

The Effectiveness of the Discovery Learning Model on Poetry Writing Ability

Arya Miza Amin

Universitas Islam Riau

E-mail: aryamizaamin@student.uir.ac.id

Desi Sukenti

Universitas Islam Riau

E-mail: desisukenti@edu.uir.ac.id

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Abstract

The reason for choosing the discovery learning model because it is an active learning model that can help the student's writing skills. By using this learning model, students can learn to think, analyze, and solve problems. The purpose of the research is to find the effect of the discovery learning model on students' ability in writing a poetry at *Sekolah Menengah Atas (SMA) Negeri 1 Pangkalan Kerinci*. This research was experimental research with a form of quasi-experimental design. The sample of this study was two classes, the control class and the experimental class, from Grade X *SMA Negeri 1 Pangkalan Kerinci*. The number of each class consisted of 32 students. In the experimental class, discovery learning is applied as a treatment, while the control class still uses a conventional learning model. The data analysis used descriptive statistics. The results of the study revealed that learning using the discovery learning model in students' ability in writing poetry obtains the value of learning completeness at 86.7% which is higher than the conventional learning model. Based on the significant value of Sig (2-tailed) between discovery learning and the ability to write poetry is $0.000 < 0.0$. It means that there is a significant effect between discovery learning and student's ability in writing poetry. From the results of the study, it can be concluded that the writing ability in the poetry of SMAN 1 Pangkalan Kerinci students is high by using discovery learning.

Keywords: discovery learning model, students' ability, writing poetry

INTRODUCTION

Students actually possess higher order thinking skill because it utilizes them to solve learning related challenges and effectively communicate their arguments. Higher order thinking skills involve the capacity to use, alter, and convert prior information and experience in order to think critically and creatively in order to make decisions and solve issues in novel circumstances (Andriani & Suparman, 2019). It is also stated Ariyana et al. (2018) that also wrote a handbook oriented learning on skills higher level thinking. Higher order thinking skills are defined as skills that students must own and master in order to develop critical and creative thinking, because high-order thinking skills can enhance and stimulate the process of thinking skills, train logical skills, critical thinking patterns, and students' creativity in learning (Purnamawati & Saliruddin, 2017; Sofyan, 2019; Fisher, 2009). Higher order thinking skills are required for the capacity to analyse, evaluate, and create. This improves students' mastery of the content (Maslakhathunni'mah & Dimas (2022).

The research from Amelia & Pujiastuti (2020) shows that from a maximum score of 100%, the average student's analytical ability level reaches 33.3%, the evaluation ability level reaches 44.44%, and the ability level to create reaches 0%. This higher-order thinking skill must be cultivated during the learning process. As a result, more effective teaching approaches are required since students are expected to be creative and innovative. There are some experts did research about discovery learning that can be seen in the following paragraph.

Yuda (2022) did study on improving science learning outcomes of elementary students at SDN 11 Mandau Class VI using the discovery learning. The study discovered that after using the discovery learning learning approach, there was an increase. In cycle I, the criteria for the students' activity were 76.19% and in cycle II students' activity was 95.23% active in following the learning process. While the students' learning outcomes in the pre-cycle obtained 42.85% with an average score 65.25. In cycle I, students' completeness was 71.42%, the average was 75.50. In cycle II, learning completeness by the students increased to 90.47% with an average of 84.25. It can be stated that the implementation of the discovery learning model for science subject might rise students' activities and learning outcomes in the teaching-learning.

There are several related findings that examine higher-order thinking skills. The research from Nurrohmi et al. (2017) concluded that students tend to be passive during the learning and discussion process and have difficulty drawing conclusions at the end of learning which shows that students have low critical thinking skills. In addition to, Putri et al. (2019) stated that during learning and conversation, students frequently act passively and struggle to form conclusions. Next, Sari et al. (2019) revealed that higher-order thinking skills are still low, this is evidenced by the results of the test questions obtained in the form of a class average value of 48.17. The low cognitive level of the assessment instrument made by the teacher for students is one of the reasons for students' low higher order thinking skills. Then, Lestari et al. (2022) conducted research on applying the discovery learning model for improving high order thinking skill and learning outcomes for social studies for class VIII Students of SMPN 3 Pulung. Research findings showed: 1) The quality of learning utilizing discovery learning from cycles 1 and 2 is 76.19 and 90.48, respectively; 2) In contrast, the HOTS ability in the pre-cycle was 16%, and in cycles 1 and 2, it was 28% and 72%, respectively. This is higher than the research aim of 50% and 3) Completeness of social studies learning outcomes in pre-cycle 20%, compared to 52% and 80% in cycle 1 and cycle 2. The learning outcomes for mastery

learning were above the indication of success, namely 75%, indicating that this research might last up to two cycles.

