



THE EFFECT OF OFFLINE ASSISTED LEARNING SERLI PRACTICUM MODULE ON SOLAR SYSTEM MATERIALS ON STUDENT LEARNING MOTIVATION

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Abstract

The purpose of this study was to determine the effect of offline learning assisted by the Serli practicum module on the solar system material on the learning motivation of sixth-grade students of SD Inpres Lolu. The type of this research is quantitative research with experimental research type using a Quasi-experimental method with a Quasi-experimental design. The subjects in this study were students of class VI SD Inpres Lolu totaling 21 people. There were 11 experimental class students and 10 control class students. Data collection was carried out using a research instrument in the form of a questionnaire, and data analysis using prerequisite tests, namely normality test and homogeneity test and hypothesis testing using unpaired test sample t-test which was analyzed using SPSS Statistics version 25. Based on the results of this study showed a significant value of paired sample T-Test $0.000 < 0.05$ then accepts the H_a hypothesis and rejects H_o , meaning offline learning assisted by the Serli practicum module on the solar system material affects the learning motivation of sixth-grade students of SD Inpres Lolu.

Keywords: Offline Learning, Serli Practicum Module, Solar System Material, Learning Motivation

Abstrak

Tujuan penelitian ini adalah untuk mengetahui pengaruh pembelajaran luring berbantuan modul praktikum serli pada materi tata surya terhadap motivasi belajar siswa kelas VI SD Inpres Lolu. Jenis penelitian ini adalah penelitian kuantitatif dengan jenis penelitian eksperimen menggunakan metode Quasi eksperimental dengan desain Quasi eksperimental design. Subyek pada penelitian ini yaitu siswa kelas VI SD Inpres Lolu yang berjumlah 21 orang. Siswa kelas eksperimen berjumlah 11 orang dan siswa kelas kontrol berjumlah 10 orang. Pengambilan data yang dilakukan menggunakan instrumen penelitian berupa angket, dan analisis data menggunakan uji prasyarat yaitu uji normalitas dan uji homogenitas serta pengujian hipotesis menggunakan uji paired sampel t-test yang dianalisis menggunakan SPSS Statistics versi 25. Berdasarkan hasil penelitian ini menunjukkan nilai signifikan paired sample T-Test $0,000 < 0,05$ maka menerima hipotesis H_a dan menolak H_o , artinya pembelajaran luring berbantuan modul praktikum serli pada materi tata surya berpengaruh terhadap motivasi belajar siswa kelas VI SD Inpres Lolu.

Kata Kunci: Pembelajaran Luring, Modul Praktikum Serli, Materi Tata Surya, Motivasi Belajar

INTRODUCTION

Education is a conscious and systematic effort, carried out by people who are entrusted with the responsibility to influence students so that they have the nature and character following the ideals of education.¹ Education is a goal-conscious effort that is systematically directed at changing behavior towards student maturity. These changes indicate a process that must be passed. Change is not only related to the addition of knowledge, but also in the form of skills, skills, attitudes, understanding, self-esteem, interests, character, and adjustment.²

This is under the Minister of Education and Culture of the Republic of Indonesia regarding Circular Letter Number 4 of 2020 concerning the Implementation of Education Policies in the Emergency Period for the Spread of Corona Virus Disease (Covid-19), learning from home through online and or offline distance learning is carried out under the implementation guidelines. learn from home as follows: 1. Distance learning online (online) using gadgets or laptops through several portals and online learning applications; and 2. Off-line distance learning using television, radio, self-study modules and worksheets, printed teaching materials, teaching aids, and learning media from objects in the surrounding environment.³

According to Hasibuan, the definition of online learning is a learning method that uses an internet-based interactive Learning Management System (LMS). Like using Zoom, Google Meet, Google Drive, and so on. Online activities include webinars, and online classes, all activities are carried out using the internet and computer networks.⁴

Offline learning can be interpreted as a form of learning that is not at all connected to the internet. An offline learning system (outside the network) means learning by using media outside the internet, for example, television, or radio, it can also be with a well-organized face-to-face system.⁵ If students do assignments and then send them directly to the teacher and don't connect them to the internet network, then that is an example of offline activity. Another example is the teacher doing face-to-face visits by visiting students at their respective homes directly without using the internet. Online and offline learning systems must inevitably continue to be carried out during the Covid-19 pandemic. So that students can still learn even from home. Because students can't be left on long holidays because we don't know when the COVID-19 pandemic will pass.⁶

¹ Ali Muhson, "Pengembangan Media Pembelajaran Berbasis Teknologi Informasi," *Jurnal Pendidikan Akuntansi Indonesia* 8, no. 2 (2010), <https://doi.org/10.21831/jpai.v8i2.949>.

