on Self-Regulated Learning and Students' Performance in a Multimedia Environment* [Doctoral dissertation]. Walden University.
- Wasiran, Y., & Andinasari, A. (2019). Meningkatkan Kemampuan Berpikir Kreatif dan Penalaran Adaptif Matematika melalui Paket Instruksional Berbasis Creative Problem Solving. *Jnpm: Jurnal Nasional Pendidikan Matematika*, 3(1), 51–65.
- Wibawa, S. (2018). *Penelitian Tindakan Kelas*. FBS UNY.
- Yuliati, Y., & Lestari, I. (2019). Penerapan Model Creative Problem Solving untuk Meningkatkan Hasil Belajar Siswa pada Pembelajaran Ilmu Pengetahuan Alam di Sekolah Dasar. *Jurnal Cakrawala Pendas*, 5(1). <https://doi.org/10.31949/jcp.v5i1.1200>