There is a theory that reinforces that higher-order thinking is important for students, namely Bloom's taxonomy theory revised by Anderson & Krathwohl (2001) explaining that higher-order thinking skills are part of cognitive processes. Six levels divided into two parts by outline. Levels C1 (remembering), C2 (understanding), and C3 (applying) are included in the category of low-level thinking skills. Meanwhile, C4 (analyzing), C5 (evaluating) and C6 (creating) levels are included to the category of high order thinking skills. One of the factors that causes students' low higher order thinking skills is that students cannot analyze and evaluate properly. High order thinking skills which cannot be developed by students during learning, will result in students only being able to remember and repeat the material they have learned. Then students cannot analyze and make conclusions from the material being studied during learning.

One of the activities that need higher order thinking skill is writing. Writing should have idea, coherence, choice of words, and also setting to build a good input in writing (Darmadi, 2011). In learning Indonesian language, the students should use a good language that refers to systematical technique of writing (Sugiarto, et al., 2022; Doyin & Wagiran, 2009). The purpose in writing poetry is to assist students in developing insight into vocabulary development. Through learning to write poetry students will learn how to convey their thoughts well and can be understood by others with full appreciation. In the 2013 Curriculum, it is explicitly stated that poetry writing activities have the aim of exploring and developing students' basic competencies, namely the competence of creative writing poetry. The achievement of creative writing competence (writing poetry) can be measured through learning indicators, namely by students writing poetry containing their own ideas by displaying the right choice of words and interesting rhymes to convey intentions/ideas. Learning to write poetry is applied so that students are able to be educated to become students who have polite and civilized personalities, have refined character, have a sense of humanity, are socially concerned, have cultural appreciation and channel ideas, imagine, express creatively both orally and in writing and are able to improve students' skills in enjoying, appreciating, and understanding poetry (Jabrohim, 2013).

These objectives are expected to be achieved optimally. However, until now these goals have not been achieved as expected. This is proven, among other things, by the fact that students' interest is low, students still do not have the ability to find and express ideas or ideas for writing poetry. One of the obstacles related to the low interest of students in writing poetry is a difficult subject to learn. When learning to write poetry, students feel faced with a hard job which often creates feelings of anxiety, indecision, and doubt because they feel they are not talented. This situation is characterized by the fact that students often take a long time when assigned to write a poem. This happens because the ability of students in higher order thinking to explore imagination is still very limited.

To overcome students' limitations in higher-order thinking, implementing an appropriate learning model is a very appropriate solution. Discovery learning is one learning approach that may be used. Discovery is a learning model based on the constructivist viewpoint. The aim of discovery learning is to understand the concept of relationships, meaning, and finally arrive at a conclusion through an intuitive process. Discovery learning makes an effort to establish the basis for the learning model and develops scientific ways of thinking. Students are defined as learning subjects, and the role of the teacher is important in this learning model. Discovery learning that will be

given direct experience to students through experiments and practice but students will find more information themselves while being taught and can draw a conclusion from that information. Putri et al. (2019) stated that discovery learning is a learning model that regulates teaching in such a way that children acquire knowledge that they did not previously know not through notification, but found it themselves". Activities in learning are planned in discovery learning so that students can make observations, classify, make conjectures, explain, and draw inferences, and so on in order to discover ideas or principles.

Meanwhile, according to Pratiwi & Hapsari (2020) "understanding concepts, meanings, and relationships through an intuitive process to finally arrive at a conclusion" in the discovery learning approach. Individuals are involved in discovery when they use their mental processes to uncover some notions and principles. Mental activities such as observation, categorization, measurement, prediction, determination, and inference are required for discovery. The difference using discovery learning is that in discovery the problem to be presented to students is a kind of problem engineered by the teacher, while in inquiry the problem is not the result of engineering, so students direct all their thoughts and skills to get findings in that problem through the research process. While problem solving itself for this stage has a position as an emphasis on the ability to solve problems.