² Suci Perwita Sari, Sazkia Aprilia, and Khalifatussadiyah, "Penggunaan Metode Make A Match Untuk Meningkatkan Hasil Belajar Siswa SD," *Educational Journal of Elementary School* 1, no. 1 (2020): 19–24.

³ Bahroin Budiya, "Manajemen Pengelolaan Kelas Masa Pandemi Di SD Ta'miriyah Surabaya," *Attadrib: Jurnal Pendidikan Guru Madrasah Ibtidaiyah* 4, no. 1 (May 29, 2021): 50–54, <https://doi.org/10.54069/attadrib.v4i1.129>; Siti Maryam Munjiat, "Implementation of Islamic Religious Education Learning in Higher Education on The Pandemic Period," *Nazhruna: Jurnal Pendidikan Islam* 3, no. 2 (August 5, 2020): 285–95, <https://doi.org/10.31538/nzh.v3i2.757>; Rio Erwan Pratama and Sri Mulyati, "Pembelajaran Daring Dan Luring Pada Masa Pandemi Covid-19," *Gagasan Pendidikan Indonesia* 1, no. 2 (December 2, 2020): 49–59, <https://doi.org/10.30870/gpi.v1i2.9405>.

⁴ Andasia Malyana, "Pelaksanaan Pembelajaran Daring Dan Luring Dengan Metode Bimbingan Berkelanjutan Pada Guru Sekolah Dasar Di Teluk Betung Utara Bandar Lampung," *Pedagogia: Jurnal Ilmiah Pendidikan Dasar Indonesia* 2, no. 1 (September 2, 2020): 67–76, <https://doi.org/10.52217/pedagogia.v2i1.640>.

⁵ Agus Purwanto et al., "Studi Eksploratif Dampak Pandemi COVID-19 Terhadap Proses Pembelajaran Online Di Sekolah Dasar," *EduPsyCouns: Journal of Education, Psychology and Counseling* 2, no. 1 (April 15, 2020): 1–12.

⁶ Zulvia Trinova et al., "Online School Future: Challenges and Expectations of Modern Education in Indonesia," *Nazhruna: Jurnal Pendidikan Islam* 5, no. 1 (February 10, 2022): 78–95, <https://doi.org/10.31538/nzh.v5i1.1884>; Lucas Kohnke and Benjamin Luke Moorhouse, "Facilitating Synchronous Online Language Learning through Zoom," *RELC Journal* 53, no. 1 (April 1, 2022): 296–301,

Currently, Inpres Lolu Elementary School is using offline learning. This is because some students do not have smartphones (gadgets). The initial implementation of offline learning was that initially, the teacher visited the students' homes one by one, but after a few months, the teacher had difficulties because they had to visit many students' homes in one meeting. Finally, the teacher changed the offline learning strategy by giving assignments to students where students came to take assignments to school on Mondays and took them back to school on Fridays, but if students didn't take them to school on Friday, the homeroom teacher would pick them up. the assignment to the student's home.

Based on the initial observations, the researcher conducted interviews with the homeroom teacher of class VI SD Inpres Lolu regarding students' learning motivation by using offline learning. According to the homeroom teacher of class VI SD Inpres Lolu, there were several problems encountered when conducting offline learning, including the lack of student motivation to learn. This was due to several factors including the lack of understanding of students in learning because they did not do face-to-face learning, and the students were lazy in reading. so that the tasks that students do are less than optimal, conventional, and less varied learning methods when learning makes students bored and do not understand the material being taught, and the lack of practice or practicum due to limited media from the school. Where do we know that the subject of Natural Sciences (IPA) can take place well if there are media and teaching aids that can support the teaching and learning process?

One way to overcome some of these problems is to use modules. According to Prastowo, a module is a teaching material that is systematically arranged using language that is easily understood by students according to their level of knowledge and age so that they can learn on their own (independently) with minimal assistance or guidance from the teacher.⁷ Then with the module, students can also measure their level of mastery of the material discussed in each module unit. If students have mastered the material, then they can proceed to the next level module unit. On the other hand, if students are not able to do it, they will be asked to repeat and study again. Meanwhile, to assess of whether or not a module is meaningful or not is determined by the ease with which the module is used by students in learning activities.⁸

In this case, the researcher uses the Serli practicum module (Discovery Learning) where according to Rosali, discovery learning is a learning procedure that focuses on individual studies, manipulation of objects, and experiments carried out by students before concluding.⁹ Discovery is learning to seek and find yourself. In the application of the discovery, strategy students gain the freedom to learn independently to process the information they get. Starting from the assumption that to gain knowledge, someone who learns must think thinks, the greater the thinking activity, the more effective teaching is to achieve the goal.¹⁰

<https://doi.org/10.1177/0033688220937235>.

⁷ Jamaluddin Malik, Sutaryat Trisnamansyah, and Agus Mulyanto, "Pengaruh Kompetensi, Motivasi, Sarana Prasarana, Dan Iklim Sekolah Terhadap Kepemimpinan Kepala Sekolah Di Sekolah Dasar Negeri," *Munaddhomah: Jurnal Manajemen Pendidikan Islam* 2, no. 2 (October 22, 2021): 81–94, <https://doi.org/10.31538/munaddhomah.v2i2.48>.

⁸Thalib, Azizah, Puji Winarti, and Nurul Kami Sani. 2020. "Pengembangan Modul Praktikum Serli (Discovery Learning) untuk Pembelajaran Sains di Sekolah Dasar." *Profesi Pendidikan Dasar* 7 (1): 53–64. <https://doi.org/10.23917/ppd.v7i1.10817>.

⁹ Rosali Br Sembiring and Mukhtar, "Strategi Pembelajaran Dan Minat Belajar Terhadap Hasil Belajar Matematika," *Jurnal Teknologi Pendidikan (JTP)* 6, no. 2 (October 1, 2013): 214–29, <https://doi.org/10.24114/jtp.v6i2.4996>.

¹⁰ Rustam E. Simamora, Sahat Saragih, and Hasratuddin, "Improving Students' Mathematical Problem Solving Ability and Self-Efficacy through Guided Discovery Learning in Local Culture Context," *International Electronic Journal of Mathematics Education* 14, no. 1 (2019): 61–72; K. Nurdin, Hanafy Sain Muh, and Mustami

By using the Serli practicum module (Discovery Learning) for science learning in grade VI SD, it makes learning more meaningful (meaningful) because students can find their solutions or answers to problems given through experiments that have been carried out. Through the Discovery Learning approach, students become active and independent in conducting experiments which ultimately enable students to find a concept, understand the material and be able to solve problems.¹¹ Through a module with a Discovery Learning approach, students can easily conduct experiments to come to their sons. Discovery Learning is a learning process in which students are given a learning material, then given a reference on how the material can be used as an answer to a question or problem given by students. During the learning process students are required to find the steps, stages, and answers needed until they find them themselves. Next, he must use his findings to answer and formulate opinions and descriptions of answers assigned by the teacher.¹²

The objectives of developing the module with the Discovery Learning approach adopted from Prastowo include 1) So that students can learn independently without or with the guidance of educators. This is in accordance following sticks of the Discovery Learning approach; 2) So that the role of educators is not too dominant and authoritarian in learning activities so that students can find their knowl; 3) Train students' honesty. With To gains new knowledge or proves phenomena that occur, the work steps in practicum activities are made systematically so that students carry out practical activities according to the instructions in the module; 4) Accommodating various levels and learning speeds of students. Students who have been able to make their conclusions continue to the next practicum activity; 5) So that students can measure their level of mastery of the material that has been studied. At the end of the module, it is equipped with an evaluation related to the material that has been studied through practical activities.¹³

Based on this background, the researcher is interested in conducting research entitled "The Effect of Offline Learning Assisted by the Serli Practicum Module on Solar System Materials on the Learning Motivation of Class VI Students of SD Inpres Lolu".