Changing teacher oriented learning where only the teacher is the center of information to become student oriented. The students become active subjects in teaching and learning activities. Additionally, this approach switches from the expository mode, in which students simply get general knowledge from the teacher to the discovery mode. The students must actively seek out information on their own writing. According to Dalman (2016), is a productive and expressive activity that requires the writer to be adept in the use of graphology, linguistic structure, and vocabulary. Tarigan (2013) also claims that writing is the derivation or depiction of graphic symbols that define a language that someone understands. The other students who understand the language and visual pictures may read these graphic symbols. In fostering poetry writing skills, it can be through the use of models that are suitable and easy to imitate. Even though in lessons students may have studied complex poetry both in rhyme, rhythm and linguistic elements, for writing practice, poetry is usually free and simple, containing observations in the form of appeals or statements (Rahmanto 2018). According to Rahmanto (2018), poetry is the dominant form of expression in literature, this domination is not only because the forms of poetry are easy to memorize, but also because they are meaningful and highly favored by those who think deeply. The importance of writing practice is not only to sharpen observation and improve language skills, but with poetry writing practice it is hoped that students can gain fresh interest that arises from the depth of the poem itself.

Through the observation stage, it was found that there was a gap in the phenomenon of low students' high-level thinking skills also occurring at SMAN 1 Pangkalan Kerinci. Researchers conducted interviews with Mrs. Herna Damanik S.Pd. as a class X teacher of Indonesian subjects who stated that students tend to be passive during the learning process and students have the ability to think high and low in the material of writing poetry.

Research on the application of discovery learning in improving students' learning ability has been conducted by Rasmuin and Syah (2022). The result of this study is that the application of the problem solving as learning model has a significant effect on higher order thinking skill (HOTS) in students SMP Negeri 2 Kaledupa. The similarity of this study with the author is that they both discuss the affect of learning models on higher

order thinking skills (HOTS). While the difference between this study and the author is the learning model used by previous researchers, namely the problem solving model while the author uses the discovery learning model. Another research by Juniarso (2020). The researcher wrote the research about discovery learning model to Students' critical thinking skill for university level. The result of the research revealed that teaching creative thinking through discovery learning is superior to classical learning; and teaching students' self-confidence through discovery learning demonstrates good criteria.

Based on the problems raised against this background, the researcher expects that implementing the discovery learning model may assist students at SMA Negeri 1 Pangkalan Kerinci improve their lower order thinking skills. Students' higher order thinking skills are aided by the discovery learning model. Discovery learning, according to Hosnan in Prasetyo & Abduh (2021), is a methodology for building an active manner of learning by getting and researching it yourself, so that the findings acquired may be retained. Students learn to think, analyse, and solve issues by adopting this technique of instruction. Furthermore, discovery learning is a model for establishing active student learning strategies by seeking and researching such that the findings acquired are long-lasting in memory and not easily forgotten for the students as cited by Hamalik in (Prasetyo & Abduh, 2021). Based on the background of the problems described, the researcher is interested in conducting research entitled "Implementation of the Discovery Learning Model on the Ability to Write Poetry in Class X at SMAN 1 Pangkalan Kerinci.

METHOD

In this study, a quantitative method was used. The concept of quantitative research is a type of research activity whose specifications are systematic, planned, and clearly structured from the beginning to the creation of a research design, in terms of research objectives, research subjects, research objects, sample data, data sources, and methodology (beginning with data collection and ending with data analysis) (Suharso, 2019). The data for the study were gathered via test activities offered to students by the teacher in the form of poetry writing tests. The experimental research was chosen because the researcher want to implement an activity or therapy but cannot control the external conditions that may impact the research outcomes. Furthermore, if the study subjects could not be randomly separated into groups, this research design was adopted. This study employs an experimental research approach known as Quasi Experimental Design.

The population as well as in this study were 32 of each class at X students of SMAN 1 Pangkalan Kerinci consisting of 2 classes of 62 students. One class as a control class and one other class as an experimental class. The consideration used for sampling was that the two classes have the same number of students, taught by the same teacher. In the experimental class, discovery learning was applied as a treatment, while the control class still used conventional methods. After the treatment was carried out, both classes were given a post test. In this study, the test of learning outcomes on students' cognitive aspects has been carried out twice. The first test aimed to evaluate cognitive ability in both groups. This initial cognitive ability was used in the experimental and control class. The second test aimed to measure student achievement in cognitive aspects. Data analysis was carried out using quantitative descriptive analysis. Quantitative data were test results which were then processed using statistics and become the initial writing ability assessment value. The value of the assessment of higher order thinking skills in writing poetry was calculated in the following formula.

$$x = \frac{\text{Obtained Score}}{\text{Maximum Score}} \times 100\%$$

After knowing the value of higher order thinking skills in writing poetry, the next step is to determine the average value of one class and distribute the scores into the criteria for ability to calculate currency values. To get the average, it can be done with the formula below:

$$\text{Mean} = \frac{\sum X}{N}$$

Note:

Mean = average score

Σx = total of students' score

N = total of students

FINDINGS AND DISCUSSION

Findings

The students' ability in writing poetry was measured by the accuracy in creating poetry based on (1) the coherence of meaning between lines and stanzas, (2) the suitability of the contents of the theme and title, (3) diction, (4) style of language, (5) imagination, (6) rhyme and (7) mandate. The average student has limitations in applying the ability to write poetry from the aspects of (3) diction, (4) style of language, (5) imagination, (6) and rhyme. This was evidenced in aspects (3) diction, (4) style of language, (5) imagination, (6) and rhyme, many students got a score of 20 or very less.

At the stage of the research conducted, the highest score on the pretest was 80 and the lowest score was 50. Referring to the student's test scores above, it was known that there were two categories of scores. That was the lowest value and the highest value. The lowest score category in the posttest was 65 which has a completeness percentage of 43.3%. Then, the highest score category in the posttest was 95 with a percentage of student completeness of 86.7%. Furthermore, it can clearly be seen at Tabel 1.

Table 1. The Comparison of Test Score of the Students of Pre-test and Post-test

No	Learning Outcome	Pre-test	Post-test
1	The Highest Score	82	95
2	The Lowest Score	20	65
3	Mastery Learning	43,3%	86,7 %

Based on the above data it is known that the learning completeness in the pretest is 43.3%. During the pretest, the researcher did not apply the discovery learning model to the experimental class. The pre-test showed that the ability of students to produce poetry is still in the low level. Then a post-test was carried out to see differences in students' skills in writing poetry using the discovery learning model and those who did not use the discovery learning model. To see the difference between the two stages, see the Diagram 1.

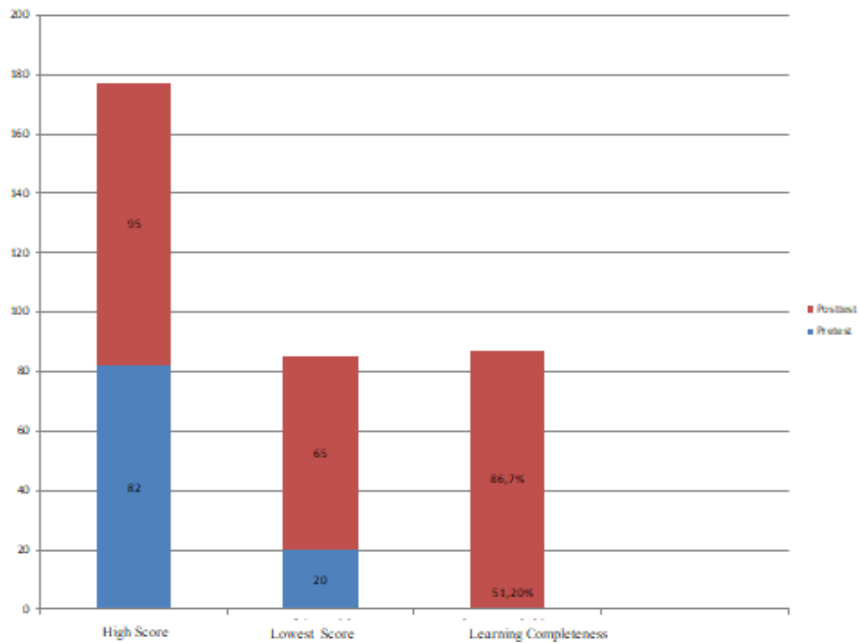


Diagram 1. Histogram of the Comparison of Pretest and Posttest

From the Diagram 1, it can be seen that there is a very significant difference in learning outcomes between the pretest and posttest. In the pretest, the student's highest score was 65 and in the posttest the student's highest score was 95. These results show a very significant improvement because the score of 65 has not yet reached the KKM score or no student has completed it. From the aspect of student learning completeness also showed more improvement in the posttest. Learning completeness in the pretest was 51.20% and increased in the posttest to 86.7%.