METHOD

The type of experimental research used in this research is Quasi-Experimental Research. Quasi-experimental research is a method that has control, but cannot fully control the external variables that affect the experiment. The quasi-experimental research design used in this study is the Nonequivalent Control Group Design.¹⁴ The design of this study consisted of two control and experimental groups which were then given a pre-test to determine the initial state before treatment, then a post-test or final test after treatment was given, namely whether there was a difference between the experimental group and the control group. The experimental

Halifa Muhammad, "The Implementation of Inquiry-Discovery Learning," *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature* 7, no. 1 (July 11, 2019), <https://doi.org/10.24256/ideas.v7i1.734>.

¹¹ David Hammer, "Discovery Learning and Discovery Teaching," *Cognition and Instruction* 15, no. 4 (December 1, 1997): 485–529, https://doi.org/10.1207/s1532690xci1504_2.

¹² Azizah Azizah and Siti Fajeriah, "The Effect of Offline Learning Model Assisted in Practicum Discovery Learning on Learning Outcomes," *Nazhruna: Jurnal Pendidikan Islam* 4, no. 3 (November 2, 2021): 663–71, <https://doi.org/10.31538/nzh.v4i3.1667>.

¹³ Sucia Winita, Syahrul Ramadhan, and Yasnur Asri, "The Development of Electronic Module Based on Discovery Learning in Writing Explanation Text" (Eighth International Conference on Languages and Arts (ICLA-2019), Atlantis Press, 2020), 63–69, <https://doi.org/10.2991/assehr.k.200819.013>; E. Ellizar et al., "Developing a Discovery Learning Module on Chemical Equilibrium to Improve Critical Thinking Skills of Senior High School Students," *Journal of Physics: Conference Series* 1185 (April 2019): 012145, <https://doi.org/10.1088/1742-6596/1185/1/012145>.

¹⁴ Sugiyono, *Metode penelitian pendidikan: (pendekatan kuantitatif, kualitatif dan R & D)* (Alfabeta, 2008).

class was given treatment using the Serli practicum module, and the control class was given treatment using student textbooks.

The subjects of this study were sixth-grade students of SD Inpres Lolu with a total of 21 students, 11 of whom were boys and 10 were girls. These students were used as the experimental class group of 11 people and the control class group of 10 people. The research instrument used is a student learning motivation questionnaire. The questionnaire in this study aims to measure students' learning motivation before and after being given treatment. Before using the questionnaire instrument, a validation test was conducted at SD Inpres Binanngga.

After being tested in class VI SD Inpres Binanngga, the questionnaire was tested for validity and reliability which was analyzed using SPSS Statistics version 25. The data analysis techniques used in this study were descriptive data analysis techniques and inferential data analysis techniques. the description is used to describe the average (mean), minimum, maximum, and standard deviation, and inferential data analysis is used to test the hypothesis by using paired sample t-test to find out whether there is a difference between the results of the data before treatment and after treatment, and the calculation is assisted with SPSS version 25 statistics.

RESULT AND DISCUSSION

Result

After getting the research data, the next step is to analyze the data. There are two data analyses used in this study, namely descriptive data analysis and inferential data analysis. The results of the descriptive analysis of the pretest experimental class and control class can be seen in the following table.

Table 1. Pretest Data Analysis Results

Statistics	Data <i>Pretest</i>	
	Experiment Class	Control Class
Average value	84,39	79,00
Lowest Value	78,33	71,67
Highest score	93,33	95,00

Based on the table above, the results of the pre-test in the control class have an average score of 79.00. With a maximum value of 95.00 and a minimum value of 71.67. The average value of learning motivation in the experimental class after being given the pre-test was 84.39. With a maximum value of 93.33 and a minimum value of 78.33. Furthermore, the results of the post-test analysis of the experimental class and control class can be seen in the following table:

Table 2. Post-test Data Analysis Results

Statistics	Data <i>Post-test</i>	
	Experiment Class	Control Class
Average score	86,21	82,83

Lowest score	75,00	71,67
Highest score	96,67	91,67

Based on the data analysis above, it is known that the post-test score of the experimental class has an average (mean) of students in the experimental class of 86.21, a minimum score of 75.00, and a maximum value of 96.67. The control class post-test results have an average (mean) student of 82.83, a minimum score of 71.67, and a maximum score of 91.67.