The Implementation of Discovery Learning Model

The result of normality test of pre-test and post-tets as follows.

Table 2. The Result of Normality Test

Group	Shapiro-Wilk			
	Statistic	Df	Sig.	
Students Score	Control	.867	32	.061
	Eksperi ment	.882	32	0.72

Based on the normality test data above, the control class data in the Shapiro Wilk column is 0.061, then in the experimental class data it is known that the significance is 0.072, it is stated that the data is normally distributed.

Higher-order thinking skills are described based on a review of the results of higher-order thinking skills tests which consist of 3 aspects, namely analyzing, evaluating and creating. Data on the results of students' higher-order thinking as a whole will be presented in Table 3.

Table 3. The Average High Level Thinking of Students in Writing Poetry

Aspect	Criteria		
	H (%)	M (%)	L (%)
Analyze	88	91,96	73,15
Evaluate	91,5	59,82	60,42
Create	94,17	69,05	65,59

Note:

H = High

M = medium

L = low

Based on the Table 3, it is known that students' high-level thinking skills in writing poetry are on average high. Further explanation can be seen at Table 4.

Table 4. Outline of Higher Order Thinking Skills in Writing Poetry

Aspect	Overall Total (%)
Analyze	84,37
Evaluate	70,58
Create	76,27

Based on the Table 4, it found that the discovery learning indicator that dominated students' high-level thinking skills was in the aspect of analyzing with the ability category of 84.37%. Then by the aspect of creating with the ability category of 76.27% and evaluating the category of 70.58%.

To find out the effect of applying the iscovery learning model to the ability to write poetry, a test was carried out and the following results were obtained. Further explanation can be seen at Table 5.

Table 5. Discovery learning Learning to students' learning abilities

	Discovery learning	Students' Writing Ability in Poetry
Pearson Correlation	1	,610**
Sig. (2-tailed)		,000
N	32	32
Pearson Correlation	,610**	1
Sig. (2-tailed)	,000	
N	32	32

Based on Table 5, it can be seen that the value of the Pearson Correlation for discovery learning and the ability to write poetry is .610**, meaning that for discovery learning and the ability to write poetry is high. So, if there is an increase in discovery learning it will lead to an increase in the ability to write poetry. The value of the Pearson Correlation for discovery learning and the ability to write poetry, if we multiply (x) by 100 it will be assessed as 61.0% Then subtract (-) 100, it will be assessed as 39%. This means that the relationship between the independent variables (total discovery learning is 61%, the remaining 39% is affected by other variables outside the model. Based on the significant value of Sig (2-tailed) between discovery learning and the ability to write

poetry is $0.000 < 0.05$, which means it is correlated significant difference between discovery learning and the ability to write poetry. Since the r count or Pearson correlation in this analysis is positive, it means that there is a positive effect between discovery learning and the ability to write poetry.

Discussion

Learning Indonesian is directed to sharpen the sensitivity of students' feelings. Teachers are expected to motivate students to increase their writing interest in literary works, because by studying literature, students are expected to draw various benefits from their lives. Therefore, a teacher must direct students to have literary works that are in accordance with the interests and maturity of their souls. Various attempts were made by giving assignments to create literary works, namely writing poetry.

Writing skill is an activity that requires process. These processes include understanding the contents of the text and finding differences between texts. Before being skilled at writing texts, students must understand the text well. One of the texts studied by class X students is poetry text. Poetry text is one of the beautiful works of literature and is created through condensing ideas and ideas. Sulkifli & Marwat (2016) poetry is a medium of expression for poets in expressing ideas or ideas. Even deeper, poetry becomes the deepest expression of the poet's anxiety in responding to an even what are the events that are experienced or the events of their life.

The highest score on the pretest was 80 and the lowest score was 50. Referring to the student's test scores above, it is known that there are two categories of scores. That is the lowest value and the highest value. The lowest score category in the posttest is 65 which has a completeness percentage of 43.3%. Then, the highest score category in the posttest is 95 with a percentage of student completeness of 86.7%. Learning completeness in the pretest was 43.3%. The pre-test showed that the students' ability to write poetry is still under the siding category. Then a posttest was carried out to see differences in students' abilities in writing poetry using the discovery learning model and those who did not use the discovery learning model. The discovery learning indicator that dominates students' high-level thinking skills is in the aspect of analyzing with the ability category of 84.37%. Then by the aspect of creating with the ability category of 76.27% and evaluating the category of 70.58%.

The advantages of the discovery learning model are as follows. It helps students to improve and improve skills and cognitive processes. In the discovery business is the key to this process, and it is up to a person how to learn. Knowledge that can be obtained through personal and effective methods because it strengthens understanding, memory and methods, to create a feeling of pleasure in students, because of the growing sense of investigating and succeeding, in this learning model allows students to develop quickly and according to their own pace, to cause students to direct their own learning activities involving their minds and self-motivating, more to help students strengthen their self-concept, for that reason gain confidence in working with others (Abdjul, 2022; Sari & Rijois, 2016). Students and instructors will play an equal role in the communication of ideas. Even the teacher must be able to act as a learner, and as a researcher in a discussion situation, must help eliminate skepticism (doubt) because it leads to a final and certain or definite truth.

This research has different findings with other studies. In this study, the researchers focused on students' writing skills. While most previous studies only discuss learning outcomes. However, there are also similarities from other studies with the author,

namely both discussing the affect of learning models on Higher Order Thinking Skills (HOTS).

CONCLUSION

Based on the research conducted, it can be concluded that the ability to write poetry is in “high” category. In other words, if there is an increasing level in discovery learning it will lead to an increase in the ability to write poetry. The value of the Pearson Correlation for discovery learning and the ability to write poetry, if it multiply (x) by 100 it will be assessed as 61.0% Then subtract (-) 100, it will be assessed as 39%. This means that the relationship between the independent variables (total discovery learning is 61%, the remaining 39% is affected by other variables outside the model. Based on the significant value of Sig (2-tailed) between discovery learning and the ability to write poetry is 0.000 <0.05, which means there is a significant effect between discovery learning and the ability to write poetry by implementing discovery learning. In addition to, it showed that most of students’ high order thinking abilities are in the aspect of analyzing with the ability category of 84.37%, then by the aspect of creating with the ability category of 76.27% and evaluating in the 70.58% category. For the further researcher is expected to further develop learning media in the application of discovery learning models. The further researcher can expand the scope of discovery learning by using another variable in students’ writing ability.

REFERENCES

- Abdul, D. (2022). Penerapan Model Pembelajaran Discovery Learning Untuk Meningkatkan Hasil Belajar Biologi pada Siswa Kelas X SMA Negeri 1 Buntulia. *Aksara: Jurnal Ilmu Pendidikan Nonformal*, 8(1), 343-348.
- Amelia, S. R. & Pujiastuti, H. (2020). Analisis Kemampuan Berpikir Kreatif Matematis melalui Tugas Open-Ended. *Jurnal Pembelajaran Matematika Inovatif*, 3(3), 247-258.
- Anderson, L.W. & Krathwohl, D. R. (2001). *A Taxonomy for Learning, Teaching, and Assessing*. New York: Longman.
- Andriani, I., & Suparman. (2019). Design of Module to Increasing Critical Thinking Skills for Seventh Grade Students. *International Journal of Scientific and Technology Research*, 8(12), 853–856.
- Ariyana, Y., Pudjiastuti, A., Bestary, R., & Zamroni, Z. (2018). *Buku Pegangan Pembelajaran Berorientasi Pada Keterampilan Berfikir Tingkat Tinggi*. Jakarta: Direktorat Jenderal Guru dan Tenaga Kependidikan Kementerian Pendidikan dan Kebudayaan.
- Dalman, D. (2016). *Keterampilan Menulis*. Jakarta: Raja Grafindo Persada.
- Darmadi, K. (2011). *Meningkatkan Kemampuan Menulis Panduan untuk Mahasiswa dan Calon Guru*. Yogyakarta: Andi.
- Doyin, M., & Wagiran, W. (2009). *Bahasa Indonesia: Pengantar Penulisan Karya Ilmiah*. Semarang: Unnes Press.
- Fisher, F. (2009). *Berpikir Kritis: Sebuah Pengantar*. Jakarta: Erlangga.
- Jabrohim, J. (2013). *Cara Menulis Kreatif*. Yogyakarta: Sabda Media.
- Juniarso, T. (2020). Model Discovery Learning terhadap Kemampuan Berpikir Kreatif Mahasiswa. *ELSE (Elementary School Education Journal): Jurnal Pendidikan dan Pembelajaran Sekolah Dasar*, 4(1), 36-43.