The results of the descriptive analysis show that there is a difference in the average value of students' learning motivation between the experimental class and the control class. The average value of students' learning motivation in the experimental class is higher than the average value of students in the control class. perform inferential analysis to see or determine the effect of the offline learning model assisted by serial modules on student learning motivation on solar system material. The inferential analysis includes hypothesis testing and prerequisite testing. The prerequisite tests measured in this study the are normality test and homogeneity test.

The normality test used in this study is to determine whether the data population in the experimental class and control class is normally distributed or not. The test criteria used to measure residual normality in this study H_0 is accepted if the sign value is obtained from the set level of 5% (0.05). Normality Distribution Test Residual Score Pretest experimental and control classes were carried out using the Kolmogorov-Smirnov test using the SPSS version 25 program. The results of the normality test of data in the control and experimental classes can be seen in the following table.

Table 3. Normality Test Results of Pre-Test and Post-Test Data Experiment Class and Control Class

Class		Kolmogorov-Smirnov		
		statistics	Df	Sig.
Student's motivation to study	Pre-Test Eksperimen	.159	11	.200*
	Post-Test Eksperimen	.168	11	.200*
	Pre-Test Kontrol	.241	10	.104
	Post-Test Kontrol	.235	11	.124*

Based on Table 3, the significant value in the experimental class is 0.200. greater than the set level ($0.200 > 0.05$). This means that H_0 is accepted and H_a is rejected, which means the residual data is normally distributed. As for the control class, the significance value is 0.104. Greater the set level ($0.104 > 0.05$). This means that H_0 is accepted and H_a is rejected, which means the residual data is normally distributed.

A homogeneity test is a statistical test procedure intended to show that two or more groups of sample data come from populations that have the same variation. The homogeneity test was carried out using the level of homogeneity with the help of SPSS version 25. The hypothesis proposed for homogeneity is H_0 = Population comes from the same data (homogeneous) and H_a = Population comes from unequal data (heterogeneous). The test criteria used to determine the homogeneity of the population in this study are H_a is accepted if the sig value obtained is at the set level of 5% (0.05) and H_a is rejected if $\text{sig} < \alpha$ is determined. The results of the homogeneity test can be seen in the following table.

Table 4. Results of Homogeneity of Pre-Test Data Experiment Class and Control Class

Student's motivation to study	Levene Statistic	df1	df2	Sig.
Based on Mean	.065	1	19	.801

Based on Table 4 above, the significance value in the experimental class is 0.801. This value is greater than the set level ($0.801 > 0.05$). This shows that H_0 is accepted, which means the population comes from homogeneous data.

After obtaining data on two classes, namely the experimental class and the control class with a normal distribution and derived from homogeneous data, the next step is to test the hypothesis. Hypothesis testing is a test used to test the truth of a statement statistically and draw conclusions about whether to accept or reject the statement. Testing the effect of offline learning model assisted by Serli practicum module on motivation to learn solar system material using Paired Sample t-test analysis through SPSS version 25.

The hypothesis tested in the Paired Sample t-Test analysis is H_a which reads that is there any effect of using an offline learning model assisted by the Serli module on the solar system material on students' learning motivation and H_0 says that there is no effect of using offline learning model assisted by the Serli practicum module on the solar system material. on student learning motivation. The hypothesis was carried out at a significance level of 5% (0.05). The results of the Paired Simple t-Test analysis can be seen in the following table.

Table 5. Test Results Paired sample T-Test.

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		T	Df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pre-Test-Post-Test	49,286	3,989	.871	47,470	51,102	56,616	20	.000

Based on Table 5 above, the significance value of the Paired Sample T-Test is $0.000 < 0.05$. Because the significant value of the t-test $< (0.000 < 0.05)$ then H_a is accepted and H_0 is rejected. So, it was concluded that the use of offline learning models assisted by the Serli practicum module on the solar system material affected the motivation to learn science in grade 6 SD Inpres Lolu.

Discussion

The results of testing the hypothesis state that the Serli practicum module on the solar system material affects the motivation to learn science in grade 6 SD Inpres Lolu. The effect of the learning model assisted by the solar system material practicum module on the learning motivation of the sixth-grade students of SD Inpres Lolu is shown by the Sig t-test value in

the t-test analysis result table. The column shows that the value of the t-test sign is less than ($0.000 < 0.05$). Then the influence of the learning model assisted by the Serli practicum module on the solar system material on the learning motivation of the sixth-grade students of SD Inpres Lolu.

The effect of using the Serli practicum module on the solar system material on the science learning motivation of sixth-grade students of SD Inpres Lolu was also shown from the Posttest activity carried out at the end of the lesson. The average post-test score for the experimental class was 86.21 while the post-test average for the control group was 82.83.

The posttest results show that the average value obtained from class experiments in science learning using the Serli practicum module is higher than the average value obtained by the control class in science learning using book media. on the motivation to learn science in grade VI SD Inpres Lolu. The results of this study are supported by the theories found previously. do something to achieve a goal.¹⁵

When using the Serli practicum module in the experimental class it can help students learn and conduct experiments independently, and provide more meaningful learning to students because by using the Serli practicum module students can find concepts from the material being studied, students become active and independent in conducting experiments, students feel happy because they succeeded in finding new concepts and solving their problems, students become interested in learning science because science is useful in everyday life and students have a positive view of science and scientists. This is in aby results of previous research conducted by Azizah et al. The title is "Development of the Serli Practicum Module (Discovery Learning) for Science Learning in Elementary Schools."¹⁶ Based on the results of the study, the researcher stated that the Discovery Learning module for science learning in grade VI elementary school was effectively used in science learning practicum activities in elementary schools.

CONCLUSION

Based on the data analysis, it can be concluded that the t-test analysis obtained a significance value of 0.000. Because the significance value of the t-test $< (0.000 < 0.05)$ then H_a is accepted and H_o is accepted, it can be concluded that the use of the Serli practicum module on the solar system material affects the learning motivation of the sixth-grade students of SD Inpres Lolu.

REFERENCES

Azizah, Azizah, and Siti Fajeriah. "The Effect of Offline Learning Model Assisted in Practicum Discovery Learning on Learning Outcomes." *Nazhruna: Jurnal Pendidikan Islam* 4, no. 3 (November 2, 2021): 663–71. <https://doi.org/10.31538/nzh.v4i3.1667>.

¹⁵ Amna Emda, "Kedudukan Motivasi Belajar Siswa Dalam Pembelajaran," *Lantanida Journal* 5, no. 2 (2018): 172–82.

¹⁶ Azizah Thalib, Puji Winarti, and Nurul Kami Sani, "Pengembangan Modul Praktikum Serli (Discovery Learning) Untuk Pembelajaran Sains Di Sekolah Dasar," *Profesi Pendidikan Dasar* 7, no. 1 (2020): 53–64, <https://doi.org/10.23917/ppd.v7i1.10817>.