- Lestari, I., Hanif, M., & Parji, P. (2022). Penerapan Model Discovery Learning untuk Meningkatkan HOTS dan Hasil Belajar IPS Siswa Kelas VIII SMPN 3 Pulung. *Wewarah: Jurnal Pendidikan Multidisipliner*, 1(2), 220-233.
- Maslakhatunni'mah, D., & Dimas, A. (2022). Meta Analisis Kemampuan Berpikir Tingkat Tinggi (HOTS) Pada Mata Pelajaran IPA. *Spektra: Jurnal Kajian*, 8(2), 176-187.
- Nurrohmi, Y., Utaya, S., & Utomo, D. H. (2017). Pengaruh Model Pembelajaran Discovery Learning terhadap Kemampuan Berpikir Kritis. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*, 2(10), 1308-1314.
- Prasetyo, A. D., & Abduh, M. (2021). Peningkatan Keaktifan Belajar Siswa Melalui Model Discovery Learning Di Sekolah Dasar. *Jurnal Basicedu*, 5(4), 1717-1724.
- Pratiwi, B., & Hapsari, K. P. (2020). Kemampuan Berpikir Tingkat Tinggi dalam Pemanfaatan YouTube Sebagai Media Pembelajaran Bahasa Indonesia. *Jurnal Ilmiah Sekolah Dasar*, 4(2), 282-289.
- Purnamawati & Saliruddin. (2017). The Effectiveness of the Use of Metacognition-Based Industrial Electronic Learning Tools in Growing Higher Order Thinking Skills (HOTS). *Jurnal Pendidikan Vokasi*, 7(2), 139-148.
- Putri, W. E., Riswandi, R., & Surahman, M. (2019). Pengaruh Model Discovery Learning untuk Mencapai Higher Order Thinking Skill. *Pedagogi: Jurnal Pendidikan Dasar*, 7(9), 1-14.
- Rasmuin, R., & Syah, S. (2021). Pengaruh Metode Pembelajaran Problem Solving Terhadap Higher Order Thingking Skill (HOTS) pada Siswa SMP. *Jurnal Akademik Pendidikan Matematika*, 7(1), 72-80.
- Sari, R. R., Lufri, L., Selaras, G. H., & Daruss, R. (2019). Analisis Kemampuan Berpikir Tingkat Tinggi Peserta Didik Kelas Xi SMA pada Materi Sistem Ekskresi. *Bioilmi*, 5(2), 91-101.
- Sari, E. & Rijois, R. (2016). Pengaruh Model Accelerated Learning Included by Discovery (ALID) terhadap Hasil Belajar Pada Materigerak Tumbuhan. *Lectura: Jurnal Pendidikan*, 7(1), 103-113.
- Sofyan, F. A. (2019). Implementasi HOTS pada Kurikulum 2013. *Inventa*, 3(1), 1-9.
- Sugiarto, E., Cahyono, A. N., Widiyatmoko, A., Kusumaningtyas, R.D., Nuzulia, S., Arief, S., Wijaya, A., Sumartiningsih, S., & Wahanisa, R. (2022). *Panduan Tugas Akhir dan Publikasi*. Semarang: Universitas Negeri Semarang.
- Suharso, P. (2019). *Metode Penelitian Kuantitatif untuk Bisnis*. Jakarta: Permata Puri Media.
- Sulkifli & Marwat. (2016). Kemampuan Menulis Puisi Siswa Kelas VIII SMP Negeri Satu Atap 3 Langgikima Kabupaten Konawe Utara. *Jurnal Bastra: Bahasa dan Sastra*. 1(1). 1-22.
- Yuda, Z. (2022). Meningkatkan Hasil Belajar IPA Siswa Kelas VI SDN 11 Mandau melalui Metode Discovery Learning. *Jurnal Pajar (Pendidikan dan Pengajaran)*, 6(5), 1506-1513.