- Budiya, Bahroin. "Manajemen Pengelolaan Kelas Masa Pandemi Di SD Ta'miriyah Surabaya." *Attadrib: Jurnal Pendidikan Guru Madrasah Ibtidaiyah* 4, no. 1 (May 29, 2021): 50–54. <https://doi.org/10.54069/attadrib.v4i1.129>.
- Ellizar, E., S. D. Putri, M. Azhar, and H. Hardeli. "Developing a Discovery Learning Module on Chemical Equilibrium to Improve Critical Thinking Skills of Senior High School Students." *Journal of Physics: Conference Series* 1185 (April 2019): 012145. <https://doi.org/10.1088/1742-6596/1185/1/012145>.
- Emda, Amna. "Kedudukan Motivasi Belajar Siswa Dalam Pembelajaran." *Lantanida Journal* 5, no. 2 (2018): 172–82.
- Hammer, David. "Discovery Learning and Discovery Teaching." *Cognition and Instruction* 15, no. 4 (December 1, 1997): 485–529. https://doi.org/10.1207/s1532690xc1504_2.
- Kohnke, Lucas, and Benjamin Luke Moorhouse. "Facilitating Synchronous Online Language Learning through Zoom." *RELC Journal* 53, no. 1 (April 1, 2022): 296–301. <https://doi.org/10.1177/0033688220937235>.
- Malik, Jamaluddin, Sutaryat Trisnamansyah, and Agus Mulyanto. "Pengaruh Kompetensi, Motivasi, Sarana Prasarana, Dan Iklim Sekolah Terhadap Kepemimpinan Kepala Sekolah Di Sekolah Dasar Negeri." *Munaddhomah: Jurnal Manajemen Pendidikan Islam* 2, no. 2 (October 22, 2021): 81–94. <https://doi.org/10.31538/munaddhomah.v2i2.48>.
- Malyana, Andasia. "Pelaksanaan Pembelajaran Daring Dan Luring Dengan Metode Bimbingan Berkelanjutan Pada Guru Sekolah Dasar Di Teluk Betung Utara Bandar Lampung." *Pedagogia: Jurnal Ilmiah Pendidikan Dasar Indonesia* 2, no. 1 (September 2, 2020): 67–76. <https://doi.org/10.52217/pedagogia.v2i1.640>.
- Muhson, Ali. "Pengembangan Media Pembelajaran Berbasis Teknologi Informasi." *Jurnal Pendidikan Akuntansi Indonesia* 8, no. 2 (2010). <https://doi.org/10.21831/jpai.v8i2.949>.
- Munjiat, Siti Maryam. "Implementation of Islamic Religious Education Learning in Higher Education on The Pandemic Period." *Nazhruna: Jurnal Pendidikan Islam* 3, no. 2 (August 5, 2020): 285–95. <https://doi.org/10.31538/nzh.v3i2.757>.
- Nuridin, K., Hanafy Sain Muh, and Mustami Halifa Muhammad. "The Implementation of Inquiry-Discovery Learning." *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature* 7, no. 1 (July 11, 2019). <https://doi.org/10.24256/ideas.v7i1.734>.
- Perwita Sari, Suci, Sazkia Aprilia, and Khalifatussadiyah. "Penggunaan Metode Make A Match Untuk Meningkatkan Hasil Belajar Siswa SD." *Educational Journal of Elementary School* 1, no. 1 (2020): 19–24.
- Pratama, Rio Erwan, and Sri Mulyati. "Pembelajaran Daring Dan Luring Pada Masa Pandemi Covid-19." *Gagasan Pendidikan Indonesia* 1, no. 2 (December 2, 2020): 49–59. <https://doi.org/10.30870/gpi.v1i2.9405>.
- Purwanto, Agus, Rudy Pramono, Masduki Asbari, Choi Chi Hyun, Laksmi Mayesti Wijayanti, Ratna Setyowati Putri, and priyono Budi Santoso. "Studi Eksploratif Dampak Pandemi COVID-19 Terhadap Proses Pembelajaran Online Di Sekolah Dasar." *EduPsyCouns: Journal of Education, Psychology and Counseling* 2, no. 1 (April 15, 2020): 1–12.

- Sembiring, Rosali Br, and Mukhtar. "Strategi Pembelajaran Dan Minat Belajar Terhadap Hasil Belajar Matematika." *Jurnal Teknologi Pendidikan (JTP)* 6, no. 2 (October 1, 2013): 214–29. <https://doi.org/10.24114/jtp.v6i2.4996>.
- Simamora, Rustam E., Sahat Saragih, and Hasratuddin. "Improving Students' Mathematical Problem Solving Ability and Self-Efficacy through Guided Discovery Learning in Local Culture Context." *International Electronic Journal of Mathematics Education* 14, no. 1 (2019): 61–72.
- Sugiyono. *Metode penelitian pendidikan: (pendekatan kuantitatif, kualitatif dan R & D)*. Alfabeta, 2008.
- Thalib, Azizah, Puji Winarti, and Nurul Kami Sani. "Pengembangan Modul Praktikum Serli (Discovery Learning) Untuk Pembelajaran Sains Di Sekolah Dasar." *Profesi Pendidikan Dasar* 7, no. 1 (2020): 53–64. <https://doi.org/10.23917/ppd.v7i1.10817>.
- Trinova, Zulvia, Ali Mu'ammarr Zainal Abidin, Khasanah Khasanah, Lela Susanty, and Ulfa Maulani. "Online School Future: Challenges and Expectations of Modern Education in Indonesia." *Nazhruna: Jurnal Pendidikan Islam* 5, no. 1 (February 10, 2022): 78–95. <https://doi.org/10.31538/nzh.v5i1.1884>.
- Winita, Sucia, Syahrul Ramadhan, and Yasnur Asri. "The Development of Electronic Module Based on Discovery Learning in Writing Explanation Text," 63–69. Atlantis Press, 2020. <https://doi.org/10.2991/assehr.k.200819.013>.